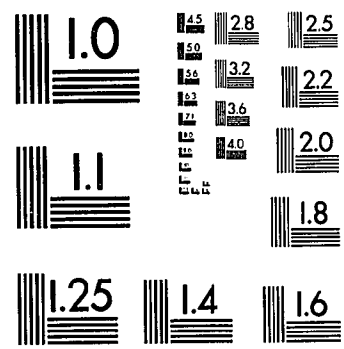
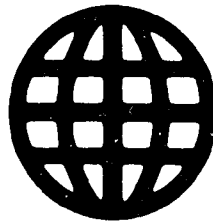


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STUDY OF HYPERACTIVITY, DISORIENTATION AND THE SPATIAL
ENVIRONMENT

City University of New York

PH.D. 1985

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WANDERING BEHAVIOR OF OLDER PEOPLE IN NURSING HOMES:
A STUDY OF HYPERACTIVITY, DISORIENTATION AND THE SPATIAL ENVIRONMENT

by

Lorraine G. Hiatt

A dissertation submitted to the Graduate Faculty
in Psychology in partial fulfillment of the
requirements for the degree of Doctor of Philoso-
phy, The City University of New York

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1985

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

August 29, 1985
Date

Leanne D. Rivlin
Chairman of Examining Committee

September 4, 1985
Date

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ABSTRACT

WANDERING BEHAVIOR OF OLDER PEOPLE IN NURSING HOMES:
A STUDY OF HYPERACTIVITY, DISORIENTATION AND THE SPATIAL ENVIRONMENT

by

Lorraine G. Hiatt

Adviser: Professor Leanne Rivlin

This is a report of three empirical studies of older nursing home residents who wander: 1) a short-answer survey of 170 randomly selected nursing homes in 8 states, focused on definitions, causes and interventions; 2) open-ended definitions of wandering from 120 conference participants; and 3) on-site comparisons and observation of 15 wanderers and non-wanderers.

Wandering posed problems for 62% of the institutions and resulted in "serious consequences" for 79% of these, though less than 2% of residents have runaway within three months. Five percent of the elderly per institution paced, seven percent roamed and five percent attempted to leave. Over half of the staff believe wandering has no goal or purpose. This was not supported by actual cases, where goals were identified for 13/15. Case data suggested patterns of wandering based upon (1) agitation level, (2) wayfinding competence, and (3) intent. Smaller facilities reported proportionately more wanderers than did larger ones which may be a function of the use of significantly more restraints in the larger facilities. Higher incidences of attempts to leave, episodes of runaways and of disorientation were reported in custodial vs. rehabilitation oriented facilities.

Only 7% of the respondents felt that the best outcome of this type of research would be to "stop" wandering behavior. However, what staff members reported that they did differed significantly from what they thought best in preventing wandering. Some of the most commonly reported interventions were: taking people on walks (79%), door buzzers (76%), enclosed courts (67%), body holders (63%) and geriatric wheelchairs (63%). Only 18% used neither geriatric wheelchairs nor restraining belts or vests. There was less consensus on what was best. For example, two-thirds use Reality Orientation or Remotivation groups, only 40% believe these the best means of preventing wandering. Few institutions (5%) used new technologies to monitor individual wanderers. Only three innovative programs were identified from the 700+ surveys mailed and only ten percent of the homes assessed wanderers.

The findings suggested variables for future studies and researchers are urged to study wanderers cared for at home.

ACKNOWLEDGEMENTS

A dissertation bears one name; this one represents the collaboration of many others. I appreciate the dedication of Dr. Leanne Rivlin, chairperson, whose office I entered nearly weekly for seven years and left refreshed with new insights about humanistic research and institutional life. Dr. Barbara Felton (New York University) led me through a thicket of statistical interpretation and painstakingly reviewed late drafts. I am enriched by her understanding of gerontological research and competence in interpreting statistical analyses. I thank Dr. Susan Saegert for helping shape the methodology, for grappling with the meaning of the unanticipated findings and for challenging me to work systematically through these data. Dr. Kathleen Christiansen's careful readings were always helpful, especially in sharpening the literature review and keeping an eye out for larger policy implications. Dr. James Fozard's curiosity about the topic of wandering, gained through his association with the Veterans Administration, piqued my interest in practical applications of findings in relationship to Alzheimer's disease and psychophysical functioning. Dr. Gary Winkel counselled on data handling and interpretation. I am grateful to Dr. Sheree West who paved the way through bureaucracies, willingly shared gerontological insights, and demonstrated wizardry as a patient computer consultant-- illustrating the importance of more experienced student colleagues. How I shall miss the special intensity of these relationships. And, oh do I look forward to being free to collaborate with you each in the future.

The fieldwork was made possible because of the generosity of Al Mendlovitz, ACSW, at the time of this study the Executive Director of the Blumenthal Jewish Home for the Aged, Clemmons, NC (referred to as Meadowside). Jan Sawyer, Dir. Community Programs, (creative impetus behind the group for wanderers); Marilyn Rowland, R.N., D.O.N.; Lucille Shaw, R.N.; and Edna Blevins, MSW were especially giving with their time and experience. In over 70 fieldwork studies, I have never met as effective a research liaison as this Social Service Department, Nursing staff and management team. Nearly forty residents and about twenty family members gave this research their personal time and energy. I am most appreciative of the families of non-wanderers who participated and to all who consented to the involvement of their elders.

Thank you Dr. George N. Naskaris and Sebastian Hiatt Naskaris, who played mixed doubles where I was usually paired with this dissertation and who have given so much of the most precious resource we have, our time together.

Without the assistance of these and others, this work would never have taken on a life of its own.

-LGH 8/24/85

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PROBLEM STATEMENT

Though wandering is a scarce phenomenon, it generates fairly widespread concern (Burnside, 1980). There are data indicating that approximately 11% of all older people in institutions wander and that such behavior requires additional staff time and hence cost (National Center for Health Statistics (NCHS), 1979). Published case data suggest that wandering is dealt with many ways, from benign neglect to restraint, from retraining to high tech monitoring. However, there has been little information collected on the nature of the behavior and on what is being done throughout the U.S.

Caregivers seem to have various mental images of wandering, from shuffling feet to those who go "AWOL", to a wandering mind. The link between interventions and definitions is unclear. Among the questions are whether the behavior itself is aimless or should be extinguished or redirected-- whether it has some purpose or value.

This research was designed in three studies. The first was planned to obtain cross-institution data on definitions, staff views of causes, and on the state-of-the art of interventions. The second, smaller scale studies, helped to fill out the information on definitions and on how a specific institution deals with wandering. Following the literature review, ten specific research issues are enumerated.

LITERATURE REVIEW

Statistical Significance Of Wandering

According to the Public Health Service, of the 1,303,100 patients or residents in 18,900 U.S. nursing homes operating in 1977, there were 149,200 wanderers or 11% of the nursing home population (NCHS, 1979, p. 39).

Definitions

One of the early accounts of wandering was written by a psychiatrist. Because it expresses so many of the present day views it is reproduced here. Underlining highlights topics which are controversial and to be further studied:

Nocturnal restlessness is a chronic problem in nursing homes. Older people, particularly those with senile brain disease, will often be found walking aimlessly. This together with decreased vision and hearing and with mental impairment, contributes at night--when sensory deficiencies are more marked--to confusion, agitation, and uncooperativeness...

Corollary to nocturnal restlessness is the problem of wandering. Patients will walk around the neighborhood aimlessly and in an apparent daze. They may suddenly experience a desire to travel in search of new experience and to find means of tension relief and reduction. Some of them believe they are returning to their own homes from the strange place in which they find themselves. This can be counteracted by increasing their participation in activities during the day so that they are busy and become sufficiently fatigued to sleep at night.

-Stotsky, 1968, p. 106

Dictionaries tend to link the concept of "wandering" to the value judgment of "aimless" (Merriam-Webster, 1979; Dorland, 1981).

Researchers and practitioners have adopted this connection.

Wandering is defined as the disoriented activities and aimless movements of elderly patients toward indefinable objectives or unobtainable goals. It is a state of confusion encompassing verbal, behavioral and physical movements characteristics of disorientation to time, place, and person.

-Monsour, 1980, p. 2

Is wandering in fact "aimless" (Monsour, 1980; Monsour & Robb, 1982; Stotsky, 1968; Hussian, 1981; Verwoerd, 1976; Barnes & Raskind, 1980) or does it involve a misbegotten coping strategy for dealing with stressful internal or external conditions (Snyder, Pyrek, Rupprecht & Smith, 1978; Hiatt, 1980, 1981; Burnside, 1980)? "Aimless" can be equated with "useless"; without consensus on the intent of the behavior, it is not surprising that there is basic disagreement over whether wandering ought to be interrupted, redirected or encouraged under safer conditions (Burnside, 1980; Monsour & Robb, 1982; Cornbleth, 1977; Hiatt, 1980b; 1981b).

In both general and medical terminology, there is a connotation of abnormality or deviance:

Wandering: movement away from a proper, normal or usual course or place.

-Merriam-Webster, 1979

Movement stands out in a geriatric institution. In an earlier study of wandering, my colleagues and I found that wanderers were in motion seven times more than their non-wandering cohorts (Snyder et al., 1978). Perhaps the non-wandering cohort is excessively sedentary while the wanderer is comparatively mobile. Without data establishing the norms of behavior, the question of whether wandering is deviance is difficult to resolve.

One of the excesses associated with wandering is agitation and/or hyperactivity. Medical and pharmacological texts typically subsume

"wandering" under other diagnostic categories and terms "psychomotor agitation" (American Psychiatric Association, 1980), "hyperactivity" (Dorland, 1981), "attentional deficits" (American Psychiatric Association, 1980, p. 41), "akathesia", [disturbances in motor function] (Abrams, 1976) or "motor restlessness" (Whanquer & Busse, 1976).

The significance of interpretation lies again in decisions regarding intervention. If wandering is a by-product of hyperactivity or agitation then it should probably be treated in the context of those behaviors, not solely as a motor behavior to be curbed through restraint without reference to the precipitating emotional state.

The term wandering is not a recognized medical diagnosis but is listed in at least one medical diagnostic handbook as a complication of dementia: "Complications: Individuals with dementia may wander and become lost" (American Psychiatric Association, 1981, p. 110).

The medical term for wandering, seldom used (based on my experience with nursing staff and charts), is "akathesia."

"akathesia: a condition of motor restlessness, ranging from a feeling of inner disquiet to inability to sit or lie quietly or to sleep; seen in toxic reactions to phenothiazines.

-Dorland, 1981, p. 42

Perhaps because of the connection to hyperactivity, wandering has also been defined as: "frequent and/or unpredictable pacing with no discernible goal" (Dawson & Reid, 1985).

Cognitive Aspects of Wandering: Wandering and Disorientation. Does wandering refer to a mental state? Most definitions refer to physical action, usually walking (though there is a published anecdotal account

of a wanderer who used a taxi cab (Smith, 1983) and a research study implying that wandering might be one of a class of hyperactive motions that include excessive hand movements, Hussian & Hill, 1980). There are also references to wandering as a mental phenomenon or "wandering mind" (Monsour, 1980).

Wandering has often been defined as disorientation or inability to find one's way: "[Wandering is] any change which results in a person's inability to return to the point of origin" (Hussian, 1980, p. 139).

Is the wanderer disoriented, lacking awareness? Or, is wandering conducted as a search for some vision or mental image? Either or both might be true, which would suggest that wandering may be a composite of physical actions and mental states.

Age or Ageism and Definitions. The term "wandering" as used in texts refers exclusively to the behavior of older people (Burnside, 1980; Verwoerd, 1975). Medical definitions also tend to apply the term wandering to older people but there is a similar ring in definitions of hyperactivity ascribed to youths.

Hyperactivity: Abnormally increased activity. Developmental hyperactivity of children is characterized by constant motion-- exploring, experimenting, etc. -- and usually accompanied by distractibility and low tolerance for frustration...

-Dorland, 1981, p. 628

"motor hyperactivity: The symptom of motor hyperactivity was identified as poorly organized, non-directed, excessive gross motor activity (such as excessive climbing or running) or extreme restlessness or fidgetiness such that the child was seemingly unable

to sit or stand still.

-Stanton & Brumback, 1981, p. 326

When professionals discuss interventions for hyperactive children, they typically focus on the total child; there is no presumption that children should be immobilized. The definitions of motor hyperactivity fit a number of wandering episodes (Hiatt, 1982b). Why do definitions of hyperactivity fail to consider adults or the developmental possibilities of the behavior?

"Attribution" is a theory which deals with those behaviors elicited by verbal commands and labels (Jones, Kanouse, Kelley, et al., 1972). Kanouse (1972) has suggested that naive inferences made from everyday language influence conceptualization. For example, terms such as wandering appear descriptive but contain causal hypotheses and assumptions that can mask the concept. The level of generality with which a phenomenon is described may substantially determine the level of generality with which it is explained. Once one has a satisfactory attribution or explanation accounting for the facts, he or she is less likely to consider possible alternatives.

It is as if individuals in their attribution process are satisfied with sufficient explanations and do not require explanations to be necessary as well.

-Kanouse, 1972, p. 154

The term wandering may have become so entangled in generalizations that new terms will be required.

Summary on Terminology: Adopting a Working Definition. The terminology for wandering would afford a field day for the ethnologist and semanticist. Surplus meaning of wandering has included: age of the person (consider the sentiments of the wandering youth vs. older person); speed of movement (wandering elderly vs. hyperactive children); and place and reasons for leaving the place (eloper from hospitals; runaway from households). Some labels are romantic (happy wanderer, vagabond) and others convey disdain and poverty (psychiatric hobo, derelict, homeless, vagrant).

In order to proceed with the research, an interim definition was adopted.

Wandering: the tendency to engage in motor activity proportionately more than the norm for one's social context.

For this study, wandering refers to physical activity and disorientation refers to a mental state. The research data provide an opportunity to examine the coincidence of wandering and disorientation.

Empirical Research and Publications On Wandering

Burnside (1980) reports that very little literature in nursing, psychiatry, or allied health sciences deals specifically with the topic of wandering. She bases her conclusions on a computerized data base search. I also conducted three data base searches through medical, social science and psychology literature for 1977-1983 and found fewer than ten pertinent mentions of the term. I supplemented computerized searches by personally reviewing topic indices for references to

wandering, disorientation, hyperactivity and aging to obtain current citations. I also corresponded with the researchers who had published data on wandering to learn whether they had additional studies underway or knew of others. Table 1 summarizes sources of literature. There are signs that interest in the topic is increasing. In 1984, the National Institute of Mental Health issued a Request for Proposals specifying wandering as a priority topic, suggesting that the publications should be forthcoming. Related topics have also received some investigatory attention. Forward Management Associates (1982) (New York City) has made a study of the costs of restraints and assessed interventions for wandering.

The three sources of published empirical research have drawn on institutionally based populations: my own work at a non-profit geriatric center and a state hospital (Snyder et al., 1978; Hiatt, 1980; Hiatt, 1982), the Pittsburgh, PA, Veterans Administration Hospital studies (Cornbleth, 1977; Monsour, 1980; Monsour & Robb, 1982) and a Canadian geriatric hospital, Sunnybrook Medical Care Center, Toronto, Ontario (Dawson & Reid, 1985). Program innovations have been developed and reported at the Blumenthal Home, Clemmons, NC (Sawyer & Mendlovitz, 1984). This represents a total of seven empirical studies, offering relatively incomparable data on fewer than 100 individuals. To my knowledge, there have been no studies of family care of older wanderers, though wandering has been referred to in the literature of the homeless (Rosencranz & Vinovskis, 1978; Kramer, Taube & Redick, 1973; Glick & Hargreaves, 1979; Spradley, 1972; Lamb, 1980).

Table 1

Sources of Literature on Wandering

TYPE OF REFERENCE(S)	Number	Citations
FULL ARTICLES/RESEARCH		
Journals of Gerontology	3	Soverni & Borghese, 1968; Snyder et al., 1978; Cornbleth, 1977
Social Work Journals	1	Monsour & Robb, 1982
Nursing Home Journals	2	Hiatt, 1980b; Miller, 1976
Dissertation	1	Monsour, 1980
Conference Presentations	2	Dawson & Reid, 1985 ^a Sawyer & Mendlovitz, 1982
News Magazines	1	Leo, 1981
Newspaper Accounts	3	Gubisich, 1976; Bernstein, 1984 Woestendiek, 1983
Americana	1	Jager, 1980
NOVELS	1	Shulman, 1981
SHORT DISCUSSIONS OF WANDERING		
Texts in Psychogeriatrics	4	Stotsky, 1968; Whitehead, 1974 Verwoerd, 1976; Hussian, 1981
Texts in Geriatric Nursing	2	Burnside, 1980; Wolanin & Phillips, 1981
Texts on Memory Impairment/ Alzheimer's Disease	1	Mace & Rabins, 1980
Long-term care Education Guides ^b	2	Carroll, 1978 AAHA, 1985
Newsletters	2	Butwid, 1980; Beretta, 1980
BRIEF CITATIONS/MENTIONS		
Pharmacology	1	Abrams, 1976
History of Mental Health	3	Dain, 1971; Pinel, 1971; York, 1954
Law	1	Kohnen, 1978
Child Development	2	Rivlin & Rothenberg, 1980 Stanton & Brumback, 1981
Government Publications	1	NCHS, 1979
TOTAL		34

^aAlso to be published in late 1985 or 1986 as Gerontologist article.

^bThe Veterans administration is putting out a handbook on patient care with a chapter on wandering. The book will be edited by Dr. James Fozard, Bureau of Long-Term Care (Hiatt, in press).

Contemporary Relevance

Why study wandering? This project was initially inspired by a letter from an attorney who could not determine what "standard practices" are regarding care of wanderers. He was representing the family of an older person who had wandered away and died.

A better understanding of wandering may in fact contribute to institutional reform if it serves to remove unnecessary restrictions which symbolize control and to encourage safe, independent spatial and motor behavior. Any progress made in understanding wandering may pique public interest in other issues of innovation in aging care and services, perhaps altering unwarranted negative stereotypes of aging itself. Research on wandering has implications for service delivery and for social sciences research.

Relevance of Wandering to Service Delivery:

1. The Reduction of Suffering (Burnside, 1980; Verwoerdt, 1976; Stotsky, 1968). Suffering may not be solely within the purview of the individual who wanders. Burnside (1980; Cornbleth, 1977; Verwoerdt, 1976) have described organizational and staff demands raised by the individual who wanders. Verwoerdt noted that the elderly person becomes a "social nuisance" when he or she continually wanders away (p. 90).

2. Determining the Appropriateness of Institutions and Institutionalization. Families have reportedly found wandering burdensome to cope with in home care (Hamrick & Blazer, 1980), and more troublesome than incontinence (Williams, 1979). A contemporary text on care of people with Alzheimer's disease suggests that wandering is a decisive factor in nursing home placement (Mace & Rabins, 1980).

Research on wanderers and care of wanderers may help improve institutional care or offer insight for family caregivers.

3. Contributing to the Search for Fitting Interventions. Active interventions for memory impaired older people have been advocated to replace the tacit practice of custodial care until death (Butler, 1975). A survey of interventions for wandering may lead to systematic research on their relative usefulness.

4. Questioning Physical Restraint and Range Controls. As a person who has spent time residing in retirement centers, I have found it disconcerting to learn how many hours some people spend tied, confined or controlled (Hiatt, 1985; Snyder, 1975). Restraints and controls are reportedly administered for the good of the patient (Nordstrom, Smith & Meilicke, 1983; Farnsworth, 1973). But seldom are people released and/or moved in accordance with legal requirements (Nordstrom, et al., 1983). Since the earliest days of institutional reform, the value of restraints has been questioned (Dain, 1971). Risks of wandering have been cited as justification for controlled units (Cornbleth, 1977) and for using geriatric wheelchairs (Mace & Rabins, 1980). Research on interventions should clarify whether restraints are being used and how effective staff view them to be.

5. Reducing the Risks. No statistical profile is available of deaths or injuries associated with wandering. Greater understanding of wandering risks may offer methods for staving off accidental death or injury.

6. Clarifying the Economics of Wandering. How much do wandering and present day interventions cost health care providers? Though the majority of nursing home clients do not wander, wandering has been singled out as requiring a disproportionate share of institutional resources (NCHS, 1979). This study may be used to identify parameters for an economic model of the organizational costs of wanderers and of different interventions.

Relevance to the Field of Psychology:

1. Cognition, Motor Behavior and The Environment. Wandering may hold clues to interactions between motor behavior, mental function and communication (Vygotsky, 1978). This type of research should illustrate a more thoughtful connection between cognition, motion and the environment (Ittelson, 1975), offering insights which can be applied to other behavior including mobility, action, and apparent behavior problems.

2. Dialectical Issues in Developmental Psychology. Wandering is a topic which is well suited to the constructs of dialectical perspectives in life span developmental psychology (Riegel, 1976, 1977) and to the search for meaningful integration of the physical and the social environment in interactive models of memory and behavior throughout the lifespan (Fozard, 1980; Fozard & Popkin, 1978).

Theoretical Propositions and Wandering Behavior

Research on wandering, a seemingly narrow slice of behavior, may have implications for a variety of theoretical developments in gerontology, environmental psychology, mental health and long-term care.

Models and Theories of Aging. Is there a model of aging that could be useful in understanding why some older people wander? At the time of this study, there were few full-scale models to account for variations in the experiences of old age (Birren & Renner, 1976). I have applied a "whole person model of aging" to this study. A whole person model suggests that the experience of aging results from the interaction of physical, psychological, social and personal factors (Hiatt, 1982; Riegel, 1976). This model requires that data be collected in each genre.

The diversity of descriptions on wandering suggested the use of a dialectical framework for data gathering (Kvale, 1977; Labouvie-Vief, 1978; Riegel, 1976, 1977). A dialectical perspective accommodates apparently paradoxical information (i.e., that wandering is goal oriented and aimless, that wanderers are oriented and disoriented). Dialectical models have encouraged integration of data from the physical and social environment as a means of understanding memory and behavior throughout the lifespan (Kvale, 1977). Researchers who use a dialectical framework gather data from a variety of sources and consider the changes that behavior (such as wandering) brings about rather than attempting to resolve conflicting findings by choosing one set of explanations for behavior.

Lawton's Environmental Docility Hypothesis is one of the best known meta theories of gerontology (1977). It is based upon a Lewinian Congruence Model (Lewin, 1935): $B = f(P, E)$ where B= Behavior, P= Person, and E= Environment (though Lewin did not specify this as physical environment; Deutsch, 1968).

In Lawton's terms: $B = f(C, Ep)$ where B= Behavior; C= Competence and Ep= Environmental Press. Lawton has studied mentally impaired older people using the Environmental Docility Hypothesis stating, "as competence or status of any kind decreases, the probability becomes greater that behavior will be influenced by environmental constraints or facilitators" (Lawton, 1974, p. 61). Lawton operationalized competence with measures of biological health, cognition, motor behavior and with functional assessments (Lawton, 1975). Environmental press is defined as changes or demands that activate the behavior of people and has not been as clearly operationalized as have the competence variables (Windley & Scheidt, 1980). The essence of Lawton's work is to focus attention on the environment, suggesting that the environment matters more (not as had been presumed, less) to the more impaired individual. His work has stimulated interest in therapies for mentally disordered older people which involve greater use of the physical and social environment. The study of wandering can, itself, serve as an example of research inspired by the environmental docility hypothesis.

Motion, Environmental Features and Cognition. The literature on environmental cognition and the older person's ability to navigate in either familiar or new environments has often failed to account for the role of motion in conjunction with environmental features and cognition (Evans, 1980). Studies of motor behavior of memory impaired older people should shed light on the interaction of individual and environmental factors in the production of motor responses.

Wandering has not been systematically studied as a symptom. Perhaps wandering is either a reaction to stimulus deprivation (Lawton, 1981) or to stimulus overload (Hiatt, 1981b). This research may suggest a more comprehensive connection between cognition, environmental features and motor responses than has been previously set forth in gerontology.

The literature of child development has included studies which link motor responses, environmental "tools" and the production of language (Vygotsky, 1978). The literature of aging makes frequent reference to changes in motor behavior (Birren & Renner, 1976) and has recently taken up a crusading position on the topic of exercise (Butler, 1978), but few researchers have studied the consequence of motor behavior on memory. It is possible that wandering is both a signal of cognitive decline and a method of coping.

Research and Theories of Coping. The literature on coping behavior seems particularly apt to interpretation of wandering. What are the potential values (and drawbacks) of wandering as a coping mechanism? Theories of coping behavior have been stimulated by research on stress (Armstrong, 1980; Chiraboga & Cutler, 1980; Pearlin & Schooler, 1978; Eisdorfer & Wilkie, 1977). Wack and Rodin (1978) have suggested that lack of control of one's self or circumstances may be stressful and important to the understanding of institutionalized populations. Based on the theoretical constructs on coping behavior developed by Lazarus, data from this study will be analyzed in terms of whether wandering offers some instrumental or palliative relief from stressful conditions (Folkman & Lazarus, 1980; Lazarus, 1966).

If wandering does appear to serve as a coping mechanism, then long-term care providers may need to consider the implications of this for interventions and restraining methods used.

Hightlights of Research on Memory

It is estimated that ten percent of all elderly persons experience severe memory impairments and that 2 million Americans suffer from Alzheimer's disease, the most highly publicized type of dementia (Terry & Katzman, 1983). Is wandering symptomatic of senile dementia of the Alzheimer's type (SDAT)? In literature appearing prior to 1980 (which marked an information explosion on Alzheimer's disease), wandering was often equated with memory impairment (Stotsky, 1968; Verwoerdt 1976; Monsour, 1980). Now, in part owing to the complexity of SDAT and difficulties in diagnoses, which are often only made with accuracy in autopsy (Jarvik, 1980; Katzman, Terry & Bick, 1978), the connections are raised more tentatively (Hussian, 1981).

Wanderers scored lower than non-wanderers on at least two clinical measures of memory function (Snyder, et al., 1978; Cornbleth, 1977), though both are admittedly non-specific: the Kahn Goldfarb Questionnaire (Kahn, Goldfarb, Pollack & Peck, 1960) and the Human Development Inventory (Pyrek & Snyder, 1978). Connections between wandering and memory could have implications for intervention. One might deal differently with an alert wanderer than with one who had deficits in short- or long-term memory. If wandering occurs independently of memory disorder, then caregivers may have to look to other precipitators: medications, environment, emotional state or dissatisfaction.

Wandering and Information Processing Models of Memory. Information processing models of memory emphasize six topics: attention and arousal (Keele, 1977; Hoyer & Plude, 1980; Cohen & Wu, 1980; Berlyne, 1960), coding and organizing (Cohen & Eisdorfer, 1979), storing (Drachman & Leavit, 1972), holding information in storage (Anders & Fozard, 1973; Fozard, 1980; Squire, 1974; Squire & Slater, 1975; Drachman & Leavit, 1972); retrieval (akin to recall) (Newcombe & Steinberg, 1974; Fozard, 1980); and decision processes (Fozard, 1980). Proponents of such models note that losses can be selective (Cohen & Wu, 1980; Siegler, 1980). This might explain why some people who wander move tenaciously toward the same goal or dogmatically manifest a routine without recognizing the discontinuity between their actions and outcome in the present environment.

Wandering may indicate problems in at least three of the six components of information processing: disruption of attention, or of arousal (Hiatt, 1981b; Dawson & Reid, 1985), or problems in eye movements and the scanning process.

Attention implies a selective process which can be broadly analyzed in two categories: focused attention, the ability to follow a conversation and not be disturbed; and divided attention, the ability to attend to several conversations at one time.

-Cohen & Wu, 1980; p. 88

Confusion may result from difficulties in dividing or sustaining attention (Kahaneman & Tversky, 1973; Cohen & Eisdorfer, 1979). Recent Alzheimer's research has focused on the scanning process and the possibility that impaired perception may short-term memory efficiency

(Miller, 1981, p. 107). Presenile dementia patients in one study were more vulnerable to visual masking, i.e., one stimulus interfered with the perception of others (Coyne, Liss & Geckler, 1984). Both disorientation and wandering could be influenced by deficits in attention and in short-term memory.

Sensory Deterioration. Humans experience losses in vision and hearing throughout life, though many of these are not labeled as diseases and often presumed to be memory impairment (Snyder, Pyrek & Smith, 1976; Fozard & Popkin, 1978). The available published empirical research has not addressed the possibility that wanderers have visual processing or other related defects.

Motivation and Arousal. Older individuals need to be sufficiently aroused to learn or perform a task, learning and performance may be inhibited by excessive arousal (Eisdorfer, Nowlin & Wilkie, 1970; Thompson & Marsh, 1973, p. 138). Arousal is another complex construct, possibly involving three independent systems: electrocortical arousal, autonomic arousal and behavioral arousal (Thompson & Marsh, 1973). It has also been conceptualized along a continuum ranging from euphoric excitement, to alert attentiveness, to relaxed wakefulness, to drowsiness, to deep sleep (Hilgard & Bower, 1975). Botwinick defines arousal as a psychophysiological state which energizes or spurs people on in an undifferentiated, overall way (1978, P. 268). Kahaneman and Tversky (1973) have demonstrated that as the difficulty of tasks increases, so does arousal level. They conclude that when arousal is increased, the individual responds to fewer simultaneously presented cues, is less efficient in discriminating, and experiences reductions in

ability to sustain attention.

Most of these studies rely on laboratory-based tasks and have yet to be transformed into real life experiences (Fozard, 1981). They do suggest a relationship between complexity of experience, arousal and attention span which may have implications for wandering.

Mood States. Zarit and colleagues have found that mood affects both memory storage and retrieval (Zarit, Miller & Kahn, 1976; Zarit, 1980; Zarit & Kahn, 1975). Literature on wandering has not empirically addressed the mood of the wanderer either prior to or following movements.

Other Issues Bearing On Wandering: Agitation, Depression, Stress, Sleep Disturbances, Incontinence and Drugs. According to the the U.S. Public Health Service, agitation characterizes 34% of all nursing home patients making it three times as prevalent as wandering (NCHS, 1979).

Definitions of agitation share some descriptors with definitions of wandering:

Agitation can be present with behavior symptoms that may rise from multiple causes...[it is] a broad behavioral term connoting excessive motor activity, is often nonpurposeful [emphasis added] in nature, and is commonly associated with feelings of internal tension, irritability, hostility and belligerency.

- Barnes & Raskind, 1980, p. 111

A prominent sign of dementia, particularly senile dementia of the Alzheimer type, is vigorous pacing which may last for hours. This behavior is often difficult to distinguish from agitation and if pacing is interfered with by physical restraint, agitation and hostility are the likely results.

- Barnes & Raskind, 1980, p. 115

Neurological factors may explain the coincidence of wandering and agitation. Heilman and Valenstein (1980) suggest that lesions affecting the left hemisphere may cause difficulties in emotional discrimination.

One explanation for Alzheimer's disease's effects on memory also relate to lesions (Mohs, Davis & Dunn, 1984; Terry, 1978; and Miller & Cohn, 1981).

Heilman and Valenstein assert that an individual with left hemispheric lesions may be alexic (aphasia characterized by loss of ability to read) but can discriminate emotional faces. An individual with right hemispheric lesions may be able to read, but would have difficulty recognizing emotional scenes. Therefore, it would seem reasonable to suggest that wandering might occur in the absence of agitation if right hemispheric lesions had occurred. Whereas, wandering might be present with agitation when there were no lesions or where they predominated in the left hemisphere.

Left hemisphere damage might also impede one's ability to use legible environmental cues: name plates, maps and signs. To my knowledge, the relationship between neurological function and environmental behavior of older people has not been studied, particularly with reference to wandering, agitation or spatial orientation (see Miles and Evarts, 1979).

It may be that disturbances of cortical systems, coupled with changing environments, produce mood swings and wandering. Changing environments might include shifts in numbers of people, or alterations in the character of background noise. Changes may also result from internal experiences: pain, sense of loss, or boredom, for example. The presence of cortical disturbances does not adequately explain whether mood change or agitation precede or follow the wandering behavior. The implication is that the older person who feels agitated may have the

neurological capacity to perceive other information (Kent, 1975).

Barnes and Raskind (1979) have characterized agitation as a symptom of depression. This parallels recent research on children which suggested that hyperactivity is associated with depression (Stanton & Brumback, 1981). It would be useful to know whether wandering is preceded by diagnosed depression and/or agitation. Depression has been described as the major mental health problem of the elderly (Glassgote, Gudeman & Miles, 1977; Pfeiffer, 1977; Cohen & Eisdorfer, 1979; Raskin, 1979; Rosenfield, 1978). Among the symptoms of depression are poor attention, limited concentration and difficulties in sustaining conversations (Salzman & Shader, 1979). Stanton and Brumback (1981) have found that motor hyperactivity in children is associated with depression (and not learning disabilities as formerly surmised). However, in their catalog of common signs of depression, Salzman and Shader do not list hyperactivity. In that others have linked 1) agitation and depression, and 2) agitation and wandering, it would be useful to have more data on the motor patterns of depressed older people (Barnes & Raskind, 1980, p. 115). Depression has been associated with distorted perceptions of time (Wyrick & Wyrick, 1977; Goldfarb, 1955) and with preoccupation with events of the distant rather than recent past. Perhaps the depressed individual will manifest patterns of wandering that are different from one with Alzheimer's disease, wandering to places associated with the distant past and being unrealistic about the present. Or, perhaps wandering represents a physical action taken as one's depression is lifting and signals an interest in activities of the present. It would also be interesting to

learn whether the slow ambling wanderer is more deeply steeped in a depression than the quick-stepped pacer.

Sleep disturbances have been linked to aging, to depression and to agitation. The U.S. Public health service estimates that nearly ten percent of U.S. nursing home patients are insomniacs (NCHS, 1979, p. 39). Feinberg (1978) reports that overall sleep time for older people is not significantly reduced but that older people wake more frequently and compensate by staying in bed longer. Comfort (1980) makes similar observations and notes that staff of institutions and families should not attempt to regulate sleep patterns of older people according to their own schedules. Nocturnal and daytime wandering are sometimes distinguished, though it is not clear why (Whitehead, 1974; Stotsky, 1968). In an analysis of problems experienced by family caregivers, Stanford (1970) reported that 24% of all problems were related to wandering at night and 12% to wandering during the day. Perhaps the stimuli or restraints account for some of the difference. Information needs to be consolidated on the relationship between sleeping patterns and wandering; studies have yet to be conducted comparing night vs. daytime motor behavior.

Recently, researchers have begun to question what can be done about incontinence (Bartol, 1980). It is estimated that 39% of all nursing home patients are incontinent at least some of the time (NCHS, 1978). The question of whether wandering, particularly night time wandering, is a function of incontinence and the inability to locate a bathroom has not been adequately addressed in the literature (Berger, 1984, personal communication).

On the average, older people take four to seven types of medications each day and that figure doubles for nursing home patients (Green, 1978). Drugs are used to treat wandering (Burnside, 1980). And, certain medications (i.e., piperazine tricyclics and haloperidol) may induce wandering (Tewfik, Jain, Harcup & Magowin, 1970; Abrams, 1976; Comfort, 1980; Pfeiffer, 1977). Unfortunately, when some physicians observe hyperactive motor behavior as a result of medications their tendency is to increase the dosage (Abrams, 1976). Briganti (1974) found that 90% of all patients receiving antipsychotics (phenothiazines and haloperidol) experienced extrapyramidal effects (like wandering) after ten weeks of therapy. In that length of time, many caregivers may fail to accurately tag the drug as the cause of hyperactivity. Certain drugs may cause anxiety or agitation (Abrams, 1976; Comfort, 1980) which in turn produce wandering. Barbiturates (sleeping pills, commonly used for people who are restless or wander at night) can induce "senile rickets" which look like weakness and result in impaired, disorganized mobility patterns (Comfort, 1980, p. 76). And, drugs are often used as the first choice of intervention, before attempting other procedures (Verwoerd, 1976). This may be because physicians prescribe drugs but have less influence over any other interventions. Because drugs are billable to a third party and other interventions (such as group work) are not, drugs have become the most readily available and professionally acceptable response to most behavioral problems (Green, 1978).

Both agitation and depression have been related to stress. Stressful stimuli are characterized by Appley and Trumbell (1967) as being novel, intense, rapidly changing, unexpected and productive of fatigue,

boredom, frustration or similar states. Eisdorfer and Wilkie (1977) have described stressful situations in these terms:

For a stimulus to be stressful, it must be perceived in some way as potentially harmful, threatening, damaging, unpleasant, or overwhelming to the organism's adaptive capacity.

-Eisdorfer & Wilkie, 1977, p.

Summarizing a review of the literature, Eisdorfer and Wilkie note that stress may serve as a memory inhibitor, may disorganize behavior and is particularly problematic for older people. This raises the possibility that stressful situations provoke wandering.

Assessment of Wandering. In reviewing several nursing texts which include passages on wandering, there were no assessment procedures offered on wandering (Burnside, 1980; Wolanin & Philips, 1981). This should not be surprising since assessments of older people with mental impairments are scarce and not widely used (Kane & Kane, 1981; Raskin & Jarvik, 1980). Three hopeful developments in the research on non-intrusive, cost-effective and practical diagnostics have emerged. Advances in such diagnostics could have implications for studying Alzheimer's disease and its relationship to wandering. First, research on saccadian eye movements may provide a method for discriminating the presence of Alzheimer's and the seriousness of the disease (Pirozzolo & Hansch, 1981; Hutton, Nagel & Loewenson, 1984). Such research may also indicate that some wanderers are groping with impaired visual scanning. Second, research on dichotic listening indicates that this too may serve to identify mental disorders, especially those related to temporal lobe pathology (Grimes, Grady, Foster, Sunderland & Patronas, 1985). This

research may also indicate a relationship between certain patterns of movement and difficulties in interpreting sounds in an environment. Thirdly, reaction time has been proposed as a measure of functional vs. memory impairment (Ferris, Crook, Sathanathan & Gershon, 1976). This may help clarify both tendencies toward wandering and rates of motion. Once tests such as these are improved it may be possible to learn more about whether or how wandering is related to Alzheimer's disease. It is also possible that wandering itself may be an indicator of the effects or seriousness of Alzheimer's.

Disorientation and Aging

Orientation is a term used widely by clinicians and researchers (Botwinick, 1978; Cohen & Eisdorfer, 1979; Hartley, Harker & Walsh, 1980; Weisman, in press) in slightly different contexts: orientation to place, orientation to self or person, and/or orientation as a general synonym for mental clarity:

One way of imposing order on the world is through organizing clues into wholes and using these constructs for movement and behavior, that is, establishing orientational systems.

-Rapoport, 1976, p. 228

Weisman has summarized the defining skills of being spatially oriented based upon a review of the literature:

[The ability to] 1) identify one's present location, 2) know where one is going relative to this present location; and 3) know how to get to the desired destination.

-Weisman, in press, p. 4

Overlap in Concepts of Memory and Disorientation. Orientation has been used as a general indicator of memory change for centuries (Dain, 1971). The most widely used clinical assessment procedure for "memory impairment" in a short "Mental Status Questionnaire" which asks ten questions on the older person's simple knowledge of name, today's date and the name of the present location (Goldfarb, 1955; Kahn, Goldfarb, Pollack & Peck, 1960). This technique has been referred to as a measure of disorientation (Goldfarb, 1955). As a result, many caregivers may develop a general concept of orientation without distinguishing specific knowledge of place from knowledge of routes, people or time. Here, the term wayfinding will be used to refer to the practical skill of applying information in getting from one place to another. The concept is distinguished from orientation. Orientation will be used to refer to mental knowledge and wayfinding to physical behavior. In this research the focus is on spatial orientation and no assumption is made that this is indicative of global orientation.

Though some definitions of wandering equate the behavior with disorientation, the literature surveyed did not clarify whether all wanderers are disoriented or whether the research has failed to address the question. According to cases cited, some people who wander may be spatially oriented (Snyder et al., 1978). This supports the plausibility of different wandering styles. A disoriented person may wander to find something or may use motion to obtain some other desired outcome. The spatially oriented individual who wanders may be looking for a forbidden or irreproducible object (home, a deceased spouse), a

change in environmental stimuli (fresh air); or some emotional state (comfort, peace). An oriented person may be one who is having difficulty interpreting environmental cues in order to get a fix on his or her current location or selecting an appropriate route because of incomplete attentional processes or deficient visual scanning. Some wandering individuals may be oriented to a past environment (remote memory is intact) but disoriented with respect to present surroundings and wander because they are relying on memory traces or cognitive maps of some environment of the past to locate a goal despite the 1) unavailability of that goal in the present environment; or 2) inappropriateness of the motions taken in the present setting. (See Hiatt, 1981b.) All of this suggests that research on wandering needs to consider memory function and spatial orientation and should not use one as an indicator of the other.

Influencing Disorientation and Wayfinding. Recent research has also suggested that the opportunity to personally experience spaces, either by walking or from a wheelchair is important to the process of spatial orientation (Rowles, 1978; Butler, 1977-8; Herman & Bruce, 1981). Weisman identified four classes of environmental variables that have an impact upon orientation and wayfinding skills: signs, perceptual access (views), architectural differentiation and shape or layout. One of Weisman's studies demonstrated that objects are more significant to the successful spatial orientation of older people than are signs (in press).

Research on older people in the community has suggested that spatial disorientation is not a function of familiarity or length of stay, but is dependent upon the distinctiveness of spaces (Weisman, in press). What little research there is on the topic suggests that newcomers may be more vigilant than those more experienced with a place (Evans, 1980; Snyder, et al., 1978). Skill at wayfinding may be a function of individual characteristics: some older people in institutions are very inactive or immobile, others may have recent sensory impairments. The environments themselves may contribute to spatial disorientation. Some are repetitious (Blasch & Hiatt, 1983) or "impoverished in character" (Weisman, in press, p. 8).

Findings of Prior Research on Wandering

The first published research on wandering (Cornbleth, 1977) was a comparison of the spatial behavior, mental status and psychosocial functioning of a group of wanderers vs. non-wanderers who were placed on a locked or controlled ward. The implicit objective seemed to be to justify the advisability of controlled units as an intervention technique. Findings demonstrated that wanderers moved more widely in their protected ward in contrast to non-wanderers who moved more widely in the open ward. Psychosocial comparisons indicated that wanderers were less sociable and communicated less than did non-wanderers, but that groups were similar in mental status and perceptual motor skills.

Snyder et al. (1978) contrasted 22 wanderers with 187 non-wanderers in a skilled nursing home using a 27-item psychosocial profile. Wanderers were statistically different from non-wanderers: less sociable, poorer in long-term memory, more disoriented to time and place, and less

able to follow a conversation topic. A closely matched set of eight pairs of wanderers and non-wanderers differed in degrees of motion: wanderers were seven times as likely to be in motion than their non-wandering counterparts. Wanderers traversed the ward more heavily, occupying three times as many different locations as did non-wanderers. And wanderers were "on the go" about a third of their time as compared with non-wanderers who were likely to be in motion only about 4% of the time that they were awake.

Monsour (1980; Monsour & Robb, 1982) interviewed family members of 22 institutionalized wanderers and 22 non-wanderers, predominantly men. Wanderers were matched to non-wanderers on the basis of mental status and mobility. Wanderers tended to have participated in more active recreation throughout their lives as compared with non-wanderers who pursued more sedentary lifestyles. Wanderers' families reported that wanderers had exhibited more motoric or physical means of coping with stress throughout their former lives. Their findings were similar to those of Snyder et al. (1978) who found wanderers were less sociable than non-wanderers. Neither study addressed the possibility that wandering could be a form of non-verbal communication.

Dawson and Reid (1985) have made a comprehensive study of 25 characteristics distinguishing male wanderers from non-wanderers with special emphasis on those at risk of harm. Wanderers differed from non-wanderers on the basis of speech, reading, incontinence, constant rather than transitory disorientation and the ability to know when they were lost. They were more socially adept, had better hearing and were less withdrawn. The wanderers were superior physically in that they had

a good gait and seemed perpetually active. Wanderers had more sleep disturbances, shouted more, were angry more and were not withdrawn as compared with non-wanderers. Wanderers were also twice as likely to be incontinent. The two groups were comparable in terms of aggressiveness. Two factors were identified from the longer list of behaviors that distinguished the wanderers from non-wanderers. One was labeled cognitive defects (doesn't know when lost, incontinence, disorientation, speech dysfunction and reading deficit) and the other was called hyperactivity (aggression, agitation, shouts, angry, strong, and sleep disturbed).

The preceding studies used such different operational definitions of wandering that comparisons are hampered. Snyder et al. and Dawson and Reid, for example, emphasized the motion itself while Cornbleth and Monsour each focused on the aimless qualities (cognitive and motor judgments). Snyder et al. included a discussion of styles of wandering. Hussian (1981) made similar references to possible patterns of movement. None of the other studies addressed the possibilities that wandering may involve several definitions or styles of behavior. With the exception of Snyder's work, most of the published studies have been based upon male wanderers in large government operated nursing homes. Most U.S. nursing homes are not government operated (they are sponsored on a for-profit basis) and women outnumber men by 3:1 (Kane, 1984).

As a pilot study to this one, observations were made of 17 wanderers, predominantly female, in a locked psychiatric ward (Hiatt, 1981b). The descriptive research, following a paradigm suggested in earlier work (Snyder et al., 1978) suggested that movements could be evaluated on the

basis of two important criteria: whether motion was goal-directed vs. motion-oriented and whether the person appeared more agitated or docile. The preliminary study suggested that staff were able to differentiate in 16 of 17 cases whether the person had a goal (which 80% did) or whether motion itself was the goal.

The issues of definition and of the patterns of wandering will be further investigated in this study which was conducted in a cross-section of nursing homes representative of U.S. institutions.

Effects of Wandering on Individual Older People and Caregivers. There are no first-person reports regarding an older person's own reactions to wandering or disorientation. In fact, there appear to be no published accounts of family members' responses to wandering. Information solicited from family members regarding the origin or initial episodes of behavior may provide insights on behavior changes and on interventions. Such data were solicited for this study.

Wandering may not only be of concern to the one who wanders, but is likely to have an impact on other institutional residents (Cornbleth, 1977; Hiatt, 1980b; Mace & Rabins, 1980). Wandering may be a problem to some because it "looks different", is "annoying", unpredictable or marks a change in personal characteristics of a friend (Hiatt, 1982b). We need more information on some of these associated problems of wanderers in order to develop satisfactory plans of intervention.

Specific Considerations of Wandering in Institutions

Ideally, a study of wandering should be done close to the phenomenon, that is, without the possible influence of the institution (schedules, numbers of people, larger residential quarters and systems of service

delivery). The institution itself has qualities and characteristics which are not well understood, but which have been suggested as having a bearing on the issue (Burnside, 1980; Hiatt, 1980b).

Institutional Policies and Wandering. Are there formal or informal policies within institutions regarding appropriate diagnosis or treatment of wandering? At the time of this study, health care institutions had been exposed for nearly ten years to information regarding least restrictive environments (Hiatt, 1981b). Published data were not available on institutional policies toward wandering and whether they incorporated a tolerant approach to movement.

Interventions for Wanderers. What is Innovative? Mace (1984) made a survey of 346 day care centers serving at least some memory impaired elderly clients. Seventy-six percent of these centers reported serving demented clients who wander. Results indicated that group singing, physical exercise, walks, reminiscence groups, visits from children, active games, outings, listening to music, reality orientation and visits from pets were the most effective programs. Interestingly, these are not necessarily activities that are actually available daily. No data were provided on whether people who wander participate in any of these.

Some recommendations have been developed for working with older people who wander. These are generally based upon the experiences of a single institution. One outlines criteria for determining whether wandering is a problem and for whom, suggests diversion as well as exercise, and encourages exploratory behavior (Carroll, 1978). Another describes an Energy Outlet Program (Woestendiek, 1983). In this program

older people leave a nursing unit and go to a room on another floor where exploratory behavior is encouraged and stimulated through handling clothing, tools and small items. The program includes an agenda of evocative participatory events: music, exercise and a detailed system of personal recognition (Sawyer & Mendlovitz, 1984). Preliminary research on the energy outlet program demonstrated that it benefited participants as well as staff and that the program was useful to agitated individuals who did not wander (Sawyer & Mendlovitz, 1984). Study 3 includes an observation of this program.

There are other "methods" for dealing with wanderers. These include taking pictures and posting them at a security desk or in charts, giving people who wander specially identified clothing (Dawson & Reid, 1985), and taking people on walks (Snyder et al., 1978; Hussian, 1981; Wolanin & Phillips, 1981). Snyder et al. and Wolanin and Phillips each outline programs for encouraging movement or allowing wanderers to work alongside staff or volunteers. Carroll et al. (1978) have outlined a system of staff education on attitudes toward wandering which starts with the question, "for whom does wandering pose a problem?" The literature includes no surveys of what institutions are doing about wandering. Nearly any formal program begins to sound innovative, which has been true of programs for mentally impaired elderly people in general (Kahn & Zarit, 1974).

Environmental Design and Technology. Data have not been reported on the best designs for institutions either to promote or deter wandering. Two major reviews have included discussions of design and disorientation (Blasch & Hiatt, 1980; Weisman, in press). Recommendations have ranged

from setting aside special wards to color coding. The efficacy of these methods has not been established. Manufacturers have recently introduced a series of devices based upon telemetry and microprocessing to selectively monitor elderly residents (Miller, 1978). Organizations such as the Veterans Administration are asking whether such devices should be routinely used and funded or whether they are even relevant (Fozard, 1983 personal communication).

The V.A. Medical Center in Salisbury, NC has created a garden for people who wander (Therapeutic Program..., 1983) to encourage exercise. Similar plans are underway in other U.S. retirement centers (Motion Picture and Television Studio Retirement Center, Personal Communication, 1984).

Restraint as Intervention: Implications for Policy, Liability and Patients' Rights. According to Burnside, concern over minimizing the costs of care and staff time involved in individual treatment have resulted in a tendency to rely on restraint as the first-choice for intervention (1980). The topic of wandering is often raised in the context of questions over protective care, restraint and risk management (Snyder, et al., 1978; Burnside, 1980; Kohnen, 1978; Forward Management, 1982). Restraints may range from medications to body holders to chairs with tray tables and small wheels, called "geriatric" chairs. Table 2 summarizes data on the types of restraints used in nursing homes.

Restraints have varying effects on body motion. Some, like medications (pharmaceutical restraints), impede motivation to move. Others, like vests, belts and mitts, tie the body to something stationary. A third class of devices encumber self-controlled movement

Table 2.
Summary of Data From a Study of Uses of
Restraints in U.S. Nursing Homes*

ITEM (Base Number Responding)	Frequency	Percent
1. Does the institution use restraints?--Yes (183)	181	99
2. What types of restraints are used? (181) (multiple responses possible)		
a. Physical	175	97
b. Vest	137	76
c. Waist Belt	135	75
d. Medication	121	67
e. Mitts	34	19
f. Wrist & Ankle Restraints	21	12
g. Lock Patients in Room	5	3
h. Wrist and Elbow	2	1
3. Which are used more frequently to control aberrant patient behavior? (153)		
a. Physical restraints	41	27
b. Medications	112	73
4. Do states have limitations influencing the type of restraints used? (178)		
a. Yes	159	89
b. No	19	11
5. For what type of patients are restraints used? (181)		
a. Confused	127	70
b. Violent	88	49
c. Hyperactive	80	44
d. Injured or Ill	54	30
6. Is there a time, limited by law, for which a physician can prescribe a restraint? (177)		
a. Yes	58	33
b. No	43	24
c. Don't Know	76	43
7. Do families object to restraints used on relatives? (166) --Yes responses	41	25
-To which do they object more? (108)		
a. Physical Restraints	76	70
b. Tranquilizers	32	30
8. Do patients ever complain about the use of restraints? (163) --Yes responses	135	83
9. Has the use of tranquilizers and physical re- straints been affected by public concern in recent years? (153)		
a. Use more now	35	23
b. Use less now	32	21
c. No change	86	56

*Adapted from E.L. Farnsworth. Nursing homes use cautions when they use restraints. *Modern Nursing Home*, 1973, 30 (3), pp. 4 and 9. Printed copy shows only frequencies; all percents computed.

Poll was made of 500 nursing homes, selected randomly; 183 or 37% responded.

(i.e., geriatric wheelchairs, beanbag chairs). One study suggested that restraining belts were more common in hospitals and jackets or vests more prevalent in nursing homes (Nordstrom, Smith & Meilicke, 1983). Subtle methods of curbing freedom include requiring patients to wear slippers so walking on earth or paving is less comfortable or seemly (Burnside, 1980).

Closely akin to restraints are territorial or range controls: half or Dutch doors on bedrooms, gates at the entry to a ward or unit, head height door handles or hardware which the older person may find difficult to see or reach. Door signals such as buzzers have been used to electronically control exits. Press the button on an electronically outfitted door and one has fifteen seconds to pass through; doors left open longer will buzz at a nurses station or security desk. The design concept is based on the assumption that a confused person cannot coordinate the activities necessary to open the door or, if he/she did, would require longer than 15 seconds to evacuate. With buzzers and gates as range controls, the person may be free to move within a circumscribed area. No one has evaluated the relative effects of these interventions on rates of wandering or runaways. One study indicates that restraining is more common when the caregiver has less continuing education (Yarmesch & Sheafor, 1984).

Table 2 indicates that 99% of the respondents in one study did report using restraints (the reasons for use beyond "aberrant behavior" are not indicated). NCHS reports that 1/3 of all wanderers are in geriatric wheelchairs. A person who is confined for several years to this highchair like seating device may no longer be considered a wanderer,

which could explain why only 16% of those in geriatric wheelchairs were also characterized by wandering (NCHS, 1978).

A Canadian study offers some insights on why and how restraints are used (Nordstrom, Smith & Meilicke, 1983): "Most patients across all types of units were restrained either because of disorientation, agitation, restlessness, or to prevent falling" (p. 132). Their survey indicated that restraints were typically worn for 1/2 of each 24 hour period and that men were twice as likely as women to be restrained. It would be useful to know whether the restraints themselves become a factor in the wandering. As noted earlier, most of the empirical research on wandering is based on studies of men. It would also be useful to learn more about the interaction of gender, wandering and restraint use.

In another study, restraint practices were found to be a function of management issues: understaffing; physicians' unfamiliarity/ discomfort with psychoactive drugs and tranquilizers; ingrained patterns of behavior and general resistance to change; use of non-trained staff for coverage; and staff concern for facility damage (Hay & Cromwell, 1980).

Professional opinion is divided as to the utility of restraint, seclusion and supervised freedom. The proponents of freedom have called upon humanistic considerations:

Commonly the client who wanders is restrained or sedated sufficiently to interfere with the inappropriate behavior. These two approaches lead to further loss of control, dependence, loss of mobility and sensory deprivation.

-Hussian, 1981, p. 189

If a patient is restrained because he wanders, he may be in less danger if allowed to wander than be restrained...If he is restrained to prevent falls, it would be wiser to risk fall than to restrain without observation."

-Nordstrom, Smith & Meilicke, 1983, p. 136

Research on falls may have implications for both restraints and wandering. Walsh & Bromberg, (1984) report that 18% of all falls are severe (p. 105) and that of all falls, 40% occur among women and 27% to men over 75 and lead to fractures. In at least some of these instances, modifications to the environment (Waller, 1978) and medications (Walsh & Bromberg, 1984) are considered responsible. Staff members may be justified to be concerned about falls, but confining wanderers and using restraints may not be the best method of reducing them.

Restraints and Published Research on Wandering. Researchers of wandering took various positions on the topic of restraint, which seemed to influence their notions of intervention.

Presently the goal [of institutional caregivers] is to end the wandering behavior. Results of this study do not suggest that this goal should be changed in the future, but rather, that strategies used to achieve the goal should be altered. Currently, the most direct and expedient means are employed-- physical and/or chemical restraints. These approaches do indeed achieve the goal but at the price of the wanderers' self-esteem and physical health.

-Monsour & Robb, 1980

Cornbleth (1977) for example, noted that non-wanderers were not happy about living on locked wards (the opinions of wanderers were not cited). Monsour and Robb (1982) advocated locked wards rather than medications to control behavior of wanderers. Snyder et al. (1978) suggested freedom of

movement, including training some people to go outside of the building with a carefully orchestrated surveillance and follow-through. Dawson and Reid (1985) reviewed a method where wanderers were given freedom to move throughout a building, but dressed in special t-shirts. Their study had indicated that many wanderers were congenial which masked their spatial confusion. The special clothing was used to alert staff to the potential confusion of the wanderers. Hussian (1981) advocates exercise, noting that the duration of wanderers' trips and distance covered decreased when daily periods of free ambulation were provided (p. 140). Hussian also found a direct relationship between the time spent in physical restraints and the subsequent time spent wandering. Burnside (1980), Barnes and Raskind (1980), and Snyder et al. (1978) have reported that belting or tying wanderers were not successful treatments and often increased anxiety and escape attempts.

The literature on restraints has failed to show that restraints are the best method of intervention for wanderers.

Framework for Characterizing Interventions Used for People Who Wander

The foregoing descriptions of policy, intervention and approaches to restraints have been summarized around three assumptions and the policies and specific techniques used to carry these out. (Originally developed in Hiatt, 1982.)

Assumption I: Wandering should be ended (Robb & Monsour, 1980). Two interventions could be derived from this assumption:

(a) to impede the individual from wandering or restrict his/her freedom of movement (through physical restraints, restraining chairs, drugs/pharmaceutical restraints, locked wards and limiting freedom of

movement to a designated area).

(b) to adopt ancillary measures which impede or complicate movement without directly binding the individual. Examples include wearing uniforms (even pajamas and robes in the day), prohibiting older people from wearing street shoes (perhaps offering paper slippers instead), or controlling and restricting access to outer wear; placing buzzers or alarms on building exits.

Assumption II: Wandering behavior should be reshaped, redirected, distracted or reoriented (Robb & Monsour, 1980; Hiatt, 1980c; Snyder, et al., 1978; Burnside, 1980). One primary intervention was derived from this assumption: to provide alternatives to the wandering and develop staffing plans which supported these alternatives on a regular basis. Examples include: developing structured activities (perhaps keyed to the times when wandering activity is documented to increase); providing supervised outings to the community and familiar base two to three times a week (so they can be recalled); offering regular programs of physical exercise and vestibular stimulation especially when other motor activity is temporarily or indefinitely suspended.

Assumption III: Wandering behavior can be tolerated in a given area or areas under specified conditions of surveillance or control (Hiatt, 1980c; Robb & Monsour, 1980; Burnside, 1980).

This assumption also has one primary derivative intervention: to deploy staff to supervise specific areas and to assign staff or trained others to particular areas at specific times, allowing wandering within the controlled (even locked) units or other designated areas.

Examples of this assumption involve places where scheduling operates in a revolving way, such that people can be deployed to areas used by several people as needed (obviously as some older individuals leave a ward, the demand for staff there might be reduced). Other examples include those using monitoring devices on building exits and/or individual people. Such places may be irregularly shaped to give the impression of both open expanses and little niches.

It is possible that other assumptions and interventions will be revealed through study of more institutions and programs.

Interventions For Disorientation. Some success has been documented for improving wayfinding skills independent living older people (Evans, 1980), though individuals differ throughout life in facility for orientation and wayfinding (Kozlowski & Bryant, 1977). Small scale studies of both institutionalized and non-institutionalized older people have indicated that motivation and landmarks (Moore & Golledge, 1976; Fehr & Fishbein, 1976)-- especially if easily named (Evans, 1980)-- can improve wayfinding. Practice also seems to be a key in spatial understanding (Evans, 1980; Herman & Bruce, 1981).

Despite the fact that there appear to be ways of improving wayfinding skills, my own visits to over 350 health care environments have indicated fewer than a dozen facilities which formally do so.

The Essence of Problems Posed by Geriatric Wandering.

Judging from case study accounts, what makes wandering a problem for the individual is a function of the circumstances he or she encounters (exposure, traffic, predators, social criticism) and the inability to control at will his/her return to some designated location of safety.

Wandering becomes a problem for the individual also as it affects others: family, peers, caregivers (Hiatt, 1980c; Burnside, 1980; Monsour & Robb, 1981).

The functional significance of wandering is the safety of the client and time spent preventing injury.

-Hussian, 1981, p. 139

The literature cited and reviewed here has failed to establish evidence that motor behavior itself poses a risk to older people who wander. While references are made to the serious consequences of wandering, no cross-institutional studies have been conducted to document the hazards of wandering relative to some alternative such as not wandering or being restrained. It does appear that some older people are characterized by motor behavior which is viewed as excessive and may indicate underlying problems such as agitation, depression, negative reaction to drugs, discomfort or pain.

The literature surveyed did not establish an empirical link between excessive motor behavior (wandering) and disorientation to time or place. This is probably due in part to the scarcity of research. Based upon the literature cited, it appears some people who wander may be spatially oriented. This paradox can be explained in several ways: (1) The individual who wanders and is judged oriented may be looking for home, a bathroom, or a different set of environmental stimuli; (2) the individual may attempt to interpret environmental cues in order to get a fix on his or her current location or to select an appropriate route; (3) The individual may have incomplete attentional processes affecting orientation. For example, the individual may rely on memory traces or

cognitive maps of some environment of the past to locate a goal despite the 1) unavailability of that goal in the present environment; or 2) inappropriateness of the motions taken in the present setting. Inappropriateness is not meant pejoratively, but rather in the sense of unlikely to help fulfill the goal.

There are other possible interpretations of wandering, especially where that movement may become an end unto itself such as activating or arousing oneself through motion. One of the paradoxes of wandering appears to be the potential that it is both a problem and a problem-solving technique. Motor behavior might signal the individual's intelligent attempt to cope with a perplexing situation. On another level wandering may be a form of social deviance creating a problem for the institution unprepared to care for an individual who is neither sedentary nor predictable.

CONCLUSION

Both survey and observational data are needed on people who wander. A survey should clarify what institutions are doing, identify the innovative, and help improve definitions of wandering. A survey may also clarify specific questions such as patterns of restraint use and the success of technology and other means of responding to wandering. Observations should clarify: (1) differences between wanderers and non-wanderers (and include women who have been notably excluded from previous studies); (2) the movement and its serious consequences; (3) the characteristics (safety, rules, normative behavior) of the area one moves in; (4) the individual's reactions before, during and after the movement; and (5) life history. Data are also needed on the health of

wanderers compared to non-wanderers.

Though wandering is frequently referred to as a complex behavior (Burnside, 1980; Hussian, 1981; Dawson & Reid 1985), interventions described in the literature are typically monolithic as though all wandering is similar. Research on types of wandering and on types of interventions is needed to determine the relationship between what is being done and what is best for wandering. It is time to sort out information on the behavior, on interventions and on how future research could and should be conducted. Perhaps some of the problematic aspects of wandering can be minimized to make life more comfortable for everyone involved.

RESEARCH QUESTIONS

This research addressed several questions;

1. What characterizes wandering behavior and people who wander?
2. Is wandering associated with disorientation?
3. What do staff members feel causes or triggers wandering?
4. What is the nature of the movement or disorientation itself?
Are there patterns of wandering?
5. Does the motion have a purpose or function?
6. Is the motion risky? If so, what are the risks or problems of wandering?
7. What is the nature of institutions that care for people who wander?
8. Are there features of institutional life or environments that seem to be associated with higher or lower rates of wandering?
9. What are the special implications, if any, of using restraints, of confining residents, and of using signaling devices? And, what are the implications of doing nothing at all? What do nursing home staff think works well?
10. What seems innovative?

Research questions were formulated in lieu of hypotheses because at the time of this study, empirical data on wandering were scarce and though two of the six empirical studies of wandering had been conducted by this investigator, none directly addressed these research issues.

STUDY 1: SURVEY OF INSTITUTIONS

Methods and Procedures

Survey Rationale. The reports of wandering, identified through social science and health literature are based on single institutions. These studies were typically conducted by in-house or closely allied researchers and the facilities that sponsor such self-study might be considered innovators or more sophisticated than the norm. None included a survey of how wandering is perceived or dealt with across U.S. nursing homes.

One useful approach to obtaining systematic data on the incidence of wandering and the state-of-the art on intervention would be to survey facilities on the behavior of specific individuals, much as the National Center for Health Statistics (NCHS) has conducted other nursing home studies (NCHS, 1979). Or, an interdisciplinary team of investigators might conduct on-site observational research in a carefully drawn but random sample of institutions. Other approaches for obtaining an understanding of what institutions know and are doing about wandering might be to conduct telephone interviews, poll caregivers at conferences, or ask families. If one were interested in a true picture of wandering, families would need to be interviewed as they are estimated to be the major source of care for older people (Morschek, 1985). The literature search turned up little information on wanderers in family settings or family coping strategies. In-depth observations of individuals at home or in institutions would also be valuable, especially if caregivers were responding to similar questions in a

comparable time frame.

Why with all these options should this investigation be based primarily on a mail survey? The decision was based on the need to establish a baseline of understanding and national practices which could be useful in focusing subsequent research and educational efforts. Wandering is a scarce phenomenon. With an incidence of 11% and an average facility size of less than 100, one would need to collect data from a sizeable number of institutions to get a statistically respectable sampling of individuals. The researcher is then plagued with contextual problems. Selecting 10-20 institutions randomly from over 15,000 would not necessarily yield a representative sample. What effects might different institutional features such as sponsor, location, size or level of care have on the findings? Not enough was known about the institutions to develop an informed sampling plan to obtain meaningful data on individuals.

For this study, a survey was selected as a means of obtaining a set of data on a small but nationwide set of institutions. In the interests of obtaining a high rate of return, the survey focused on generalizations about wandering rather than more time-consuming reports of individuals. It represents a step along the road to understanding wandering and could be useful in progressing large scale, in-depth studies of individuals.

The choice of a survey was also arrived at by responding to realities of time and funding-- both of which were limited. Had the study been funded by an outside source, it would have included more detail on family members, included more on-site visits and dealt with specific

individuals.

The survey of institutional practices offers different sources of information (the views of directors of nursing) and seemed to be a technique that expanded the scope of episodal accounts and single-institution studies already available. Where the research to date had often reported on particular interventions (such as Cornbleth's analysis of special wards or Snyder et al.'s work on retraining), a survey would indicate whether these were standard or unique. The survey could also facilitate most other investigations needed in an overall plan of research.

Purpose of the Survey. The survey of institutions was developed to obtain broadly based information on 1) definitions of wandering; 2) experiences in caring for wanderers; 3) effectiveness of various interventions; 4) caregivers' impressions of factors that contribute to the tendency to wander; 5) relationship, if any, between the overall philosophy to interventions; and 6) the possible connection between environmental design descriptions of the institution and rates of wandering or of disorientation.

Literature, cited in the Review of Literature, suggests that wandering is a factor in the decision to institutionalize an older person. These questions were designed to clarify what institutions do with the wanderers in their care.

Description of the Survey. The four page survey contains 28 questions in three categories. It began with a half page explanation and set of instructions which were typed and photocopied onto University letterhead.

The survey items by category included:

1. Introductory Information: Demographic and background information on the facility and respondent's role and tenure.
2. Descriptions of Wandering: Respondent's use(s) of the term "wandering, whether wandering is viewed as a problem, and what the respondent thinks is the best one could expect from research on wandering.
3. Numbers of Wanderers: Actual numbers of wanderers and counts of people who are disoriented but do not wander; whether anyone has wandered away (number).
4. Administrative Policies Toward Wanderers: Admissions policy regarding wanderers; whether the institution has intervention policies and if so, what they are; and an indication of overall philosophy of care.
5. Practices on Caring for People Who Wander: Approaches used in dealing with people who wander (e.g., none, use of restraining/controlling devices, retraining or redirecting behavior, other); designation of special units for wanderers, methods used vs. thought best in preventing wandering, whether the staff feels special methods for dealing with wandering are necessary and if so, whether they have developed any.
6. Concepts of Causes: Staff views of probable contributing factors to wandering and which of these seem to account most for wanderers in their care.

7. Consequences of Wandering: Rates of runaways, whether wandering has resulted in serious consequences and what these are.

8. Other Items: Shape of building where most wanderers are housed, interest in a copy of findings and willingness to participate in a follow-up study of people who wander.

Survey Appearance and Design. The survey is predominantly composed of check-off items with seven items where a respondent may write-in "other" responses or give additional explanations. It was designed to serve as its own envelope; on one side, it is addressed to the respondent and on the other, it is addressed to the researcher. Simple black type was used on white paper with a boldly lettered headline "Learn Why People Wander" and a neon-colored "stick-on" closure. All first class postage was provided by the researcher. Respondents were given one month to reply.

Initial Procedures. The survey was initially developed and mailed to 16 institutions for pre-testing. Four of these pre-tests were followed by telephone calls to the respondents, requesting suggestions for topics, wording and reaction to the survey design. Minor reorganization and wording changes were made and two additional features were added: a sketch of building outlines based upon Weisman (1980) and an adjective description list based upon Ostrander (1972).

Overview of Statistical Procedures. All surveys were coded for computer analysis and entered on tape. The SPSS-X statistical package (SPSS-X, 1984) was used for all statistical work. Open-ended questions were typed out and organized using a word processor for convenience.

Among the statistics used were marginals (frequencies, percentages, bar graphs and histograms); cross tabulations and chi-squares, t-tests for paired and grouped responses, analysis of variance, scattergrams and Pearson correlation, factor analyses (using principal components method of extraction and varimax rotation), multiple regression, and non-parametrics (Wilcoxon test for comparisons of ranks).

Data from open-ended responses have been used to illustrate and clarify statistical findings. Write-in responses were also used as a basis for recommending topics and wording changes for subsequent researchers.

Actual levels of significance are reported wherever possible for associations which were significant at a .20 level or better. For ease of reading, probabilities greater than .20 are left blank or the abbreviation n.s. (not significant) is used.

Data Reduction Methods

The survey contained a number of short answer lists to facilitate respondents' replies. The lists were developed from contemporary literature and from the pilot study (Hiatt, 1981b). Long lists include: reasons for wandering, interventions used, and facility descriptions. Each of these had over twenty items. Short lists included facility goals, administrative policies, best outcomes of the study and definitions of wandering.

Lists are used in several ways. First, they are reported as data. In several instances, they are run against background variables such as facility size or correlated with dependent variables such as rates of runaways. Second, they are reduced using factor analytic techniques.

The resulting factor structures are reported as possible underlying constructs which may be useful in explaining wandering, intervention approaches, facility features or definitions of wandering. In this reduced form, the items were used to propose more parsimonious definitions and explanations. Third, in several instances, the factor scores are used as data and correlated with other variables; i.e., factor scores for facility description were correlated with rates of movement and types of interventions used.

Computation of Summed and Indexed Scores

Several of the lists were developed into indices. For example, the total number of interventions was sub-divided according to those dealing with 1) confinement or restraint; 2) orientational cues; and 3) programs. Sums were computed for each of these and used as data in correlations with rates of movement or disorientation.

All frequencies for rates such as disorientation, attempts to leave, pacing, roaming and runaways were converted to percentages based upon the size of the facility. In regression analyses, small variances resulted in a need to transform these percents to square roots to improve the spread for mathematical computations.

Specific indices and some weighted scores were developed for dealing with the data on both movement and interventions. These are explained in detail in the findings section along with the results.

Heightening Understanding: Extremes Analyses

Are facilities with high rates of wanderers different from those with low rates? Are those with more controls or restraints different from those with more lenient interventions? To tease out differences several

extremes analyses were done. Rates were divided into thirds and only those cases at the two extremes were included in a select set of comparisons.

Shortcomings of Procedures

During data analysis I became acutely aware of several study limitations.

1) In an effort to design a short study, the respondents were given a number of items requesting simple "yes" check marks. Dichotomous data for interventions made it necessary to run analyses of variance rather than using correlations in comparing percentages of wanderers with uses of interventions.

2) In an effort to reduce confusion, the term "wandering" was not used when asking respondents for rates of movement. Instead, operational terms such as "attempts to get out", "paces", "roams", and "leaves building" were specified on the questionnaire. However, one cannot be sure that the resulting responses are mutually exclusive. This makes estimates of overall rates of wandering to be compared with NCHS (1979) data rather suspicious as overestimates. (Or, it makes one wonder whether respondents to NCHS questions have a single notion of wandering.) Only one set of tables include a subtotal for the different types of movement. All other data deal with the specific type of movement: pacing, roaming, trying to leave or running away. The correlations and response patterns seemed to justify distinctive treatment of the different types of movements but computations were laborious.

3) The unit of study is the institution, even though institutions are reporting on rates for individuals. As such, we do not know, for example, in reporting on multiple uses of restraints whether they are using several techniques on one person or whether the organization has a "tool kit" of responses for wanderers. We cannot link causes to specific styles of movement.

4) Much of the initial exploratory work with the data involves use of correlation techniques. Correlation is a measure of association, not causation. Thus, when high relationships between certain restraining procedures are related to high rates of runaways, we cannot determine which comes first. In some instances, direction is hypothesized for the benefit of future investigators; in others, alternative hypotheses are offered.

5) There is also some concern over the accuracy of figures. Work in a specific site (see Study 3) revealed occasional controversial judgments about patients. Some staff seem to "know" their patients better than others. Some respondents actually tallied each type of wandering (several questionnaires were returned with stick figures for numbers as evidence of their efforts). Others gave a broadly based estimate (using percents rather than the requested frequencies). In larger facilities, a director of nursing may have less hands-on experience. These possibilities raise some questions about the estimates of any phenomenon from a generalized survey rather than a case-by-case review of residents.

6) The variance in institutional size was skewed by three facilities over 250 beds (one at 800). These outliers were dropped from several analyses as noted in the text.

7) Two or three facilities (depending on the item group) are omitted from several analyses because they had missing data. The survey respondents are typically 167 rather than 170 for several sub-analyses.

Despite these short-comings, the data on the whole seemed fairly good. In many instances, the general findings seemed to coincide with the variety of experiences I had had in visiting some 350 U.S. institutions.

Sample Selection

A stratified random sample of nursing homes in eight states was developed using a national directory (Morgeau, 1982). Each state sets up its own nursing home requirements and they vary slightly, as do average sizes and rates of sponsorship. Several techniques were adopted for maximizing sample representativeness.

Goals for Sample Size. The goal was to obtain a reasonable sample: large enough to generate meaningful data on policies and practices and small enough to handle within a dissertation context. Data collection was primarily investigator funded, limiting the availability of money for mailing and analysis. In consultation with the research committee, a return of 60-100 of the nation's 15,000+ licensed institutions seemed appropriate. (About 3,500 nursing homes are not licensed. These facilities vary from retirement homes for nuns to small homes for the

aged with very low levels of staffing.)

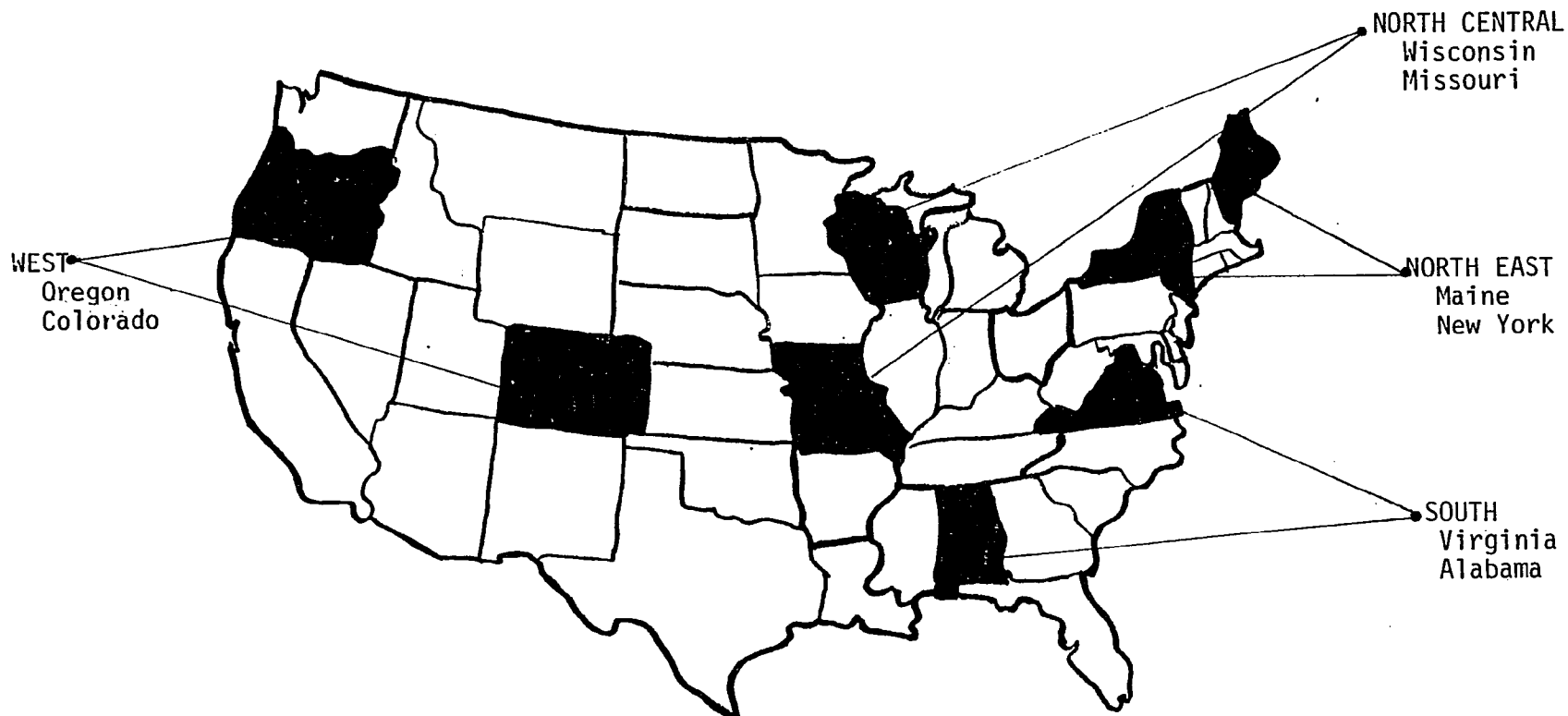
My colleagues and I had recently conducted a larger scale nursing home study that generated response rates of 24% (Berkowitz, et al., 1979) from a mailing to 4,700 randomly selected nursing homes. Therefore, it seemed reasonable that 400 questionnaires might yield about 100 replies.

Limiting Survey to Eight States, With Dense and Sparse Populations. In itemizing study questions, the importance of understanding "national practices" in dealing with people who wander suggested that input from institutions across the country be sought.

In order to obtain broad national input, yet keep within the bounds of meaningful data handling, the decision was made to sample from each of the U.S. Health and Human Services four geographic regions. Using a U.S. map showing HHS regions and population statistics, eight states were initially chosen so that a state in each region which was densely populated was balanced with a state that was more sparsely populated. (See Figure 1.)

One of the national differences in nursing homes pertains to over- or under-bedding; states vary with respect to the numbers of nursing homes available for older people. Variations are not necessarily related to populations of older people, but to a variety of other social factors and local policies with respect to how nursing homes are used (Valiente, 1984). To minimize the problem of selecting two states within a region that happened to be high (or low) with respect to the number of beds available, which might result in over-sampling from one geographic regions, some proportions were developed. Using NCHS data, the

Figure 1
Geographic Distribution of States and Regions
Sampled for the Survey



proportion of all U.S. facilities was computed for each of the four HHS regions (Northeast 20.5%, Northcentral 31.1%, South 26.0% and West 24.4%). These percents were applied to the target of 400 facilities yielding the approximate number of facilities to be surveyed from the two states selected for each region. Two criteria were used to finalize state selection. First, the number of nursing homes in the two states, when added together, needed to reflect the overall percent of 400 appropriate to that region. Next, the contending states were mapped and "eyeballed" for geographic distribution. Alternatives were considered until a balance of states, geographic coverage and population density was achieved.

Sponsorship. There are three types of sponsors of nursing homes: public (5.5%), non-profit charitable organizations (17.7%) and private, for profit entrepreneurs (76.8%) (NCHS, 1979). Local custom, state policies, tax advantages and other factors have resulted in unique profiles of sponsorship by state (Kane, 1984). A stratified sampling technique was applied to obtain a national picture of wandering despite variations in state rates of sponsorship. While this might have resulted in oversampling sponsors in one or two states, it was done to yield a more representative national picture.

Facility Size. The most comprehensive and up-to-date national directory for nursing homes available in 1982 was used as a source list of facilities. This includes 15,272 licensed nursing homes and was actually collected approximately two years earlier than the publication date (Mongeau, 1982). Unfortunately, no tabulations were ever made summarizing data from that 669 page survey, so one must rely on

government data collected in 1977 for statistical profiles describing nursing homes.

National estimates are that sizes of nursing homes are increasing from 1970 to 1984 (Kane, 1984). These increases are the result of a) actual increases in the numbers of older people; b) closing of smaller facilities which tend to have more financial difficulties complying with regulations; and c) additions on existing facilities which are often deemed less expensive than developing whole new facilities. To keep from oversampling the small facilities, NCHS data on the numbers of small and large facilities (below or above a median of 96 beds) were used as a basis for sample stratification.

Summary of Sampling Procedure. Using the Directory of Nursing homes, a the numbers of nursing homes in each of these states was obtained. Then the proportion of that total accounted for by each state was calculated. That percentage was applied to the goal size of 400 to determine a target number of institutions to be surveyed in each state.

Then national data on sponsorship was applied to the target number for each state to determine how many facilities of each sponsorship needed to be selected. Using the national median on nursing home size, at 96 beds, the number of "large" (above median) and "small" (below median) facilities was determined. Minor adjustments due to rounding resulted in a list of 430 institutions (Appendix Table B-1).

Doubling the Rate of Sampling the Proprietary Institutions. At this point, data from the pilot test results were analyzed. The pilot survey sample was also stratified. Surveys were mailed to 36 institutions and returned by 13 (36%). However, for profit nursing homes under-responded

by 50%. Similar return rates occurred in the larger national nursing home survey my colleagues and I had conducted (Berkowitz, et al., 1979).

Four options were identified in anticipation of underresponse by proprietary nursing homes: a) ignore the problem and be satisfied with under representativeness; b) follow-up the mail with phone calls, which had been successfully done in the Berkowitz study, but at substantial cost; c) launch a second mailing based on return rate; or d) mail out twice as many surveys to proprietary homes. Since there was a real possibility that season could influence wandering rates, it seemed best to double the mailings rather than try and compare two calendar periods.

The target sampling figures, calculated for proprietary facilities, were simply doubled, and surveys were mailed to 708 facilities in all. For a sampling summary, see Table 3.

Techniques for Developing Questions. Question topics were derived from issues raised by the literature: how do people define wandering? What might contribute to it? What are the rates of wandering? And what interventions are being used and/or working best? Specific items were based on open-ended interviews conducted in 1980 as a preliminary study with staff of a state hospital (Hiatt, 1981b). There had been no similar survey of U.S. nursing homes, and the other published accounts of wandering focused on selected aspects of individual or family recollections of behavior-- not on the institutions themselves.

Staff of nursing homes are well known to be frustrated by internal paperwork. My own site visits have also alerted me to staff feelings of frustration with researchers who do not appear to understand the routine and pressures of the organizations and who seem negatively predisposed

Table 3

Final Computational Estimates for Sampling of States: Showing Doubling of Proprietary Homes to Compensate for Anticipated Underresponse

State	Proprietary		Nonprofits		Public		TOTAL
	Lg	Sm	Lg	Sm	Lg	Sm	
Maine	16	16	2	2	1	0	37
New York	48	48	6	6	2	1	111
Virginia	38	38	5	4	2	1	88
Alabama	42	42	5	5	1	1	96
Wisconsin	46	46	5	5	2	2	106
Missouri	50	50	6	6	1	1	114
Colorado	40	40	5	5	1	1	92
Oregon	28	28	3	3	1	1	64
Subtotal Size	308	308	37	36	11	8	
Subtotal Sponsor	616		73		19		
GRAND TOTAL							708

toward institutional care. Based on previous survey experience, several objectives were established to maximize staff input and yet focus responses on several rather detailed areas of inquiry (i.e., causes and interventions).

1. Keep the survey short-answer and brief looking
2. Organize questions so that those easiest to answer come first
3. Make it simple to mail, pre-addressed and stamped
4. Seal it with a boldy colorful tab to distinguish it from other items on the desk or in a stack
5. Prepare a cover letter which demonstrates researcher interest and empathy and which asserts protection of respondents' identities
6. Keep language straight-forward and non-evaluative
6. Offer to provide follow-up report of findings

SAMPLE DESCRIPTION

Return Rates. Of the 708 surveys mailed, nine were returned marked "closed" or "out of business", yielding a net response rate of 24%. Rates of return ranged from 14.6% for Alabama to 40.5% for Maine and averaged 25.4%. Two-group t-tests were run to compare the numbers of surveys sent and received by state and indicated no statistical differences in rates of return ($df=7$, $t=8.15$, $p=.20$). (See Appendix Table B-2).

Representativeness of Size and Sponsorship. The ratio of large (above the national median of 96) to small (below 96) facilities was 56 to 44. (See Table 4.) Facilities ranged from 14 to 800 beds, with a mean of 116. Only two completed surveys were returned for facilities over 300 beds.

Most U.S. states certify nursing homes at two levels, based on the number of licensed nursing personnel provided. These are known as "Skilled Nursing Facilities" (SNF's) (approximately 2.7 hours of care per older person per day) and "Intermediate Care Facilities" (ICF's) (1.7 hours of care per person per day). The combined total of skilled and intermediate care beds constitutes the general category of "nursing home" used as a basis for computation of rates of wanderers in this study. The average size of nursing homes in this study is 108.5 beds with a range of 13 to 800. The sample compares favorably with national data on nursing home characteristics as Appendix Table B-2 illustrates.

Of the three types of sponsorship surveyed (for profit, non-profit/church, government), government facilities underresponded. When returns from government and non-profit facilities were pooled and

Table 4
Summary Statistics on Sampling

	Sent		Received		t	df	l.s.
	No.	%	No.	%			
Size							
Large Homes	356	50.2	95	55.9	7.90	7	n.s.
Small Homes	352	49.7	75	44.1	8.16	7	n.s.
Sponsorship							
For Profit, Proprietary	616	87.0	142	83.5	8.18	7	n.s.
Nonprofit + Public	92	13.9	38	16.5	5.93	7	n.s.
Nonprofit	(73)	79.3	(33)	(86.8)	--	--	--
Public	(19)	20.7	(5)	(13.2)	--	--	--
Region							
North East	148	21.0	38	22.4	.	3	n.s.
South	184	26.0	38	22.4			
North Central	220	31.0	55	32.4			
West	156	22.0	39	22.9			
TOTAL	708	100.0	170	100.0			
Response Rate				24.0			

Table 5

Summary of Respondents' Characteristics^a

CHARACTERISTIC	No.	%
<u>Positions of Respondents</u>		
	n= 169	
Nurse; Director of Nursing	151	89.3
Administrator	14	8.3
Other: i.e. Social worker	4	2.4
<u>Tenure of Survey Respondents</u>		
	n= 169	100
Five or more years	90	49
Three to four years	33	20
One to two years	36	21
Under one year	16	10

^aThe survey was addressed to the Director of Nursing.

compared with for-profit facilities, there were no statistically significant differences in response rates. This justified double sampling of the for-profit facilities. However, follow-up studies should also increase the initial mailing to government facilities.

Respondents. The surveys were addressed to Directors of Nursing. And, directors of nurses accounted for 89% of the respondents, followed by administrators (8%). (See Table 5.) Most respondents (49.7%) had been with the facility five or more years. Length of tenure was not systematically correlated with the findings.

Facility Locations. The facilities are predominantly located in cities (31%) and small towns (34%). (See Appendix Table B-3.) Suburban nursing homes accounted for 20% and rural for 14% of the sample. Generally, analyses of responses did not differ on the basis of location. Associations between rates of disorientation and rural-located facility are noted and are discussed in a later section. The people in these facilities are less urban than the facilities themselves, with 70% of the institutions reporting "some" or "all" of their population as rural.

Indications of Interest in the Topic. The topic apparently was of interest to the respondents, as indicated by their current rates of wandering, judgment of its problematic effects, and curiosity about the findings.

In the three month period of July - September, 1983, 94.6% had had a person wander either inside or away and 81% had had a person wander away from the building, outside onto the street or grounds. Two-thirds of the respondents (66.1%) considered wandering a problem at this time. To

another survey item, 62.1% defined a person who wanders as one who "presents a problem for staff". It is quite possible that respondents to this survey over-represent facilities with wanderers; a sampling of non-respondents should be conducted in subsequent larger scale research to address such possibilities.

Other indications of interest included:

-91.7% of the respondents wanted a copy of the results;

-52.8% indicated that they "might be willing" to participate in a follow-up study and 9.9% "would be willing" to participate in a follow up.

Characteristics and Features of Facilities Studied

Facility Descriptions. What types of facilities ARE nursing homes? At the time this study was conducted an article on long-term care facilities in the U.S., based on 1977 NCHS published and unpublished data, indicated:

75% of all nursing homes are over 10 years old; almost 40% are over 20 years old. Over 60% were purpose-built; converted hospitals are rare. Most homes are a mixture of private and semiprivate rooms. Less than one third of all nursing homes reporting in the 1977 nursing homes identified themselves as part of a chain. Another 13% were tied to a health care or retirement facility.

- Kane, 1984, p. 385

The respondents to this study seem to reflect these norms.

Managerial and Service Objectives

One of the premises to be explored in this study was whether reactions to wandering were a function of the institution's overall philosophy and procedures. Two sets of survey questions were posed to

Table 6

Institutions' Overall Approaches to Care of Older People;
Frequency and Percentage Distribution

DESCRIPTION OF CARE	No.	%
Rehabilitate people to return to a lower level of care	122	73.1
Maintain present level of physical functioning	119	71.3
Maintain present level of mental functioning	110	65.9
Keep people comfortable	97	58.1
We are in the process of change (new management, new building) and our philosophy is being worked out	5	3.0

Note. Based upon 167 respondents to any of these items. A total of 453 responses were checked. Question was worded, "What best describes your approach to older people in your care?"

obtain insights of management philosophy and concept. The first asked about the nursing home's approach to individuals; choices ranged from benign ("keeping people comfortable") to "rehabilitation". Because I felt hesitant about asking respondents directly whether their facilities were geared toward custodial care, the term "keeping people comfortable," which has been used at conferences as a euphemism for custodial care, was adopted here. Institutions which claim to "maintain" physical or mental abilities are sometimes viewed with more prestige than custodialism on the assumption that old age is characterized by decline, so maintenance requires more effort (Kane, 1984). Rehabilitation is controversial. Some administrators feel that rehabilitation is the goal of a hospital and equates with heavy emphasis on physical care to the exclusion of other needs (Mendlovitz, 1984, personal communication; Brody, 1970). Table 6 illustrates the findings. These items collapsed in a factor analysis to one item with a single factor structure. The question needs revision and could be administered as a set of scales in follow-up research.

Respondents were also asked to describe their services in general. The most common reply was that services are geared toward rehabilitation (44.9%) and physical care (30.5%). Fifteen percent wrote in responses indicating that their nursing home was wholistic, embracing both physical and mental aspects of the older person. (Table 7, see note.)

The responses to these two items (greater than 15%) were recoded as six possible responses (three from Question 7, three from Question 8) into one item and factor analyzed. As Table 9 shows, two factors resulted which explained 67.6% of the variance. The first factor,

Table 7

Description of Facility's Services;
Frequency and Percentage Distribution

SERVICE DESCRIPTION	No.	Percents	
		Net	All
"Our services are geared toward rehabilitation"	75	58.6	44.9
"Our services are geared toward physical care"	51	39.8	30.5
"Our program is geared toward mental functioning"	2	1.6	1.2
Subtotal	128	100.0	
All "OTHER"	39	--	23.0
Total	167	--	100.0

Note. The net total of 128 responses represents 76% of the 168 respondents who followed directions and gave one reply as requested. Despite instructions, 24% gave multiple responses, probably an indication that a substantial portion cannot categorize their services as monolithic "physical" or "mental" programs. Fifteen or 9% of the total 168 respondents classified their programs in all three categories; thirteen or 8% indicated that services are both mental and physical in orientation; and 9 or 5% characterized their efforts as physical care and rehabilitation.

Table 8

Zero Order Correlations Among Management Philosophies

MANAGEMENT PHILOSOPHY		Maintain Physical Function	Maintain Mental Function	Reha- bili- tation
Keep People Comfortable	r=	.399	.412	-.160
	p=	.000	.000	.038
Maintain Physical Function	r=		.8544	-.266
	p=		.000	.001
Maintain Mental Function	r=			-.181
	p=			.019

Table 9

Management and Service Descriptions
Factor Structure Matrix

VARIABLES OF MANAGEMENT PHILOSOPHY	Maintenance/ Custodial	Rehabili- tation
	Factor 1	Factor 2
Factor Loadings		
Maintain present mental function	.890	-.209
Maintain present physical function	.865	-.307
Keep people comfortable	.704	.019
Services geared toward rehabilitation	-.165	.896
Gear services to physical care	.026	-.845
Rehabilitate to lower level of care	-.171	.551
Percent of Variance Extracted	45.6%	22.0%

The term "maintain" refers to effort to sustain skills which are on the decline. Returning to lower levels of care is viewed as a positive outcome since people need less supervision or institutionalization. Lower levels of care refer to one's own home (see Figure 2.)

Maintenance/Custodial, included the variables pertaining to maintenance of physical and mental function and the variable of custodialism, keeping people comfortable. The second was more clearly Rehabilitation Oriented. Table 10 shows that Maintenance/Custodial nursing homes tend to be significantly smaller ($r=.188$; $p=.016$). In the Findings section, these management patterns and the issue of institution size will be reintroduced and related to incident rates of wandering and choices of interventions.

Licensure and Level of Care. States vary with respect to how they license and refer to institutions. Since one can easily get lost in the terminology, Figure 2 has been prepared to clarify the language and patient/resident profiles. The difference in theory between the two major levels of care commonly called "nursing homes" is the average hours of nursing services and the qualifications of the supervising nurse. Typically, there are more staff and supervision is under the direction of a Registered Nurse nearly 24 hours a day in the Skilled Nursing Homes. In the Intermediate Care Facilities (called Health Related Facilities in New York), the supervision for 2/3 of the day is likely to be directed by a Licensed Practical Nurse (LPN) or Licensed Vocational Nurse (LVN) and fewer nursing assistants are available. Some states, like New York have a predominance of skilled nursing homes (called Skilled Nursing Facilities or SNF's) and others, like Connecticut have more Intermediate Care Facilities (ICF's). Appendix Table B-4 lists each of the eight states included in this survey along with the proportion of institutions responding that were Skilled, Intermediate Care or Both. Licensure is important to the administrator

FIGURE 2

A Full Range of Retirement Living Options; The Continuum of Care

		Brief Description
Lowest Level of Care	• Living in One's Own Home	Note: The overwhelming majority (70%) of all older people reside in homes which they own, NOT in institutions, apartments or shared living arrangements
	• Multi-generational family living ^a	
	• Specially built apartment	Apartment residences, typically age and often income prerequisites; may include government rent support for some or all apartments; may be no meal service
	• Congregate Apartment-	Apartment residences with central meals available or accessible; may be emergency or coordinating staff available
	• Apartment for Disabled	Like Congregate Care Apartments; typically more architecturally accessible
	• Home for the Aged/Personal Care Unit/Adult Home	Meals; housekeeping; personal assistance, may be a nursing staff available (not generally required)
Highest Level of Care/ Supervision	Nursing Homes/Rest Homes Convalescent Homes	Licensed Practical Nurse (requirements vary) supervises; about 1.5 hours/patient day of nursing care
	• Intermediate Care Facility (ICF)	
	• Skilled Nursing Facility (SNF)	Registered Nurse 24 hours/day; about 2.5 hrs/patient day of nursing care; all meals; housekeeping; activities
	• Psychiatric Hospital	
	• Acute Care Hospital	

A continuum of care refers to this full range of options.

Note. This chart has been adapted from one I prepared for Progressive Architecture, 1981 (August), p. 63.

^aThough there may be a lower level of care in terms of licensed supervision, it is important to point out that the family is the major care giver of older people.

or owner of a nursing home because it influences money available: charges are higher in SNF's than ICF's, so typically, more programs and care are available where there is more working capital. In this study, 54 or 33% of the responding institutions were SNF's, 82 or 50% were both SNF/ICF's and 17% were SNF only.

Licensure differences were associated with different patterns of management, size, facility location and admission policies (see Table 10). It was the facilities licensed as both SNF and ICF which were most unlike the other two levels of care. Typically ICF and SNF buildings are designed exactly the same; though for staffing purposes a separate section of the building is licensed specifically for Skilled or Intermediate care.

Size was statistically associated with licensure. The ICF only facilities were smaller; two-thirds were under 96 beds. The mixed SNF/ICF facilities were larger (2/3 over 96 beds). The SNF only facilities were equally likely to be small as large.

Over half of the mixed SNF/ICF facilities were oriented toward Rehabilitation (57%); only 27% of the ICF and 15% of the solely SNF facilities were so oriented.

In future studies of wandering, researchers should consider making comparisons within similarly licensed facilities, especially if samples are limited.

Facility Descriptions. An adjective check-list, originally developed by Ostrander (1972) for studying a variety of public settings, was modified and incorporated into the survey. The initial list of 24 descriptors and their respective response rates is presented as Table

Table 10

Crosstabulation Results of Selected Findings^a
By Institution's Certified Level(s) of Care

TOPIC	n	Level of Care			df	Chi Sq.	p
		ICF	SNF+ICF	SNF			
	= 54	82	27	163			
		Percents					
<u>Service Goals</u>							
Maint. Phys. Abil.	116	37.9	44.8	17.2	2	5.31	.05
Rehabilitation	118	27.1	57.6	15.3	2	9.65	.008
Keep pl. Comftbl	96	35.4	44.8	19.8	2	3.25	.197
<u>Facility Size</u>							
96 or more beds	91	19.8	64.8	15.4	2	19.89	.000
Under 96 beds	72	50.0	31.9	18.1			
<u>Facility Location</u>							
City	52	23.1	57.7	19.2	6	13.38	.037
Town	56	39.3	44.6	16.1			
Suburb	31	19.4	64.5	16.1			
Country	24	58.3	29.2	12.5			
<u>Sponsorship</u>							
For profit	137	36.5	48.9	14.6	2	3.83	.148
Church Nonprofit	21	19.0	52.4	28.6			
<u>Admitting Policy</u>							
Return to Home	21	9.5	76.2	14.3	2	5.11	.077
Recruit	29	37.9	51.7	10.3			
<u>How Confusing Bldg. Is to Residents</u>							
Not Confusing	37	43.2	29.7	27.0	4	9.15	.057
Somewhat	89	31.5	53.9	14.6			
Confusing/Very Confusing	30	23.3	63.3	13.3			

Note. This table highlights statistically significant findings. Other analyses yielded no statistically significant findings: i.e., 1) whether wandering is a problem now; 2) whether institution had had any wanderers three mos. prior to the survey; 3) serious consequences and 4) objective of maintaining present level of mental function.

ICF=Intermediate Care Facility (fewer staff and fewer highly trained)
SNF=Skilled Nursing Facility (more care given by more licensed staff)

Table 11

Description of Buildings' Bedroom Wings
Frequency and Percentage Distribution

Description	No.	%
Clean	144	84.7
Institutional	130	76.5
Airy	94	55.3
Colorful	93	54.7
Homey	87	51.2
Orderly	64	37.6
Modern	61	35.9
Busy	55	32.4
Calming	50	29.4
Efficient	47	27.6
Comfortable	43	26.0
Noisy	38	22.4
Plain	36	21.2
Congested	29	17.0
Lively	26	15.3
Dim	21	12.4
Impersonal	19	11.2
Old	19	11.2
Glossy	14	8.2
Well-worn	14	8.2
Antique	9	5.3
Bold	2	1.2
Other: Complimentary	13	7.6
Other: Deprecatory	7	7.6

11. Ninety-seven percent of the 165 respondents selected an average of 6.9 adjectives specifically describing the bedroom wings and areas of the building occupied by people who wander. This wording was carefully chosen to avoid referring to the decor of lobbies or showcase areas which may be off limits to the wanderer or confused older person. "Airy", the first item on the list, was selected by a surprisingly high 55.3% of the respondents. In subsequent uses of this type of checklist, the order should be varied to overcome any possible response bias or the tendency to select the first item. Other than this item, responses were fairly well distributed among items making up the alphabetized list.

The most commonly selected term for describing the nursing homes was "clean" (84.5%) followed by "institutional" (76.5%). About half of the nursing homes described themselves as airy, colorful (54.7%), or homey (51.2%). From those terms onward, choices were selected by a third or less of the respondents. Only 29.4% described their institution as "calming" and only 26.0% as "comfortable." The list was slightly more heavily weighted toward positive attributes (based on the judgment of two independent raters). In subsequent administration of this type of list, it would be better if positive, negative and neutral items were more balanced. Write-in responses referred to notions such as "private" and "personal" which would be useful to include in future checklists.

The entire list of descriptions was factor analyzed to obtain profiles of the building types. Factor scores were used to study whether

facility types were associated with rates of movement, disorientation or interventions used.

For the factor analysis, only items with at least an 11% response rate were included (see Table 12). While setting the lower cut-off at a 20% response rate would have been more statistically conventional, that level excluded adjectives associated with the extremes: the "congested", "dim", "impersonal", "lively" and "old" facilities would have been omitted. The cut-off did result in dropping: "antique", "bold", "cluttered", "glossy", and "well-worn" facilities. The factor analysis was performed on 19 bedroom wing adjectives. Five factors were extracted using a Principle Components method, Varimax rotation, with Eigen values of 1.0 or greater. These five collectively account for 51.7% of the variance, suggesting considerable heterogeneity among the descriptors-- and hence the facilities. The factors and their respective variances are: Utilitarian (17.9%), Stark (11.3%), Overloaded (8.8%), Homelike (7.5%) and Outmoded (6.3%). The factor structures were fair, with adjectives loading at the .7 to .4 levels. Only the term "colorful" split its variance notably between the first and last factors. It is possible that the term has a different meaning in the two facility types (colorful by design in the Utilitarian facilities and color variety due to years' of acquisitions in the Outmoded ones).

These data will be reintroduced in a later sections of the Findings and discussed in conjunction with percentage rates of movement, disorientation and patterns of intervention.

Table 12

Descriptions of Residential Areas of Nursing Homes
Rotated Factor Structure

ADJECTIVES	UTILITARY Factor 1	STARK Factor 2	OVERLOADED Factor 3	HOMELIKE Factor 4	OUTMODED Factor 5
	L o a d i n g s				
Clean	.701	-.044	.042	.152	.044
Airy	.626	-.177	.035	.005	-.156
Orderly	.535	.051	-.279	.280	-.016
Efficient	.532	.175	-.106	-.143	-.100
Comfortable	.498	-.330	.060	.358	-.227
Dim	-.440	.430	-.022	.351	.137
Plain	-.004	.694	-.044	.266	.095
Institutional	.038	.661	.076	-.360	-.014
Impersonal	.066	.660	.036	-.203	.106
Busy	-.034	.016	.736	-.145	-.102
Noisy	-.137	.019	.686	-.059	-.120
Lively	.352	-.134	.632	.086	.136
Congested	-.169	.200	.504	-.018	.432
Cozy	-.078	-.025	-.075	.701	.004
Homey	.162	-.411	.058	.643	.130
Calm	.251	.086	-.207	.524	-.270
Old	-.107	.321	-.056	-.029	.694
Modern	.376	.041	.287	-.058	-.483
Colorful	.460	-.317	.093	-.100	.470
Variance Extracted	17.9%	11.3%	8.8%	7.5%	6.3%

Note. These rotated factors account for a total of 51.7% of the variance. Principle components method of extraction used.









Building Shapes. Seven outline sketches of facility floorplans based on a building configuration study developed by Weisman (1980), were presented as choices on the survey (see Table 13). Respondents whose facilities did not resemble one of the schemes were asked to adapt the closest sketch or "draw-in" their facility's shape. (See Table 14 which summarizes their sketches). Ninety-one percent of the respondents did select or sketch a facility shape. Of those 155 respondents, 71% selected one of the outlines provided and the remaining 29% drew up an outline of the portion of the building in which the majority of wanderers are housed. T-, H- and L-shapes account for 47.3% of the responses, exclusive of those "drawn-in-the-blank." One of the weaknesses of the question, indicated by five write-in responses, is that some institutions are a complex of buildings with wanderers located in more than one structure. These respondents were not included in the cross-tabulations or correlations. If building complexity is a function of the numbers of intersections and complexity of angles available, then less than ten percent of these facilities would be judged as simple.

Facilities were arrayed from those with simple to more complex layouts on the basis of the numbers of angles present (bar shaped, L, T, +, H, square or rectangular, double cross, and multiple geometric). Shapes chosen by less than 5% were dropped (V, square U, sunburst, crescent). This resulted in a subsample of 133 cases, which was reduced to 132 for those smaller than 300 beds or 78% of the total 170 sample. This array was then compared with facility descriptions using analysis of variance. Layouts were not statistically significantly correlated with the facility descriptions. In subsequent efforts to conduct

Table 13

Building Floorplan Configuration, Frequency and Percentage Distribution

Question wording: "Each of the following is an outline of a building shape. Check the shape that is most like the floorplan of the building in which the MAJORITY OF PEOPLE who wander are located."

Building Description	No.	Total %	Exclusive ^a %
"T" 	31	20.1	26.5
"H" 	23	14.9	19.7
"L" 	19	12.3	16.2
"+" 	15	9.7	12.8
"-" 	13	8.4	11.1
Square 	8	5.1	6.8
"U" 	7	4.3	6.0
"V" 	1	.6	0.8
Other ^b	45	29.0	--
Total	155	100.1 ^c	--
Exclusive Total	117		99.9 ^c








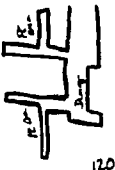





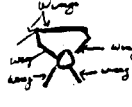







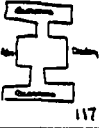
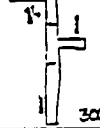
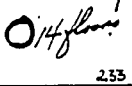





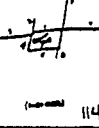


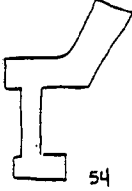
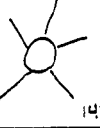

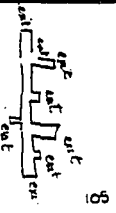

^a"Total percent" includes write-in "other" building shapes. The "exclusive total" is computed on the basis of categories of building shapes listed in the survey.

^bIncluded in the 45 "others" are: 13 variations of a double or triple cross; 10 round or starburst, 9 rectangular, and 6 erratic extremes, see following Table.

^cPercents may not equal 100 due to rounding.

Table 14

Tracings of Staff Members' Sketches of Unusual Building Shapes

 130	 59	 105	 89	 48
 150	 126	 120	 250	
 74	 60	 70	 84	 111
 131	 138	 70	 127	 2
 136	 88	 117	 300	 253
 178	 225	 72	 121	 125
 114	 60	 135	 54	 142
	 90	 105		 60

Note. Based on information drawn in by respondents. Multiple reductions were used on some drawings for comparability. Numbers in lower corner refer to beds.

research on this topic, it is recommended that data be collected on 1) number and location of entrances; 2) number of floors or stories; 3) location of control points such as security or nurses' stations; 4) number of intersections within each unit (i.e., whether units are cluster-style, "race-track" or double loaded corridors; 5) age of building and each new section or renovation; 6) presence of an outdoor area for wanderers. For configuration to be more fully explored, follow-up research could be conducted using more selective sampling.

Building Confusion. On the premise that the facility itself may contribute to disorientation for adults of any age (Blasch & Hiatt, 1983), staff were asked to rate how disorienting older people in their care found the building to be. Table 15 summarizes these findings. Less than a fourth of the respondents perceive that their facility is "not confusing", but only 4.4% judge it to be "very confusing".

Facility Size. Professionals have sometimes deliberated the question about appropriate size of facilities and units in conjunction with their concern over institutionalization (Bennett & Eisdorfer, 1974; Moss, 1979). While the average facility for this survey was 106 beds, the typical nursing home is sub-divided into smaller units of about 40 persons (with ranges from 25 to 60) (Miller & Barry, 1979).

An analysis of variance was run to study the individual and interactive effects of size and shape on estimates of facility confusion. Tables 16 and 17 show that facility confusion is more a function of shape than of size, but that shape explained a small percent of the variance. Straight line, L, T, and + shaped buildings were all judged less confusing, on the average, than were H-shaped, square, double cross or multiplex shapes. (Multiplex shapes are illustrated on Table

Table 15

Ease of Wayfinding for Older People in Building;
Frequency and Percentage Distribution

Response	No.	%
Not Confusing	37	23.3
Somewhat Confusing	90	56.7
Confusing	25	15.7
Very Confusing	7	4.4
Total	159	100.1 ^a

Note. Question wording: "How confusing is it for older people to find their way around this building?"

^aPercents may not equal 100 due to rounding.

Table 16

Analysis of Variance for Building Confusion Rates by Shape and Relative Size

FLOORPLAN SHAPE	n	HOW CONFUSING IS BUILDING (Mean) ^a			SS	df	MS	F Ratio	F Prob.
		Large 76	Small 56	All 132					
St. Line	13	1.29	2.00	1.62					
L	18	1.75	1.60	1.67					
T	32	1.80	1.47	1.63					
+	15	1.78	1.50	1.67					
H	23	2.00	2.14	2.04					
Sq. Rect.	8	2.40	2.67	2.50					
Double Cross	13	2.13	2.00	2.08					
Multiplex	10	2.88	2.00	2.70					
ALL		1.97	1.77	1.89					
Main Effects					15.621	8	1.953	3.17	.003
Between Floorplan Shapes					14.256	7	2.037	3.30	.003
Within Sizes					.216	1	0.216	.35	n.s.
2-Way Interactions								.97	n.s.
Shape and Size								.97	n.s.
Explained					19.802	15	1.320	2.14	.012

^aBuilding confusion was rated by staff in terms of how confusing the building is to residents on a four-point scale with four being highest.

^bNational averages for size were used; 96 or more beds=large; 95 or fewer beds being small.

Table 17

Nursing Home Size, Floorplan Complexity and Building Confusion
Zero Order Correlations

ITEM	Floorplan Complexity ^a n= 133	How Confusing is Building? ^b 170
Nursing Home Size	r= .125 p= .153	.158 .040
Floorplan Complexity	r= p=	.246 .004

^a Outline shapes of buildings were arrayed from simple, straight bar to irregular shapes and outside judges rated their complexity. Higher score is more irregularly shaped. Cases with no information on shape because of multiple sites or where judges did not agree on complexity were not included.

^b Staff rated how confusing building is to residents on a four-point scale with four being more confusing.

^c Size refers to number of occupied beds in skilled and intermediate care facilities of nursing home.

14.) In general, as the number of intersections and angles increased, so did the eta measure and the correlation with higher rates of facility disorientation. Overall, unadjusted deviation (eta) was .41 for shape, contrasted to .12 for size. In general, larger buildings were judged slightly more disorienting, with the exception of the straight line, H-shaped and rectangular facility where smaller ones were just slightly more confusing. Size and shape did not seem to have an interactive effect upon the ratings for facility confusion. There has been evidence, from another study, that older nursing home residents perceive size and shape as a function of their circumscribed living units and do not necessarily have an image of the whole facility (Evans, 1980).

To obtain an initial sense of the facilities themselves, zero-order correlations were computed between size and the 24-specific facility adjectives. Though some reached statistical significance, none of these correlations were particularly high. Larger facilities were statistically more likely to be described as glossy ($r=.213$; $p=.003$), modern ($r=.195$; $p=.005$), institutional ($r=.189$; $p=.007$), and airy ($r=.169$; $p=.014$) and tended to be cited as clean ($r=.091$; $p=.118$) and impersonal ($r=.083$; $p=.141$). Smaller facilities were described as homey ($r=-.199$; $p=.005$) and cozy ($r=-.137$; $p=.038$) and tended to be antique ($r=-.109$; $p=.079$), plain ($r=-.108$; $p=.081$), dim ($r=-.100$; $p=.097$) and worn ($r=.080$; $p=.151$). A zero order correlation was performed between factor scores for nursing home descriptive features and facility size (Table 18). Smaller facilities were significantly more Homelike buildings ($r=-.205$; $p=.004$) and more Outmoded ($r=-.123$; $p=.055$). Larger facilities were more likely to be Utilitarian ($r=.159$; $p=.019$). Size was not significantly correlated with factor descrip-

Table 18

Facility Description, Size, Service Orientations, Building Complexity and Shape, Levels of Care and Facility Locale: Zero Order Correlations

DESCRIPTION Factor Names	Size	Service Orientation		Descriptions of Building		Levels ^b of Care	Facility Locale ^c
				Complex	Confusing		
n=	167	165	165	162	167	162	168
UTILITARIAN	.159 .019	.009	.140 .036	-.062 .216	-.048 .106	.061 .221	.021
STARK	.057	.109 .082	-.084 .141	.122 .062	.095 .109	-.089 .130	.069 .186
OVERLOADED	-.003	-.178 .011	-.005 .473	.007	.209 .003	.221 .002	.017
HOMELIKE	-.205 .004	.088 .131	-.010	.023	.077	-.127 .054	.131 .045
OUTMODED	-.123 .055	.103 .095	-.077 .164	.045 .291	.024	.087 .136	-.080 .152

^a Building complexity is based upon how complex the shape of the building is in terms of choices provided; coded 1-8, higher score is more complex. Building confusion was judged by staff in terms of how confusing the building is to residents; coded 1-4, higher score is more confusing.

^b Intermediate Care Facilities (ICF) have lower levels of staffing; Mixed models, ICF and SNF have two levels of staffing; and Skilled Nursing Facilities have the highest numbers of staff of these three.

^c Locale coded according to where facility is located 1= Urban; 2=Suburban; 3=Small Town; 4=Rural.

^d Facility descriptions refer to factor scores. For factor descriptions, see Note. Significance listed when less than .20.

tions of Stark or Overloaded. These data will be reintroduced in later discussions, when the possibilities are explored that environmental design features are associated with incident rates of wandering or disorientation.

Multivariate Analysis of Building Confusion. A zero-order correlation matrix was run for facility confusion and size, shape and for each of the factor scores derived from facility descriptions. Larger facilities were more confusing ($r=.246$; $p=.004$). Facilities at the extremes of interior design tended to be more confusing (Tables 18 and 19). For example, both Overloaded ($r=.209$; $p=.003$) and the Stark nursing homes were slightly more confusing ($r=.162$; $p=.035$).

A multiple regression equation was developed to determine how size, shape and facility descriptions (factor scores derived from the adjectives) and level of care would predict the facility confusion. Cases were deleted on a pairwise basis and the analysis included a minimum of 132 cases entered stepwise. A first regression equation, developed on the basis of traditional procedures including the requirement that correlations reach a .05 level of significance to be entered. This resulted in only two variables entering the equation: facility shape and the characteristic of being Overloaded. (The term Overloaded was derived from the factor score and was made up of adjectives such as busy, noisy, lively and congested.) When a second regression equation was developed, the required correlation significances were relaxed to .10. Such a procedure, of exploratory value only, allowed another variable

Table 19

Regression of Facility Size, Shape and Description^a and Level of Care on Degree of Building Confusion

Block	INDEPENDENT VARIABLES	r	Unstandardized Beta (B)	Standardized Coefficient beta	Standard Error of B	F	Signif. of F
1	Building Shape	.35	.1302	.3497	.031	18.11	.0000
	Constant		1.43				
	Multiple R ²	.350					
	Adjusted R ²	.116					
2	Building Shape		.1237	.342		.081	
	Bldg. Descript'n "Overloaded"	.21	.1648	.200		.081	12.51 .0000
	R ² Change	.040					
	Constant		1.44				
	Multiple R ²	.403					
	Adjusted R ²	.149					
	F Change	.618					
	Signif. F Change	.014					
3	Building Shape		.116	.312		.082	
	Bldg. Descript'n "Overloaded"		.157	.191		.080	
	Nurs'g Hm. Size	.23	.219E-03	.138		.082	9.40 .0000
	R ² Change	.018					
	Constant		1.27				
	Multiple R ²	.425					
	Adjusted R ²	.161					
	F Change	2.83					
	Signif F Change	.095					

Note. For this analysis, outliers were dropped, PIN set to .10. Durbin-Watson Test = 2.29, total cases 164, minimum number of cases (pairwise deletion) 135, p=.01. No other items were entered following Step 3. Those variables not in the equation included: all other factor scores on facility appearance (Utilitarian, Stark, Homelike and Outmoded) and Level of Care. When PIN set to .05 and outliers included, only the first two variables were entered. They achieved a multiple R of .35, an R² of .124, an F of 9.38 and betas of .283 and .202 respectively.

^a Descriptions are based upon factor scores.

into the equation: facility size. The resulting equation had an slightly improved Adjusted R^2 (.161) and is reported in Table 19.

What can be made of these data?

1. It appears that a concept of building confusion is most likely formulated on the basis of facility features, particularly complexity of shape.

2. In general, judgments of facility confusion are unaffected by typologies such as Utilitarian, Stark, Homelike or even Outmoded --all of which may be established through interior design. However, facilities that are Overloaded are more likely to be judged as more confusing to residents. Taking a second look at these facilities (refer to correlations reported for Table 18), these do tend to be Skilled Nursing Care facilities (Level of Care is higher) and not oriented toward Maintenance/Custodialism. Perhaps reduction of social factors (noise and confusion) might be a method of mitigating the confusing aspects of a building when shape itself cannot be changed.

3. Facility size does not necessarily enter into judgments of building confusion, especially for facilities of simpler shapes. Nursing homes certified as Skilled Care are no more or less likely to be judged as confusing buildings than are those certified as Intermediate Care or even both.

Are these data valid? As an interpretive caution, it must be pointed out that staff were asked to make a judgment regarding residents' reactions. Over- and underestimations are possible; for example, if more patients are medicated or confined to wheelchairs, staff may not be able to make accurate judgments. In later sections of the Findings, we

shall see that more complex shaped buildings do not significantly correlate with the number of residents judged as disoriented. Facility disorientation in this survey item may refer to a nuisance issue; people are inconvenienced and frustrated by building features. Or, it may refer to spatial disorientation, one aspect of the larger concept of overall disorientation. However, being confused about the building is probably not being used by staff as a criterion for presuming the individual is disoriented, overall. Overall disorientation probably includes elements of time, person and social acceptance as well as place (see Study 2 Definitions which affirm these points).

This analysis suggests a series of issues for future research: Perhaps an architectural design that results in a facility with a simple shape may be less confusing to all of its users. Such a building may be efficient, promote independent movement or even greater confidence. However, it seems that simple shapes will be unlikely to improve the overall orientation to place of severely confused individuals. Perhaps design and program methods of managing the space through reduction of sensory overload (noise and congestion), may reduce "excess disability", that is remediable confusion.

Respondents' Reactions to Participation and Aspirations Re: Wandering

What do respondents hope for as the result of their participation in research on wandering? A list of eight possible outcomes was included in the survey and staff members checked any which characterized the best they could expect from research on wandering in the near future (Table 20). The item yielded a total of 667 replies, nearly four per person. This in itself indicates that these respondents, primarily directors of nursing, were looking for some different answers. Three-quarters (76.9%) felt that the best you could expect would be to make places safer for people who wander and 72.2% wanted to find new methods for keeping track of people who wander. Only 7.1% wanted to stop wandering and 23.1% sought more adequate payment for care of people who wander. The response patterns indicated that these staff members expect older people in nursing homes to wander. This is corroborated by the fact that 61.5% agreed with the statement that "there will always be wandering and wanderers." The typical staff member seems to be looking for alternatives to squelching wandering. This list suggests that there is good potential interest in new technology and safety measures and that discussion of wandering might be useful to organizations where disagreement exists or where questions of freedom and agreement are raised.

In general, responses were not statistically related to institutional or individual background characteristics with two exceptions:

Table 2G

Best Outcome Anticipated from Research on Wandering

Question Wording: "What do you think would be the best result from research on wandering in the near future?"

<u>"The Best That You Could Expect"</u>	<u>No.</u>	<u>%</u>
To make places safer for people who wander	130	76.9
To find new methods for keeping track of people who wander	122	72.2
To learn how to cope with the fact that there will always be wandering and wanderers	104	61.5
To give people who wander greater freedom	93	55.4
To get more agreement on ways of dealing with wandering	76	45.0
To make people who wander and their families more responsible for the risks involved	60	35.7
To get people to be kinder to people who wander	41	24.3
To get more adequate payment for the care of people who wander	39	23.1
To stop people from wandering	12	7.1

Note. Responses are based upon 168 respondents who replied to the question. A total of 667 responses was given.

*Those respondents who cited the research objective of "getting people to be kinder to people who wander" were more likely to be from not-for-profit (usually church-sponsored) homes (47.8%) than from for-profit institutions (20.6%; chi square=8.05; df=2; p=.018).

*Rehabilitation focused nursing homes looked for different outcomes from this research than did Custodial institutions: they were more likely to seek "Consensus" and less likely to seek "Safety and Freedom" (refer to Table 10). Rehabilitation oriented nursing homes were also more interested in "learning to cope with the fact that there will always be wanderers".

The list of outcomes chosen by 20% or more of the respondents was factor analyzed (Table 21) resulting in four factors, accounting for 73.4% of the variance. Three were fairly robust and the fourth was defined by a single item. The item referring to "better payment" split its variance between factors 1 and 4 and the item on "getting people to be kinder to wanderers" loaded on both factors 1 and 2. The factors and their respective variances were: Safety and Freedom (make places safer, give greater freedom, get adequate payment) (20.4%); Methods of Coping (learn to cope with the fact that there will always be wanderers; get people to be kinder...) (13.1%); Sharing the Risks (to make people who wander and families more responsible for risks and to find new methods of keeping track of wanderers) (13.4%); and Seeking Consensus (agree on ways of dealing with wandering; also, get adequate payment...) (13.1%). These factors may help guide in-service providers as much as researchers. Educators may want to clarify an organization's goals and staff members' objectives for programs and policies on wandering as a step in planning training programs (See Appendix D: Inservice Outline).

Table 21

Rotated Factor Matrix for Best Outcome Anticipated from
Research on Wandering

BEST OUTCOMES	Safety & Freedom Factor 1	Methods of Coping Factor 2	Sharing the Risks Factor 3	Seeking Consensus Factor 4
Making places safer	.750	-.053	-.259	-.049
Giving greater freedom	.705	-.002	.177	-.057
Getting adequate paymnt	.477	-.065	-.002	.407
Learning to cope.. ^a	-.149	.781	.016	.153
Greater kindness	.436	.607	.249	-.083
Sharing the risks	-.114	.181	.861	-.058
Ways of keeping track	.289	-.450	.523	.197
Getting more agreement on ways of dealing w/ wandering	-.096	.099	.005	.906
Variance Extracted ^b	20.4%	16.5%	13.4%	13.1%

^aSee Table 20 for exact wording of the outcomes

^bTotal variance accounted for = 63.4%

FINDINGS: STUDY 1

Organization of The Findings

Findings for Studies 1, 2, and 3 which constitute this research are presented individually followed by their own discussions and then conclusions are prepared which refer to all three. The Findings for Study 1 have been organized in two main sections. The first deals with percentage rates and causes of wandering and the second focuses upon the interventions themselves. A small section of the findings in both sections of Study 1 also deals with a secondary question: relationships of nursing home design with 1) confusion in finding one's way around the building ("building confusion"), and 2) spatial orientation. Fewer questions were included in the survey on these topics and findings are sketchier as a result. Because of the numbers of nursing home background variables involved (even after data reduction through techniques such as factor analyses), findings are discussed as they are presented. Each section concludes with a summary of the findings.

Study 2 supplements the short-answer definitions of wandering from Study 1. Readers who have not observed wanderers first-hand or who wish to familiarize themselves with behavior of individual wanderers may want to peruse Study 3 and Appendix C (which includes protocols for observation of wanders as individuals and in a group) prior to getting into the more analytical and general data on definitions which follows.

FINDINGS FOR STUDY 1: Survey of Institutions

Definitions of Wandering and Their Variety

Do staff members from different nursing homes agree on definitions of wandering? Survey respondents were given a list of five "characterizations" of people who wander as well as the option of writing in their own descriptions. These definitions were derived from the literature on wandering (cited in the Literature Review) and the preliminary study interviews with staff members regarding the behavior of 19 state hospital wanderers (Hiatt, 1981b). As illustrated on Table 22, no one definition emerged. This suggests the need to qualify terms or begin to develop more detailed behavioral descriptions of the movements and even the mental processes involved.

Two-thirds of the respondents characterized persons who wander as disoriented to the building. The survey deals in generalizations rather than individual data; the fact that staff defined wandering using multiple descriptors does not imply that every wanderer is disoriented to the building, aimless or a problem for staff. This response suggests that staff members expect wandering to occur in conjunction with disorientation.

This list of definitions needs revision; nearly half (45.6%) of the respondents supplemented the checklist with write-in replies. Of the 71 write-in responses, 66% characterized a person who wanders as one who leaves the building. A sampling of their responses appears on Table 23. The most common additions were: compulsiveness, becoming lost, restlessness, and boredom. The information staff supplied was quite similar to the open-ended definitions obtained in Study 2 which would serve as a basis for expanding the list of definitions.

Table 22

Characteristics of Persons Described as Wanderers; Frequency
and Percentage Distribution

CHARACTERISTICS	No.	%
Is disoriented to building	113	66.9
Presents a problem for staff	105	62.1
Is aimless	78	46.2
Moves more than is normal for elderly people	73	42.9
Has a problem paying attention, a wandering mind	65	38.5
Other (describe): Leaves building	51	30.2
All Other	26	15.4

Note. Responses are based upon 167 respondents who checked off any one of the options. A total of 511 responses were given.

Table 23

Write-In Comments Regarding Definitions of Wandering

CATEGORY	COMMENT/EXAMPLE
Purposeless Movement	Wanders off the unit for no purpose
Intentionality, Goal Directed	Trying to find home or family; leaves the facility with intentions of going to some past event or place Looking for lost family members, children, etc. who are not adults
Disorientation	Disoriented to place, time, person, but still wants to go out ...and is disoriented to surroundings
Judgment	Unable to understand need for placement or staying in building
Lost, Inability to Return	...and are unable to find their way back ...and gets lost Wander away from facility and is lost in community Gets lost in facility; Leaves building and does not return on own
Compulsive	Compulsive, urgent need to be on the move
Restlessness	Restless-- disoriented X 3 <u>sic</u>
Attentional Difficulty	Unable to be redirected
Boredom, Dissatisfaction	Boredome, Dissatisfied
Invasive	Wanders into other patient rooms
Danger, Risk	Wanders into unsafe areas or other patients rooms Endangers own life by wandering
Adjustment, Acquiescence to Nursing Home Policy	A person unable to adjust, trying to return to known surroundings
Attention Seeking, Manipulating Others	Wants attention
Example of Complexity	"Is disoriented to the building and grounds, plus person and time. Is aimless in that they will walk into other residents' rooms and disturb them by staying there uninvited (for various reasons) and by "rummaging" through others' belongings, sometimes taking items that don't belong to them. Presents a problem for staff, especially if they tend to be combative. Uncooperative due to reasons of confusion."

The diversity of replies raises some questions about published data on wandering (NCHS, 1979) and compounds the difficulty of conducting research or education on the topic.

Wandering Is Characterized as a Problem For Staff

Nearly two-thirds of the respondents indicated that wandering "presents a problem for staff". They were asked to describe why wandering is a problem and who is affected:

I have two disoriented males who continuously want to go home and help on the farm. Have 5 aides to 57 residents. The 2 require constant checking on. We are on a busy street on one side and wooded area on the other. We don't want anything to happen to our men. (051)

Why- Patients who wander aimlessly frustrate themselves at times. For whom-- patients who wander outside are endangering themselves. (014)

Why- because we're unable to offer the resident a one to one relationship-- the staffing ratio is not conducive to that. For whom wandering poses a problem- to the resident himself (for safety reasons) to other residents (read Residents rights) and to staff-- we do not want to see restraints, either physical or chemical. (011)

Hard to reason with them-- Impossible to give 1 to 1 at all times and keep them busy. (053)

With no locked unit residents may wander off-- Creek nearby also busy road; staff problem in evening and early morning hours. (048)

Even a few of those who judge wandering not to be a problem for them at this time offered qualifications:

Not necessarily a "problem" but a condition we must be aware of and address every day.(065)

Two thirds (n=76) of the staff members who were having difficulties with wandering wrote out examples (see Table 24 for a sampling of their comments which have been categorized by topic).

Table 24

Why Wandering is A Problem and For Whom: Write-In Responses

Question Wording: Do you consider wandering to be a problem at this time? If yes, briefly describe why and for whom wandering poses a problem.

CATEGORY/COMMENT

Time and Supervision

Nursing staff must take the time to ensure where they are and look for them if they are missing.
Nursing staff have difficulty knowing where patient is at all times.
Difficulty in having staff keep constant observation on patient when busy with another patient in their room or bathroom.
For residents safety and staff to monitor is difficult after 3 p.m.
Minimal staffing- majority are total care-- opportunity to observe nil
Due to inappropriate minimal staffing it's a problem

Doors, Exits

We have a facility with many doors, all with buzzers that are activated during the night but some are not during the day. Day time is our problem, especially with so many people coming in and out.
Danger in/on the streets around us. No locked door ability
Size of facility (11 egress floors)

Harm Outside

1) Traffic (Highways, canals, busy street) n = 15
2) Weather, Exposure (cold, sun) n=4
3) Harm n=3
It is a safety hazard because the wandering resident might hurt themselves if they get outside

Invasive, Annoyance to Other Residents

...often an infringement on other residents' right to privacy
Other patients/residents become frightened or resentful.
...they may wander into other residents' rooms & take their possessions-- alert residents often resent them.

Staff Worry, Anxiety

Cause of worry to staff.
Also a problem for nurses-- they feel great great responsibility for patient safety.
Feel a need to assure safety of residents

Restraint, Reluctance To Restrain

Residents who wander and run away from hospital areas have to be restrained in a geri chair.
More so a problem for the patients who have this tendency due to rigid restrictions on their freedom by facility, Patient and staff. Dilemma of allowing patient/resident to be free from restraint. but safe.
A problem for staff to prevent oversedating yet supervising close enough to prevent leaving building
Can't find a restraint that will keep the resident in place and so rely on door alarms that are not fail safe either

Safety, Fear of Injury

It poses a safety hazard for the individual and Res- We have a resident that wanders in the building and walks into walls, doors, etc. we are afraid of injury.

Legal Concerns

Patients' safety is a problem for pt. himself and legally for nursing home

Problems Associated With Leaving, Being Lost

They get lost and cannot get back. Do not know the name of the nursing home if they lose sight of it. Poor memory
Poor judgment.
1-2 of our residents wander away, having to be brought back by neighbors close to the home, by passing motorists or staff members.

Image

It doesn't help us with the community.

Staff Definitions and the Question, "Is Wandering Aimless"?

The issue of whether wandering serves any purpose runs through this study. The initial work with definitions suggested that nearly half of the respondents characterized wandering as "aimless". Is such a characterization associated with other survey responses? Respondents that defined wandering as aimless were more likely to see the best outcome of this study as obtaining better agreement on methods of dealing with wandering (Chi Square=5.30; df=2; p=.02). However, analyses did not demonstrate that this view of behavior resulted in significantly different ways of working with wanderers.

Wandering as Excessive Movement. Fewer than half of the respondents define wandering as I have operationally done in terms of excessive movement or "moving more than normal for older people" (42.9%). Almost the same number associate wandering with attentional difficulties or a wandering mind (38.5%). To many caregivers the motion appears less central to their characterization of wanderers that do other attributes such as one's mental state.

Factor Analyses of Characterizations of Wandering. Several Factor Analytic models were developed to determine whether the list of defining characteristics might be reduced to conceptually meaningful clusters. The variable "creates a problem for staff" correlated at a .216 level with "attentional problems" (p=.004); .202 with disorientation (p=.002); .164 with "moves more than the norm" (p=.016); .160 with "aimless" (p=.019). Factor analyses were run both with and without the item "is a problem for staff" since this attribution seemed to be of a different nature than the others (see Table 25). The write-in response, "leaves building" was included as it, like the others survey items was selected by over 20% of

Table 25

Factor Score Coefficients for Characterization of Wanderers:
Single Factor Extracted

CHARACTERIZATION	All Items Analysis 1	Selected Items Analysis 2
Has a problem paying attention	.739	.759
Moves more than is normal for elderly people	.605	.629
Is aimless	.586	.606
Is disoriented to building	.523	.515
Is a problem for staff	.495	--
Leaves the building ^a	-.608	-.626
Variance Extracted	35.7% ^b	39.9% ^c

^aWrite-in reply by 30% of respondents

^bEigenvalue of 2.14.

^cEigenvalue of 2.00.

the respondents. The factor analyses were performed using the principal components method of extraction and rotated using varimax criteria. One simple structure factor resulted which included each of the definition statements (with coefficients of .52 to .76) and an Eigenvalue of 2.0. This single factor accounted for 39.9% of the variance. These findings suggest that while wandering is a multi-faceted concept for two-fifths of the respondents, it reflects a pastiche of ideas to nearly two-thirds.

To what definitions of wandering do the nationally reported statistics like those published by NCHS on wandering refer (1979)? The assortment of definitions held by respondents suggests that nursing home researchers and educators should qualify their references to wandering by allowing respondents to self-anchor definitions or by providing operational descriptions of the specific behavior patterns under scrutiny. "Wandering" is a common term, one used in everyday parlance, but the term appears to be overlaid with meaning, particularly, it seems, for health care professionals. In subsequent sections on the findings for both this survey and Study 2, possible operational definitions and clarifications of terminology will be suggested.

Summary of Survey Findings on Characteristics of Wanderers

From this segment of the study, it appears that analyses and interventions involving wandering will need to begin with a clarification of operationally defined concepts. It is as though respondents are confident of their definition(s) of wandering and are perhaps unaware of the differences in terminology among their peers. About a third of the respondents did give a multi-plex definition. The other two-thirds singled out behaviors such as aimlessness, attention span, disorientation or moving more than the norm. Further administrations

of the survey should include "running away" or "leaving the facility" as a definition.

The fact that directors of nursing appear to hold varied definitions of wandering might well be influencing statistics collected through surveys such as this as well as those conducted by national organizations such as NCHS. Differences in definitions may also be influencing the ways people treat older wanderers or design intervention programs and facilities. Part of the task of educators of the future might be to work with nursing home caregivers to derive one definition free of some of the judgments associated with wandering (especially the qualities of aimlessness). As will be noted in the following two Studies (Studies 1 and 2), wandering may even be used by some staff members as a catch-all term for a "problem patient."

In the next section, the incidents of wandering per institution will be reported. The infrequency of wandering suggests that large scale surveys are not the best method of tapping into staff members' definitions (especially since this survey demonstrated no strong consensus). Case study and observation protocols included in the Appendix of this report illustrate some of the difficulties staff members may be having in using familiar terms to capture the motion, its nuances and their feeling of loss of control over a situation dominated by the person who wanders.

It seems that the motion itself and its independence from the environment or social expectations are two qualities which could be pursued in future research on definitions.

Incidence Rates of Wandering and Disorientation

Overall. How many people wander per nursing home? Anticipating difficulties in the definitions, respondents were asked for counts of elderly residents exhibiting for each of the following behaviors operationally defined as indicators of "wandering": 1) trying to go home, leave or get out; 2) pacing more than the average; 3) roaming around or being on the move a lot; 4) disoriented to the building but not wandering; and 5) wandering away from the building, outside, onto the street or grounds (abbreviated in this text as "runaways"). When referring to 1-3, the term "Movement Behavior" or "Rates of Movement" will be used; by contrast the term "Disoriented" will be adopted to simplify references to 4.

Table 26 summarizes the rates of movement expressed as a percent of facility size. In different sections of the Findings, it was necessary to use slightly different bases of computation (for example, dropping facilities of 300 beds or larger as outliers because they skewed the mean; or, making some calculations on the basis of nursing homes that reported any wanderers; i.e., dropping the cases reporting zeros).

Appendix Table B-5 illustrates these figures.

Trying to Get Out, Pacing and Roaming. One common description of wandering refers to the person who makes ritualized attempts to leave (grasping door handles, peering out doors, etc.). An average of five percent (5.2%) of the nursing home residents made such attempts. A nearly equal number, 5.1% of the population in the nursing homes studied, were characterized as "pacing more than average". Slightly

Table 26

Summary Statistics for Percentage Rates of Wandering and Disorientation
All Cases Included

STATISTIC	ATTEMPT TO			SUBTOTL LEAVE PACE ROAM	DISOR. NON- WANDER	RUN- AWAY	CONFINED ^a MOVERS INDEX
	LEAVE	PACE	ROAM				
MEAN ^c	5.2	5.1	7.8	18.0	23.2	2.4	27.8
STANDARD DEVIATION	4.4	4.2	7.7	12.7	21.2	2.9	14.6
VARIANCE	0.2	0.2	0.6	1.6	4.4	0.1	2.1
RANGE	0-23.1	0-27.8	0-61.9	0-76.5	0-85.2	0-15.4	2.6-50.0
MEDIAN	4.1	4.0	5.8	14.7	20.0	1.7	24.7

^aConfined movers =
$$\frac{(\text{Size of facility in beds}) - (\text{Percent Runaways})}{\text{Size of Facility}}$$

This particular column includes data only for cases that reported at least one person for "Tried to Leave" and at least one person for "Runaway." Size of facility is the number of occupied beds.

^bRaw number supplied by staff members was divided into the nursing home size where size of nursing home is the number of skilled plus intermediate care facility beds.

^cBased on 167 cases for each rate of wandering and disorientation. Confined movers index is based upon 144 cases.

more or 7.8% "roam around or are on the move a lot". Taken together, this yields a subtotal of 18.0%. About 2.4% of the population of nursing homes actually left the building or ran away (nearly all of whom were located and returned; see Serious Consequences).

Though percentages make the phenomena seem inconsequential, it is useful to think in terms of raw numbers (see Appendix Tables B-7a and B-7b). An average of 16 persons with movement behaviors such as these and another 22 who are disoriented would be hard to overlook in an average 106 bed facility where wards tend to be from 25 to 60 beds. Given the tendency for many institutions to group those of similar abilities, the sum (38 people) would fill or dominate an average sized, 40 bed ward.

Disorientation Without Wandering. An average of 23.2% of the nursing home population was disoriented but did not wander, indicating that disorientation is more common than wandering. Variance for disorientation rates was 4.4% and the standard deviation 21.2, far greater than for the other rates studied. These findings raise questions about the possible differences among four sub-samples: 1) wanderers who are not disoriented; 2) wanderers who are disoriented, 3) disoriented, nonwandering people; and 4) nonwandering, nondisoriented.

Statistics on Runaways. Despite the concern over runaways, very few people (an average of 2.4 per nursing home) did in fact leave the premises within a three month period covered by the study (June-September, 1983). When computed on the basis of those nursing homes reporting any wanderers, the average increased to 3.2% (see Appendix Table B-7). This is not meant to de-emphasize the severity of

the consequences of runaways; perhaps staff have engaged in extraordinary efforts to keep these figures low.

The Serious Consequences of Wandering. Table 27 summarizes "serious outcomes" of wandering; Appendix Table B-8 includes the full text of replies. About 14% of all institutions studied have had a resident who experienced a serious injury resulting from wandering (e.g., fractures) and a total of eight deaths were noted. The time frame of the staff members' replies is unclear (though the question asked about when, respondents were seldom specific). The average respondent had been with the facility for over four years, so the time frame could be at least that long. A death occurred in about 0.5% of the institutions. Using this as a generalization, would suggest that about 900 U.S. nursing homes (licensed and unlicensed) have had wandering-related fatalities within about the past four years. Deaths were most often attributed to exposure or to traffic incidents. Fatalities were more often reported for runaways than for incidents occurring within the facility; however, falling down steps seems to be a particularly noteworthy hazard of wandering inside a nursing home.

Indices: Runaways as a Function of Attempts to Leave. The raw percentage of runaways is not a satisfactory dependent variable for some purposes. The proportions of runaways in an institution could be low if people were restrained or if the patient population was relatively alert. One runaway in the context of few others might be treated differently than a ward full. An index was developed to focus on runaways in institutions that had had experience with people who are on the move a lot. The index was not a substitute for any of these other

Table 27

Frequency and Percentage Distribution of Serious Consequences
Occuring as a Result of Wandering

CONSEQUENCES	No.	%
n=	37	
1. Deaths	9	24.3
Immediate (7)		
Soon After (2)		
2. Injuries	24	64.9
Falls and Heart Attack (1)		
Falls and Fractures (5)		
Falls and Some Injury (5)		
Fractures (2)		
Colds, Exposure (7)		
Nonspecified "injured" (4)		
3. Lost, Found in Street, Field or Dangerous Place	7	18.9
4. Tranferred Out of Facility to Another	2	5.4
5. Other	4	10.8
Falls, No Injury (1)		
Negative Image (2)		
Family Concern (1)		
TOTAL		100.0

Note. Appendix Table B-8 contains actual responses.

^aThirty-three respondents supplied data on 37 wanderers. This set of frequencies is conservative due to the fact that some respondents used descriptive qualifiers such as "some" but were coded as one injury unless specified otherwise.

measures, but rather a measure of the degree to which runaways were contained without necessarily curtailing all movement. At first, this was conceptualized as a "Success" index.

It was computed as follows:

Step 1: Relate the two forms of movement.

$$\begin{array}{l} \text{Rate of} \\ \text{"Successful"} \\ \text{Movers} \end{array} = \frac{\text{Number People Who Runaway}}{\text{Number Who Attempt to Leave}}$$

Step 2: Correct for institution size.

$$\text{Success Index} = \frac{\text{Rate of Successful Movers}}{\text{Number of People in Nursing Home}}$$

Using Attempts to Get Out as a base helped to control for facilities where motion was low, either because of physical restraints or characteristics of residents. Twenty-six percent of the institutions had Success Index of 1-3% only; for another 25% of the nursing homes, less than .4% of the people who attempted to leave were successful in their efforts.

One problem with the "Success" index was that the numerical manipulations resulted in dropping 3% of the institutions that reported no runaways but did have people attempt to leave, because the numerator of the equation in those instances was zero.

A second index was therefore computed and dubbed a measure of "Confined Movement." This measure reverses the calculations so that the non-runaways are included. For this index, the facilities larger than 300 were dropped from the analysis. Unless otherwise noted, the larger facilities, referred to in subsequent analyses are under 300 beds.

Step 1: Computation of Number Who "Stay"

$$\text{Number Who Stay} = \frac{(\text{No. Nursing Home Beds}) - (\text{No. Who Have Runaway})}{(\text{Number Patients Who Attempted to Leave})}$$

Step 2: Computation of Percent Who Stay: "Confined Movers Index"

$$\text{Confined Movers Index} = \frac{\text{Number Who Stay}}{\text{Number of Nursing Home Beds}}$$

The number of nursing home beds, minus the number of runaways is a measure of those who stay in the facility. Table 27 summarizes the statistical findings for these rates under the heading of Confined Movers (also referred to as Confinement Index. About a fourth of the nursing home population are "movement confined" (27.8%). The range is quite broad, from 2.6% to 50% and the standard deviation is 25%, greater than for other wandering rates. The Confined Movement Index has an expected high correlation with all the other movement variables; however, it is only significantly correlated with Attempts to Leave ($r=-.549$; $p=.000$); Pacing ($r=-.245$; $p=.003$); and Roaming ($r=-.223$; $p=.016$), see Table 28.

Relationships Among Wandering Types.

*21% of the institutions had people attempt to leave, but have had no people runaway in the past three months;

*3% had someone runaway but reported no attempts to leave.

According to Table 29, the types of wandering movement (per institution) are are highly intercorrelated. Percentages refer to institutions as the base and do not necessarily imply correlations between motion types of a given individual.

The variable, "disoriented" clearly stipulated, "how many people are disoriented but do not wander". This measure should represent a distinct group of patients who do not try to leave, pace, or roam and

Table 28

Intercorrelations of Percents of Residents per Nursing Home Who Attempted to Leave, Roamed, Paced, Ran Away, Were Disoriented or Confined

TYPE OF MOVEMENT	Pace	Roam	Runaway	Disor- iented Nonwand.	Confin Index
Try to get out, leave	r= .512 p= .000	.320 .000	.609 .000	.202 .009	-.427 .000
Pace	r= p=	.440 .000	.478 .000	.091 n.s.	-.146 .061
Roam	r= p=		.371 .000	.087 .243	-.161 .039
Runaway	r= p=			.059 n.s.	-.161 .039
Disoriented/ Nonwanderer	r= p=				.087 n.s.

^aBased on 165 nursing homes with less than 300 beds.

^bConfined wandering index = $\frac{\text{Size nursing home} - \% \text{Runaways}}{\text{Attempts to Leave}}$

The higher the confinement index, the fewer the runaways.

can be meaningfully correlated with other movement patterns. The statistics for runaways could also be meaningfully correlated with the other movement variables and disorientation ratings.

*The correlation of .609 between the percent who try to leave with the percent who runaway is sufficiently high to justify staff members' taking seriously the efforts of those patients who rattle doors, spend a great deal of time around exits.

*With the correlation of .20 between the percents who are disoriented but do not wander and the percents who try to leave, it would appear that an institution that is caring for a higher proportion of disoriented people would be one that might see more people attempt to get out.

*Institutions serving more people who pace are not necessarily seeing more people who are disoriented indicating that some of those who pace are oriented.

These findings are relevant to intervention in two ways. They suggest a way of anticipating problems with runaways. Apparently, the more people who move about, the greater the number of runaways. While we cannot be sure of the direction (runaways producing more of the other types of hyperactivity; or, runaways more likely when wandering inside a building is greater), the latter prediction seems the most likely. High rates of movement should signal a staff to be more vigilant or to use technological or architectural methods for monitoring openings.

To lump all of these behaviors into one category called wandering may be less than helpful to the older person, the organization or the researcher.

Follow-up research is needed to study the differences between people or institutions characterized by high versus low rates of these motions and to learn more about how motion can be accommodated without stimulating restlessness of onlookers or even increasing the risky departures.

Caveats on Using and Obtaining Statistics on Wandering. The NCHS estimate of 11% of nursing home residents who wander is lower than the subtotal of 18.2%, obtained from this study and higher than the rate for any specific item, including runaways. Differences between these data and NCHS results could indicate any of the following: 1) Inconsistent definitions between the studies; 2) sampling differences such as the tendency for institutions with more wanderers to respond to this survey; 3) differences due to the year or time when data requests were made; and 4) who estimates and how well they know patients. The numbers from the two sources are close enough to support the relative scope of the problem and yet sufficiently divergent to warrant replication.

From personal research experience using nursing home charts and interviewing staff, I submit that staff members have no systematic measurement instrument for rating residents' movement or disorientation to place. When we ask for ratings of these behaviors, staff may be replying with estimates of confused people rather than looking at specific behaviors. I would surmise that the figures supplied by respondents for disorientation, in particular, are generalizations and not counts based on clinical evaluation. Staff qualifying comments and marginal notes suggest that disorientation can be difficult to assess if 1) patients are heavily medicated; 2) restraints are used (and staff do

not observe them wayfinding); and 3) they are in wheelchairs or dependent upon others. Future studies need to grapple with this estimating difficulty and the need for measures of spatial orientation and place knowledge which can be used with these populations.

The analyses and site visit (Study 3) revealed other weaknesses in the survey data. The surveys were all mailed to the Director of Nursing, who is typically pivotal in organizing services and tends to be the most highly trained staff member on the nursing team. However, all Directors of Nursing may not have the same level of contact with residents. In larger facilities, their roles can become predominantly administrative. Smaller facilities may place the administrative nurse in greater personal contact with older people. The smaller facilities may also estimate rates since they are less likely to have ward clerks.

The survey question on rates of runaways was framed in terms of the last three months. This was done in an effort to keep responses to a season (summer of 1983) and on the premise that memory might be less accurate beyond that point. The items on rates of movement are given as of the moment the individual answered the questionnaire. The time frame on "Serious Consequences" resulting from wandering should have been pegged more clearly. For example, the request should have asked for information based on the last three months or last year. Without clarity on the time frame, specific rates of movement should be viewed with caution.

Relationship Between Wandering and Nursing Home Background Variables

While wandering is likely to be a function of individual characteristics, a series of analyses was performed to learn whether external or contextual variables were related to higher or lower rates of wandering.

State, Sponsorship and Urban/Rural Location. At first, one might not expect any state or geographic differences in rates of wandering or disorientation unless they resulted from some response bias. However, previous research on far larger samples of nursing homes has indicated that state differences do occur (Berkowitz, et al., 1979) and that these may be a function of 1) geographic and climatic variation; 2) population density differences; 3) Medicaid or other policy differences (such as the stringency of architectural review boards or fire inspectors and their impact on building design/decor; and 4) lifestyle differences.

*Variations in reporting rates by state were found for 1) roaming; 2) attempts to leave and 3) disorientation, but not the other variables. Appendix Table B-9 summarizes the findings by state and ranks the specific states by wandering rates. No single state had uniformly higher or lower rates; i.e., Oregon respondents reported lower rates for runaways and disorientation but were quite high for rates of roaming. The reasons for state differences cannot be determined in this study. The differences suggest the value of stratified sampling in subsequent studies.

*There were only minor differences in rates of movement according to whether a facility is operated on a for-profit or non-profit basis. Due to the small number of government facilities, respondents were split into two groups: those for profit (n=140) and all non-profit (including

government sponsored) institutions (n=25). Two-group t-tests were run on the mean rates of movement. The rate for roaming was higher among for profits than non-profits. (Refer to Appendix Table B-10.) There was a pattern for profit-making nursing homes to have slightly higher, though non-significant rates of the other forms of movement and disorientation. Non-profits are apparently not curbing all movement, only runaways, as indicated by the fact that they have a higher Confined Movers Index. It is possible that sponsorship differences are due to differences in levels of care, levels of staffing or numbers of programs available.

*Mean rates did not differ for nursing homes in urban vs. rural, suburban or village communities. A one-way analysis of variance yielded no differences approximating statistical significance.

Nursing Home Service Management Objectives and Movement. On Table 9, presented earlier, two factors characterizing services were extracted from data on management orientation: Maintenance/Custodial or Rehabilitation. Factor scores for these two types of nursing homes were correlated with percentages of wanderers. Table 29 shows that Maintenance/Custodial Facilities (i.e., those with a higher factor score) also have significantly more people who attempt to leave ($r=.215$; $p=.006$) and have more who actually do runaway ($r=.160$; $p=.040$). There is a tendency for the Maintenance/Custodial nursing homes to have more disoriented non-wanderers, as well ($r=.129$; $p=.099$).

Facilities geared toward Rehabilitation trended to have a lower Confined Movers Index ($r= -.117$; $p=.134$, n.s.; i.e., the rate of those who runaway as a function of those who try is lower). In a later

Table 29
 Comparison of Rates of Movement for
 Custodial Care vs. Rehabilitation Care Homes
 Zero Order Correlations Based on Rates and Factor Scores

BEHAVIOR	ORIENTATION OF SERVICES ^a			
	Custodial Care		Rehabilitation	
	Pearson Correlations			
	r	p	r	p
Try to Leave	.215	.006	-.002	
Pace More than Average	.046		-.016	
Roam, Move a Lot	.035		.043	
Runaway, Leave Building	.160	.040	-.011	
Confinement Index	.009		-.117	.134
Disoriented, Non-Wanderer	.129	.099	-.043	

^a Orientation of Services is based upon results from Factor Analyses of how respondents characterized their goals and services; see Table 9. On this table, Factor scores on Management Goals are contrasted with rates of movement, n= 165 institutions.

^b Statistical significance, p, is reported when less or equal .1.

section, we shall explore the possibility that Rehabilitation oriented facilities have a richer set of services which may keep people active and that is may account for the lower percentes runaways in some nursing homes.

Follow-up work, on site, is needed to understand why these rates are different.

Best Outcome and Rates of Movement. Do facilities with more wanderers have unique goals for the outcome of this type of research? The factor scores for the "best outcomes" (derived as illustrated on Table 22) were correlated with the rates of wandering and disorientation. All correlations were low, and only one set, those related to having more runaways was significantly related to the respondents' aspirations for the research. Those nursing homes with more runaways were more interested in Sharing Risks (a trend, $r=.119$; $p=.128$). They were less interested in Consensus on working with wanderers and in Learning to Cope with the inevitability of wanderers ($r=-.187$, $p=.016$; $r=-.154$; $p=.048$ respectively). Having high rates of runaways may marshall organizational consensus; or perhaps there is some fallacy in what staff agree to do and this raises the percent who leave.

Building Shape and Rates of Movement. Respondents checked-off or drew in eighteen categories of building shapes, yielding small sub-samples for shape-by-shape analyses. A one-way analysis of variance of rates of wandering for each category of building shape resulted in no statistically significant findings. Therefore, all simple shapes were grouped and contrasted with all irregular shapes (Table 30). (For a review of the building shapes coded as irregular, refer to Table 14.)

Table 30
Comparison of Mean Rates of Movement and Disorientation in
Buildings With Regular and Irregular Shapes^a

BEHAVIOR	Any Simple Shapes ^a	Irregular Shapes	t	p ^b
	Mean	Mean		
	n	122	45	
Try to Leave	.051	.054	-.46	
Pace More than Av'ge	.049	.055	-.69	
Roam, move a lot	.079	.075	.37	
Runaway	.023	.028	.34	
Confinement Index ^c	.347	.253	2.33	.03
Disoriented, Non-wanderer	.232	.229	.09	
----- Building Confusion ^d	1.74	2.31	-3.95	.00

^a Simple shapes refer to 1) straight line, 2) L, 3) T
4) U, 5) + 6) H 7) Square. All other shapes coded as
"irregular". For tracings of irregular shapes, see Table

^b Two-tailed tests of significance reported only for levels
p=.05 or less. When F value was statistically significant,
separate variances used as the basis for t. Pooled variance
used otherwise.

^c For note on confinement index computation, see

^d Staff were asked to judge how confusing residents find the
building; 1 = not confusing, 4= very confusing.

Only on the Confined Movement Index was there a statistically significant difference: More people left irregularly shaped facilities (as a function of those who try) ($t=2.33$; $p=.03$). Table 30 also indicates that staff rated irregularly shaped buildings as significantly more confusing for residents.

No one shape facility was consistently associated with higher rates of movement. One interpretation of these findings is that facilities which are conducive to running away from are not also enticing for other forms of hyperactivity. Unusual building shape did not correlate significantly with having higher numbers of disoriented people. Unusually shaped buildings are perhaps a nuisance to the more alert. But, it is unlikely that placing confused persons in simply configured buildings will improve their spatial orientation. As noted in the Methodology section, more questions need to be asked to ferret out information on relationships between building configuration and hyperactivity.

Rates of Movement and Size

One surprise in this study was the relationship between facility size and percentage rates of wandering: The smaller facilities had consistently higher rates of hyperactivity but not disorientation. A lengthy set of analyses was conducted to understand whether the issue was really size or something about the smaller facilities which might explain these results.

Size referred to the number of occupied beds at the time of the survey (September, 1983). Correlations between size and attempts to leave and pacing are moderately high, in the .30 range ($p=.000$) (Table 31). Smaller facilities were not associated with higher rates of roaming. Perhaps roaming is a special style of wandering.

In order to explore the issue of size statistically, three sets of data were examined.

Two-group Mean Comparisons: The facilities were split into two groups on the basis of mean size. To stabilize findings, the two outlier facilities, those with over 300 beds, were dropped. This resulted in a mean of 99.17. Those below the mean were assigned a value of 1; those above the mean, a value of 2. The rates of Runways were then compared for the two groups and a t-test performed on the group means. Table 32 illustrates that the means for Runaways for the two groups are significantly different: Means for pacing and attempting to leave were 1.5 times greater in smaller than larger facilities. The mean rates of runaways were 3.1 for smaller homes and 1.7 for larger ones.

Table 31.
 Comparisons of Rates of Movement, Disorientation and Facility Size
 Zero Order Correlations

Incident Rates of Movement	Correlations With Size	
	n	r p
	165	
Try to Leave		-.30 .000
Runaway		-.30 .000
Pace More than Norm		-.23 .003
Disoriented, Without Wandering		-.10 n.s.
Roam, Move A Lot		-.07 n.s.
Confined Movement Index		-.09 n.s.

Note. Facility size is based on the number of occupied nursing home beds.

Table 32

Comparative Analysis of the Differences in Percentage Rates of Wandering For Small Vs. Large Nursing Homes

BEHAVIOR		Smaller Nursing Homes	Larger Nursing Homes	t	p
	n	86	79		
		Mean	Percentages		
Try to Leave		6.1	4.2	2.8	.006
Pace More than Norm		6.2	4.0	3.7	.000
Roam, Move a Lot		8.7	7.0	1.5	n.s.
Subtotal		22.1	14.9	3.2	.002
Runaway		3.1	1.7	3.4	.001
Confined Movement Index		34.1	31.1	.8	n.s.
Disoriented, Nonwandering		24.1	23.1	.50	n.s.
	n	89	79		
Raw Number of Runaways		1.7	2.4	-1.55	n.s.

Note. Smaller facilities are 98 beds or less; larger facilities are 99 beds or more. For these analyses, only facilities smaller than 300 beds were included.

^aRates are computed by dividing actual counts into facility size.

Table 33

Extremes Analysis: Comparison of Mean Size for Facilities
With High vs. Low Incident Rates of Wandering and Disorientation

INCIDENT CRITERION GROUP ^a	n	Size of Nursing Hm.		t	p
		Means	S.Dev.		
ATTEMPTS TO LEAVE					
Based on Lower Third	55	117.2	61.8	3.26	.002
Based on Highest Third	54	84.1	44.5		
RUNAWAYS					
Based on Lower Third	53	113.3	58.2	3.93	.000
Based on Highest Third	58	75.9	30.1		
PACE MORE THAN NORM					
Based on Lower Third	56	116.7	49.1	3.37	.001
Based on Highest Third	55	85.7	47.9		
ROAM, ON MOVE A LOT				1.04	n.s.
Based on Lower Third	55	109.6	49.6		
Based on Highest Third	56	99.1	56.5		
INDEX OF CONFINED MOVERS				1.97	.051
Many Leave of All Who Try	53	110.8	51.9		
Few Leave of All Who Try	57	91.4	50.9		
DISORIENTED NON-WANDERERS				1.91	.059
Based on Lower Third	52	107.1	53.8		
Based on Highest Third	56	89.5	40.6		

^aDistribution rates of wandering and disorientation of each type (i.e., Attempts to Leave, Pace, etc.) were divided into three percentile groups. The mean was computed for those nursing homes reporting relatively lower rates and compared with those nursing homes reporting relatively higher rates. This was also done for Index of Confined Movers which is the only measure which showed a higher rate in larger facilities.

When coding the findings, it seemed that nearly every facility, no matter how large or small had a constant rate of about two runaways. The raw numbers of runaways are included on Table 32. One would expect the raw rate to increase proportionately to the size but it did not.

No differences were found between rates of disorientation, roaming or in the index of confined movers.

Extremes Analysis: The distributions for each wandering rate were trichotomized into percentile groups. Means for the upper and lower thirds were compared (Table 33). Using this method, the facilities with more disoriented patients were somewhat smaller (89.5 vs. 107.1 beds; $t=1.91$; $p=.059$) and the facilities with more leaving as a function of those who try (lower Confinement Index) were smaller (91.4 vs. 110.8 beds; $t=1.97$; $p=.051$). Still, there were no significant differences in rates of roaming, though the facilities with more roamers tended to be smaller (91.4 vs. 110.8 beds; $t=1.04$, n.s.). The differences obtained by looking at the extremes suggested that 1) something about the particularly large or small facilities was related to the disorientation and confinement index; but, 2) extreme rates of roaming were somehow different from these other forms of hyperactivity.

Scattergrams: A series of scattergrams were developed to allow visual comparison of rate patterns with facility size. The steep, upward slope for the runaways (Figure 6) is visually quite different from the more evenly dispersed pattern for those attempting to leave (Figure 2). The patterns of the five scattergrams suggest that the rates for runaways are fairly consistent with size, in contrast to the far more distributed rates for attempting to leave. By contrast, there

Figure 3

SCATTERGRAM: Facility Size by Percent Who Try to Leave

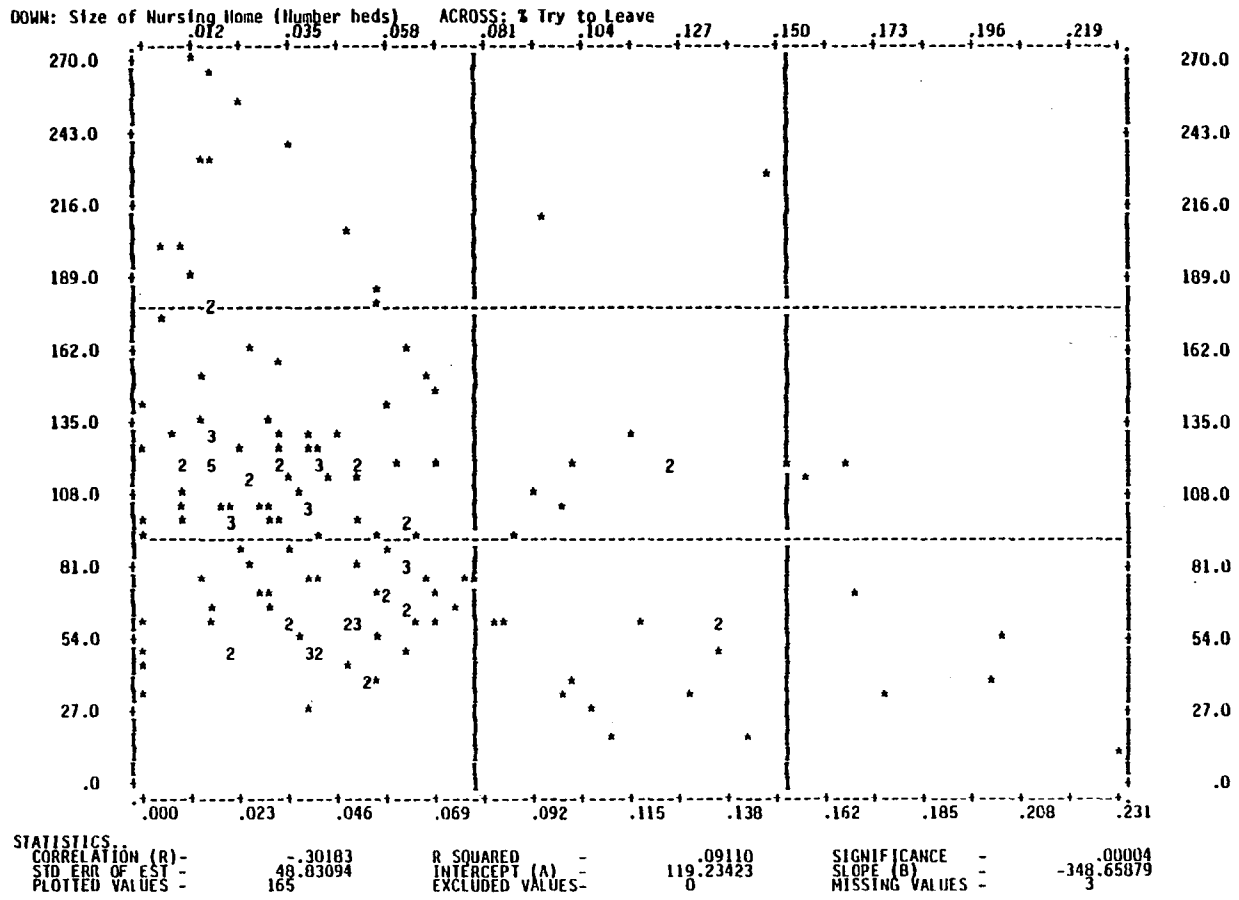


Figure 4

SCATTERGRAM: Facility Size by Percent Who Pace More than the Norm

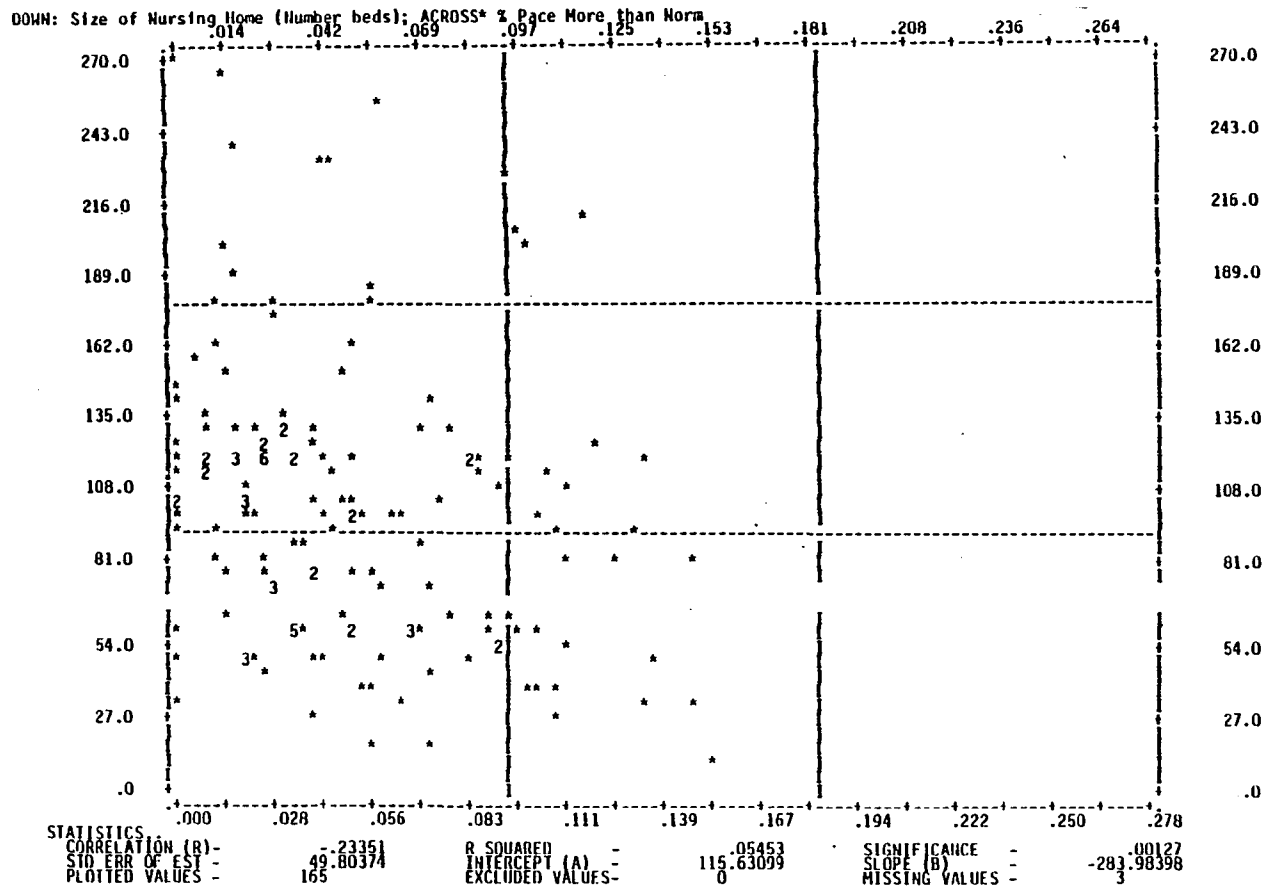
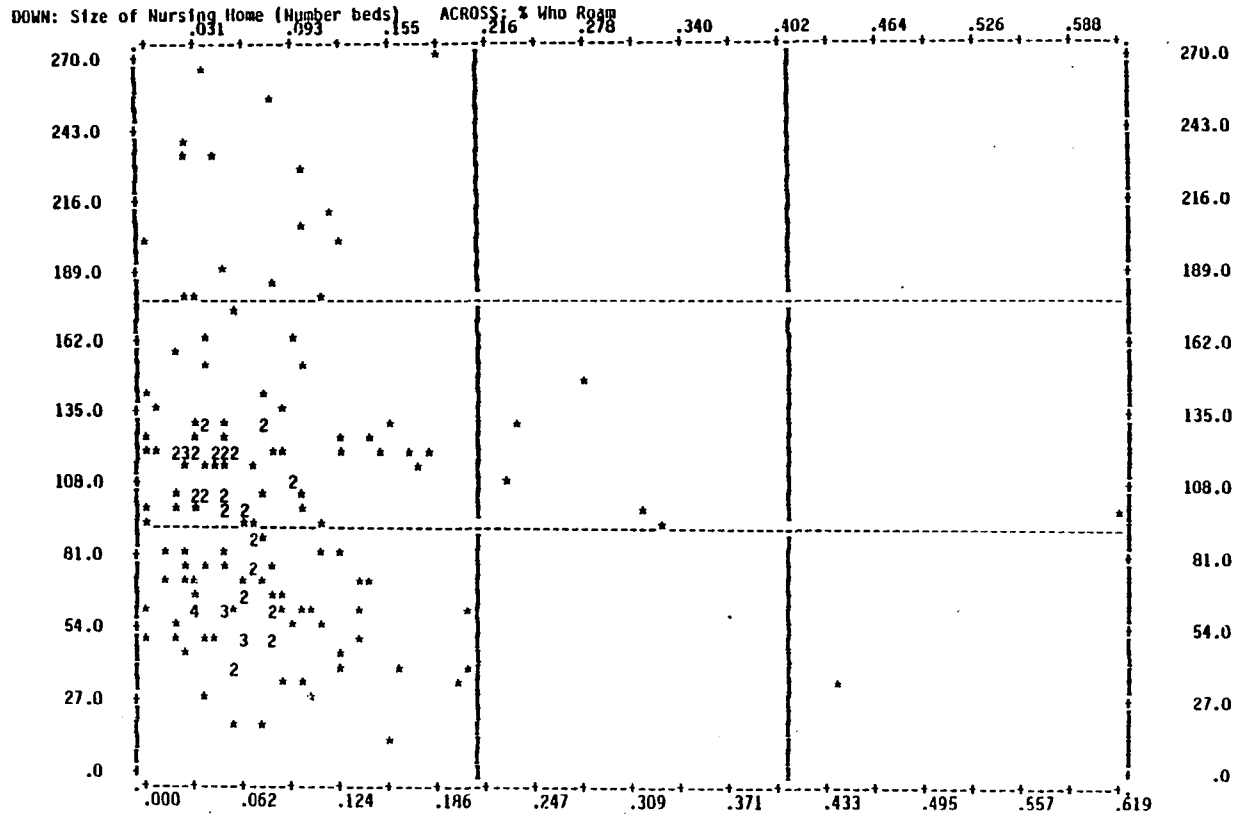


Figure 5

SCATTERGRAM: Facility Size by Percent Who Roam Around or Are on the Move a Lot



STATISTICS		R SQUARED	-	104.00538	SIGNIFICANCE	-	17465
CORRELATION (R)	-	INTERCEPT (A)	-	104.79170	SLOPE (B)	-	-48.55412
STD ERR OF EST	-	EXCLUDED VALUES	-	0	MISSING VALUES	-	3
PLOTTED VALUES	-						

Figure 6

SCATTERGRAM: Facility Size by Percent Who Are Disoriented

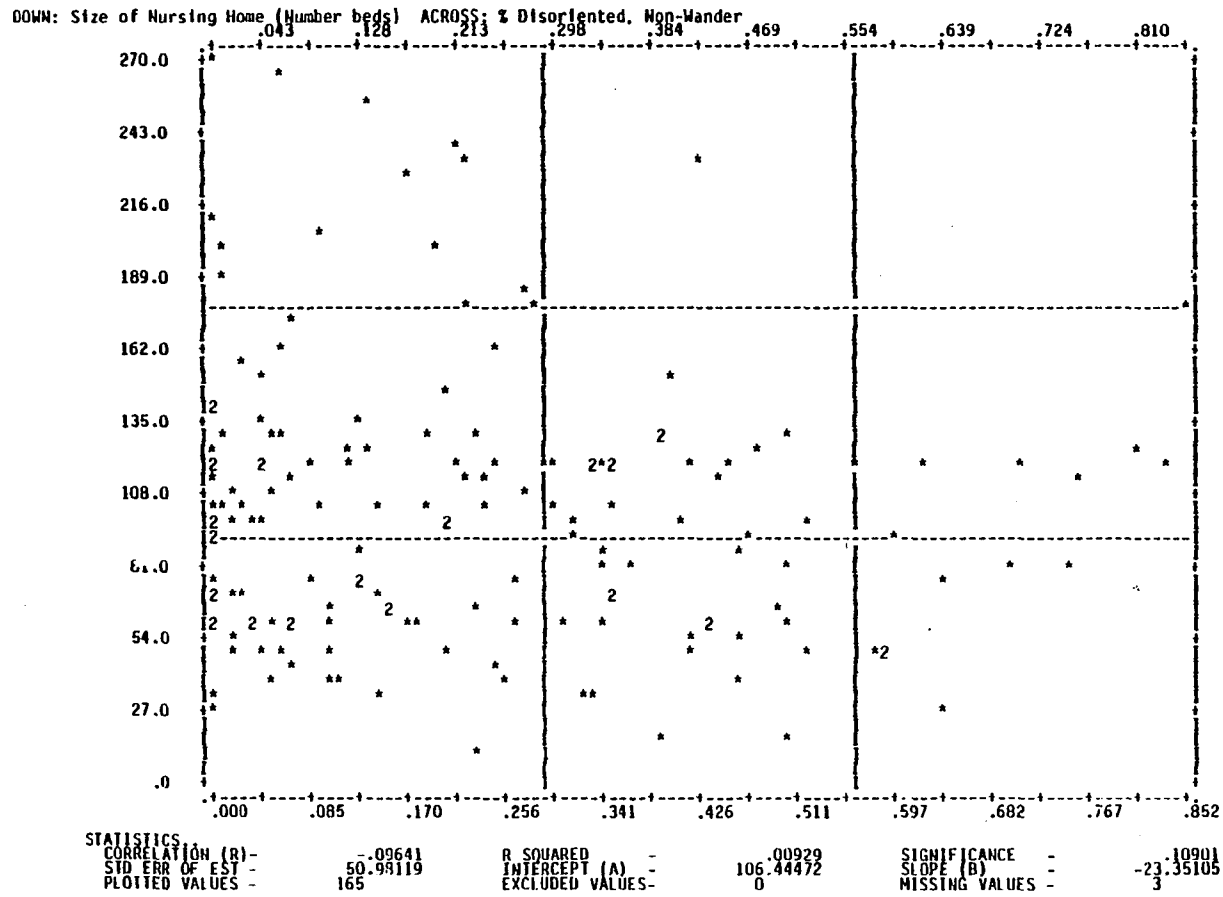
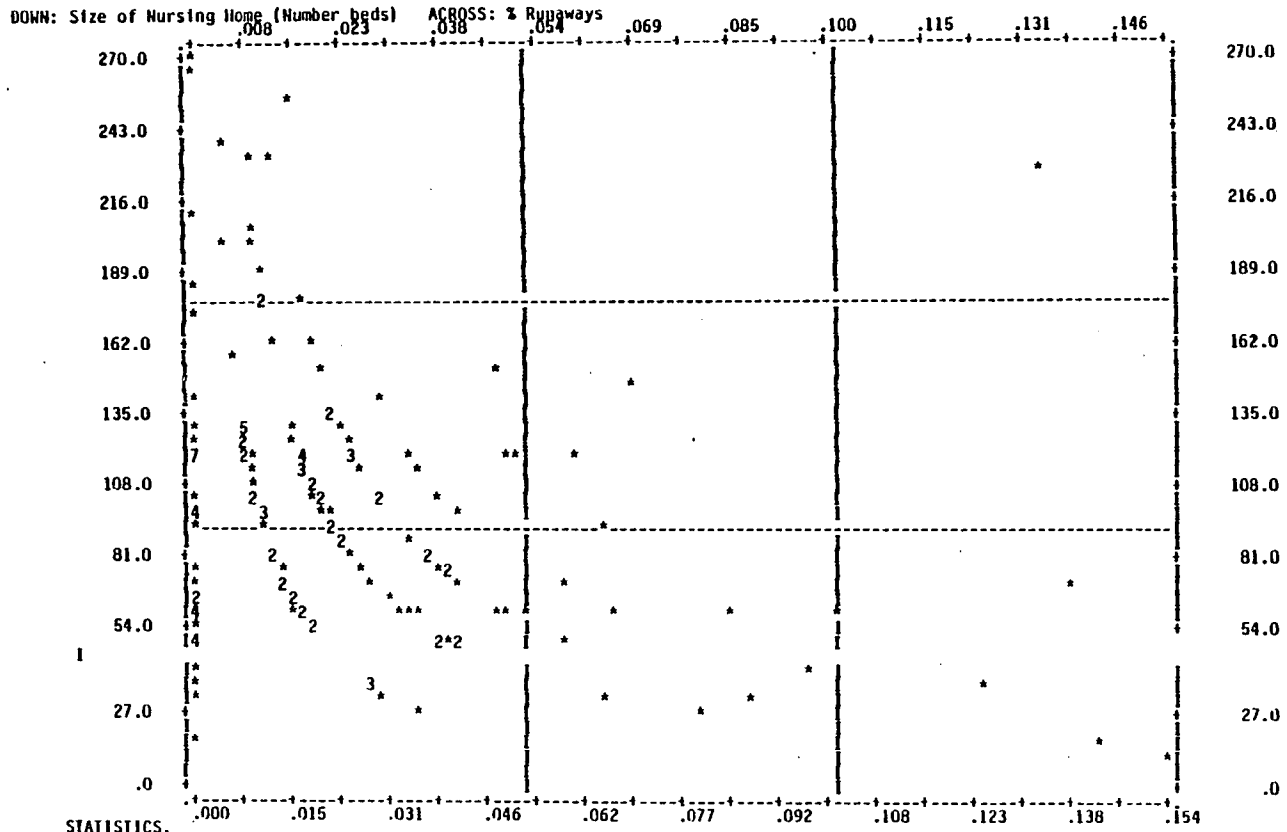


Figure 7

SCATTERGRAM: Facility Size by Percent Runaways (based on 3 month period)



STATISTICS					
CORRELATION (R) -	-.29605	R SQUARED -	.08765	SIGNIFICANCE -	.00006
STD ERR OF EST -	48.92368	INTERCEPT (A) -	113.72757	SLOPE (B) -	-521.03035
PLOTTED VALUES -	165	EXCLUDED VALUES -	0	MISSING VALUES -	3

is a fairly narrow band for roaming behavior; the rate is less affected by size of facility. The most widely scattered distribution is for disorientation and facility size (Figure 6).

Why might rates for runaways be fairly stable despite of institution size? Three explanations were proposed at this stage of the analysis, each of which require further validation. First, institutional staff members may be reluctant to report a figure any higher than two or three wanderers out of concern for their image. There is some support for this idea from the data on problems caused by wandering, where staff members raised issues of "image" and community feelings toward the facility as negative ramifications of wandering. Second, larger institutions may suggest a sense of control, supressing the residents' perception of freedom or squelching interest in attempting to leave. Proportionately fewer people may make the attempt because it seems so impossible (i.e., wanderers may be assigned to high floors, given more staff members or located in electronically controlled areas). Third, in a larger facility, it may take longer to get out (slow elevators, more floor area to traverse, more likelihood of security or reception staff at doors, more likely use of monitoring technologies due to economies of scale). In five minutes, the older person in a small facility may be down the road, where one in a larger facility may still be awaiting an elevator.

Size in itself is a difficult variable to interpret in nursing homes because of the tendency to break a facility into small units or wards. These units are indirectly mandated by state health departments because of the ways patient-to-staffing ratios are developed. We do not

know whether the individual perceives the size in terms of numbers of people or whether that size might perhaps be a function of the facility design or configuration. When this study was planned, we had no inkling of the possible significance of nursing home size. On the basis of the wealth of literature on density issues, and with the possibility that size is an important variable, future studies of wandering in nursing homes should include information on size (number of beds), organizational complexity and some measure of density. There will be more to say about size in the sections on interventions.

Information on the licensed levels of care can be very useful in understanding variations services and staffing among nursing homes. In the next section, these data will be presented and related to the issues of size.

Licensure, Level of Care and Incidence Rates of Wandering Movement

Are there differences among the rates of wanderers in facilities according to licensure? For example, is wandering more or less common among the Intermediate Care Facilities (ICF's) where elderly people are supposedly healthier, where there are lower levels of staffing and less supervision? Or are wanderers fairly prevalent throughout all levels of nursing care?

Table 34 illustrates that fewer people in the combined, SNF/ICF facilities: 1) attempt to leave; 2) roam or; 3) are judged to be disoriented. These differences are statistically significant. The ICF-Only facilities have relatively higher rates of roaming and pacing. The SNF-only facilities have high rates of attempts to leave, roaming, and disorientation. The percents of runaways were slightly lower in

Table 34

Analyses of Variance for Incidence Rates of Attempts to Leave, Roaming, Disorientation and Level of Care

Incidence Rate: Percent People Per Facility Who...	n	Mean Rate	SS	df	MS	F Ratio	F Prob.
a. Try to get out							
ICF (Intermediate Care)	54	6.2%					
ICF + SNF (Both Levels)	81	3.9%					
SNF (Skilled Nursing Facility)	27	7.1%					
Between Levels of Care			.029	2	.015	8.28	.000
Within Nursing Homes			.028	159	.002		
Total			.313	161			
b. Pace more than the norm							
ICF (Intermediate Care)	54	6.0					
ICF + SNF (Both Levels)	81	4.7					
SNF (Skilled Nursing Facility)	27	5.1					
Between Levels of Care			.005	2	.003	1.56	.213
Within Nursing Homes			.282	159	.002		
Total			.287	161			
c. Roam, Move A Lot							
ICF (Intermediate Care)	54	10.0					
ICF + SNF (Both Levels)	81	6.6					
SNF (Skilled Nursing Facility)	27	7.5					
Between Levels of Care			.038	2	.019	3.27	.040
Within Nursing Homes			.933	159	.006		
Total			.971	161			
d. Runaway, Leave Premises							
ICF (Intermediate Care)	54	2.8					
ICF + SNF (Both Levels)	81	2.1					
SNF (Skilled Nursing Facility)	27	3.0					
Between Levels of Care			.003	2	.002	1.90	.152
Within Nursing Homes			.132	159	.001		
Total			.136	161			
d. Disoriented, Not Wandering							
ICF (Intermediate Care)	54	26.5					
ICF + SNF (Both Levels)	81	18.5					
SNF (Skilled Nursing Facility)	27	31.7					
Between Levels of Care			.431	2	.215	5.05	.007
Within Nursing Homes			6.790	159	.043		
Total			7.221	161			
e. Confined Movers (Index)							
ICF (Intermediate Care)	54	30.2					
ICF + SNF (Both Levels)	81	34.8					
SNF (Skilled Nursing Facility)	27	28.7					
Between Levels of Care			.111	2	.056	.87	n.s.
Within Nursing Homes			10.112	159	.064		
Total			10.223	161			

nursing homes licensed with both SNF/ICF facilities, though this finding was not statistically significant. Only the measure of confined movement, the percentage who get out as a function of those who try, was relatively consistent regardless of levels of care.

These findings suggest that it is not just the heavily skilled care nursing homes that are serving wanderers. The Intermediate Care Facilities are also sites of hyperactivity. It is curious that the results for the mixed facilities are so low. These ICF/SNF Nursing homes tend to be larger, more oriented toward rehabilitation and more likely to be non-profit. But that may not hold the key to why their rates are lowest (compared with the singly licensed facilities) for all but the Confined Movers Index.

Summary of Variables Studied and Their Relationships to Wandering and Disorientation and to Characteristics of Nursing Homes Studied

Table 35 summarizes the correlations for variables included in this study. Non-significant data have been dropped except for a few items which correlate significantly with facility size and facility shape or which were of interest because of their nonsignificance.

Studying Table 35 as a whole provides several insights into the differences among movement patterns and disorientation.

1. First, all correlations are relatively low. Among the institutional variables, size generally had the strongest relationship with each of the percentage rates of movement. The relationship is consistently negative, indicating that smaller facilities have more people leave, runaway, and pace. Smaller facilities also tended to have more who roam.

Table 35
Zero Order Correlation Matrix
Incidence of Movement and Study Background Variables

VARIABLES STUDIED	Leave Pace Roam Runaway Disorient Confined Correlation Coefficients Movement					
SIZE of Nursing Home	r= -.376 p= .000	-.294 .001	-.153 .094	-.434 .000	-.133	-.092
LEVEL OF CARE 1=ICF, 2=SNF/ICF 3=SNF	r= -.332 p= .000	-.147 .070	-.157 .050	-.241 .003	-.243 .003	
SHAPE OF BUILDING Hi= Irregular	r= -.015	.127	.039	.019	.021	-.170
BUILDING CONFUSION Hi= Very Confusing	r= -.070	-.005	-.023	.006	-.033	-.186
SERVICE ORIENTATION						
Custodial Care	r= .215 p= .006	.046	.035	.160 .040	.129 .099	.009
Rehabilitation	r= -.002	-.016	.043	-.011	-.043	-.117 .099
BEST OUTCOME ^a						
To find ways of coping	r= -.069 p= .072	-.048	-.108	-.187 .016	-.057	-.021
Consensus	r= .072 p= .048	-.024	-.069	-.154 .048	-.070	-.073
FACILITY TYPOLOGY						
Utilitarian	r= .019 p= .071	.002	.003	.101 .097	-.048	.047
Stark	r= .071 p= .005	.197	.034	.024	.201 .005	.096 .109
Overloaded	r= .027 p= .210	.023	.001	-.038	.063 .210	.035
Homelike	r= .049 p= .260	.051	.067	.073 .174	-.065 .200	.014
Outmoded	r= .260 p= .000	.244	.078	.170 .014	.114 .070	.077 .160

2. Size is not significantly correlated with rates of disorientation nor with the confinement index.

3. Neither irregularity/complexity of building shape nor staff ratings of "how confusing the building is to residents" related to the numbers of people who are reportedly disoriented, nonwanderers. The only variables with a consistent relationship to the percents of people who are rated disoriented are the factor scores for Stark or Outmoded facilities. Correlations are in the low range but do raise questions about the role of environmental context in the behavior of people. If the findings were to hold up to further research, they would lend support to Lawton's Environmental Docility Theory (1978).

4. High rates of leaving, like high rates of runaways, were more common in facilities with more Maintenance/Custodial care. There was also a tendency for disorientation to be more common among such facilities. In the next section, we shall look at the relationship between management policies, admissions, and interventions.

5. Nursing homes with higher rates of pacing tended to be Stark or Outmoded. Outmoded facilities were also associated with higher rates of each of the wandering behaviors. This suggests that such nursing homes may in need of some real assistance. One cannot help but ponder whether the care for health and emotional conditions might not be outmoded, as well.

6. The "Best Outcome" question can be useful in understanding staff members' priorities and outlook. Those with higher rates of runaways are not looking for "methods of coping with the fact that there will always be wandering and wanderers". Perhaps institutions with more

runaways do not see this as inevitable. Nor are these institutions with high rates of runaways seeking consensus. Do they know confidently how to deal with the situation-- perhaps there is only one way.

If exogenous variable such as size and facility typology have some association with rates of wandering, it is probably not an overwhelming one. The two exceptions might be facilities that are at the extreme: Outmoded or Stark.

7. The moderately high, negative correlation between numbers of runaways and institution size does warrant follow-up. It is the only correlation to reach a .4 level. In the next section, the use of restraints and range controls in these larger facilities will be suggested as part of the explanation. These data do suggest that something special may be needed for small facilities with particularly high rates of wandering-- unless of course follow-up studies suggest that the problem is the low rate of wandering in the larger ones.

8. As we noted in earlier sections of these Findings, all forms of wandering are intercorrelated. Care must be taken not to confuse these incidence rates for institutions with individual characteristics. These data do not permit us to conclude, for example, that individuals who roam are disoriented nor that those who are attempting to leave are less likely to be disoriented.

9. The Confined Movement Index, the measure of how many people wander within "acceptable" range rather than away, can be viewed as a measure of less risky wandering. The more people who are confined (i.e., the higher the Confined Movement Index), the fewer who pace or roam. This may indicate that in the process of reducing risky runaways, all types

of movement is decreased. Or, it could indicate that types of movement, at least for some people, are not interchangeable-- that a person will not become a pacer as a result of being thwarted in attempts to leave. We need individual studies to help determine whether the movement that goes on within the building is beneficial-- even if it is slightly riskier than sitting.

10. The initial data on Serious Consequences does raise some questions about methods of dealing with wandering. Are the injury rates and the potential for death from wandering worth the risk? Does the institution risk more if the person dies from a wandering-related episode (because it is more public, perhaps) than if a person dies from other factors (even those related to poor supervision or medication or other errors and omissions)?

I have found that the nursing homes rarely share specific information on how many people wander. Nursing homes may have no idea whether the proportions of wandering that they cope with are high or low relative to their peers. Studies of institutions with very high and low rates of specific types of movement may be particularly useful to understanding interventions.

In the next section, staff explanations for wandering will be explored.

Respondents' Explanations for Wandering

Staff members were requested to check-off causes of wandering from a list of 26 (derived from the Literature Review). Two items, ("financial difficulties" and "desire to goad staff") were included to check the tendency for haphazard responding. (Both items ranked at the bottom of the list.) They were then asked to go back over the list and indicate the causes "most relevant" to the people in their care. In the absence of empirical data clarifying the causes of wandering, this set of questions has several uses:

1. Where should one start looking for causes or contributing factors to wandering? The views of staff (49.5% of which had five or more years tenure at their present institution) might stimulate biomedical and psychosocial/ environmental studies in the future.

2. Is wandering viewed as monolithic or multi-faceted in its causation?

3. How much agreement is there among staff members as to the underlying causes of wandering? Differences in their responses might reflect differences in their attitudes about the behavior and/or differences in the older people and nature of wandering itself.

4. Is wandering caused individual health or psychosocial variables or by some sets of external conditions which would feasibly be amenable to change?

The General Consensus. The 166 respondents' cited a total of 941 items (5.67 per person, average); 612 explanations were noted as most applicable to the people whom they care for (average 3.69). Results are

Table 36

Items that Staff Believe Contribute to Tendencies to Wander
Frequencies, Percents and Ranks

Checklist of Possible Causes	Most Likely ^a				Contribute ^b	
	No.	%	RANKS		No.	%
Senility, brain syndrome or dementia	90	54.2	1	1	148	89.1
Restlessness	67	40.4	2	2	131	79.9
Disorientation to place	54	32.5	3	3	123	74.1
Sense of being "shut-in"	45	27.1	4	4	101	60.8
Desire for homelife	41	24.7	5	10	74	44.5
Newness to room or building	34	20.5	6	5.5	100	60.2
Frustration	31	18.7	7	5.5	100	60.2
Unhappiness	29	17.5	8	7	95	57.2
Boredom	28	16.9	9.5	8	88	53.0
Reaction to family visits	28	16.8	9.5	9	78	47.0
Former jobs and hobbies	26	15.7	11	12	58	34.9
Weather, full moon	24	14.4	12	11	65	39.2
Curiosity	17	10.2	13.5	13	51	30.1
Medication	17	10.2	13.5	16	43	25.9
Fresh air	14	8.4	15	14	44	26.5
Joy of movement	12	7.2	16	16	43	25.9
Noise	10	6.0	17	18	31	18.7
Old age	9	5.4	18	23	15	9.0
Hunger	8	4.8	19	20.5	23	13.9
Pain	5	3.0	21	20.5	23	13.9
Gender: Women are more likely to wander	5	3.0	21	16	43	25.9
Crowding	5	3.0	21	22	21	12.7
Financial difficulties	4	2.4	23.5	24	9	5.4
Genetic factors	4	2.4	23.5	26	6	3.6
Desire to goad staff	3	1.8	25	25	7	4.2
Gender: Men are more likely to wander	2	1.2	26	19	33	19.8

^aWilcoxon rank test yielded no significant differences.

^bIncludes both the items initially indicated as "relevant to wandering" and those items circled as "most relevant."

summarized on Table 36. The ranks for the top four explanations was exactly the same for the "general explanations" to the "most likely explanations" for wandering. A Wilcoxon Rank Test was run on 24 items on the list and no statistically significant changes in the overall ranking of items resulted ($Z=-.3547$; 2-tailed $p=.722$). The two gender items were dropped due to wording problems and write-in responses indicating confusion. Women typically outnumbered men in nursing homes and some respondents did not know how to incorporate that fact into their judgments.

The leading causes cited were: dementia, senility, brain syndrome; restlessness; disorientation to place; and sense of being shut in. Only the item referring to mental status, was selected by 50% of the respondents as the most likely cause of wandering for people in their care. It was interesting to find that 47.0% felt that wandering was caused by reaction to family visits; one wonders whether the families might be enlisted as help-mates in dealing with the wandering.

On the whole, the list of causes lent further support to the idea that wandering is a multi-faceted phenomenon. Staff members seemed to more readily identify with some causes on this list rather than others. Since wandering has a low incidence rate, it is not surprising that staff members would have little experience with the full gamut of cases and causes. If all or many of the items on this list were documented as contributing factors, it would also suggest the need for diagnostic assistance and staff education.

Data Reduction. Factor analyses were performed on these data for two purposes. First, to consolidate the specific items as an aid to those who might develop assessment tools. Second, to facilitate analysis of the list in terms of whether these items might be externally influenced.

Two factor tables are included in Appendix B. The first represents an analysis of the broadest range of probable causes checked-off by staff members. The second analysis features staff members' impressions of the most likely causes. In both instances, items were only included in the factor analysis if 10% or more of the respondents selected them. A 20% cut-off may have produced more robust findings, but would have resulted in the loss of several of the exogenous or environmental variables which were of interest.

Five factors were extracted as staff members' impressions of Most Likely causes and six as Probable Causes accounting for 55.2% and 55.8% of the variance respectively. Those causes thought to be probable included: 1) Over and Understimulation, 2) Underlying Emotional, 3) Spatial/Environmental, 4) Mental Health and Fresh Air, 5) Type or Level of Activity, and 6) Homesickness. The item Restlessness split its variance among four of the six factors. Restlessness might be synonymous for wandering or characteristic of several "conditions". Several of these factors were difficult to name; the common denominators between items are not as clear for Factors 1, 4 and 5. The factor structure for staff members' impressions of Most Likely Causes was clearer with no major problems in split variance. The factors were dubbed, Reaction to Stimulation, Underlying Emotional, Lifestyle, Spatial/Orientation and Mental Health Explanations.

Table 37

Comparison of Factor Structures on "Most Likely" vs. "All Causes" of Wandering Based on Staff Responses to Checklist

STAFF IMPRESSION OF MOST LIKELY CAUSES			STAFF IMPRESSION OF PROBABLE CAUSES		
Factor			Factor		
Number	FACTOR NAME/Items	% Variance	Number	FACTOR NAME/Items	% Variance
1	REACTION TO STIMULATION Boredom Restlessness Curiosity Joy of Movement	20.4	1	OVER/UNDER STIMULATION Crowding Pain Curiosity Joy of Movement Hunger Medications	25.9
2	UNDERLYING EMOTIONAL Unhappiness Feel Shut-In Desire for Homelife Frustration	11.1	2	UNDERLYING EMOTIONAL Frustration Unhappiness Feel Shut-In ^a Restlessness ^a	8.1
3	LIFESTYLE Former Jobs/Hobbies Medications Reaction to Family Visits	8.6			
4	SPATIAL ORIENTATION Disorientation Newness to Building	8.0	3	SPATIAL ENVIRONMENT Disorientation Newness to Building Noise	6.8
5	MENTAL HEALTH EXPLANATIONS Mental Impairment Weather/Full Moon	7.1	4	MENTAL HEALTH AND FRESH AIR Weather/Full Moon Former Jobs/Hobbies Mental Impairment Desire for Fresh Air	6.1
			5	TYPE/LEVEL OF ACTIVITY Boredom Reaction to Family Visit	6.1
			6	HOMESICKNESS Desire for Homelife	5.5

Note. For factor coefficients, see Appendix Tables B-12 and B-13. "Restlessness" is shown on the item with which is most heavily loaded. However, it was also prominent on Factors 3,4, and 5.

Table 37 contains a conceptual comparison of these factors and their composite items. "Probable causes" were generally parallel to the "most relevant" causes. The first factor extracted in each analysis suggested that exogenous variables are perceived by staff as major contributors to wandering. A study of causation warrants a larger, longitudinal study focusing upon individuals.

Other features of the factor analysis which were of interest:

*The greatest variance is accounted for by factors comprised of items which transcend memory: Memory/dementia/senility comes near the end of both lists of explanations

*Spatial Orientation or Spatial Environments (including noise) seem to be robust factors worthy of facility-by-facility investigation.

*Irritants such as medications, pain, crowding and hunger which account for the greatest variance in the longer list nearly disappear from the list of most relevant causes. This is perplexing. Does it suggest that when thinking globally, staff members are more willing to cite environmental or external considerations than when thinking of particular individuals? Respondents were asked to think specifically in terms of people in their care when offering "most likely" causes. Perhaps nurses have no direct methods for assessing the effects of crowding, pain, hunger, medications or noise on their clients and this is why these items were not as prominent on the second list.

In general, the results of the analysis were interesting because of the understanding staff members seem to have developed of the behavior. Contrary to literature previously cited, these respondents did not

identify a single cause of wandering such as memory loss.

Policies and Interventions: Why Policies Might Be Important.

Respondents were asked about policies regarding interventions and admissions. Policies are ideally developed to specify what would otherwise be vague. In nursing homes, policies are mandated for procedures ranging from fire safety to medications handling. Nursing homes are not typically required to have policies on wandering. One institution did include a detailed policy on wandering. A policy suggests administrative level awareness of and involvement in an issue. A policy is also a basis for an outside authority or an administrator to hold specific staff members or departments accountable for activities that require cooperation among several departments. However, having a policy (typically a written document kept in a notebook at the nurses station and/or in an administrative office) does not assure that those staff who offer direct care are aware of it or even follow-up on what is stated.

An initial question was "do institutions have policies on wandering"? Followed by, "are those who have policies different from those who do not?" Third, do institutions with no policies handle wandering differently from those that do have policies?

The Majority Have a Policy Which Could Be Characterized as Benign.

Thirty percent (30.3%) of the organizations have no administrative policy on wandering (Table 38). The 116 respondents who indicated that they do have a formal policy on wandering checked off a grand total of 289 responses for an average of 2.49 per institution. The most common administrative policy, more than twice as likely as any other-- was to

Table 38

Administration's Policy Toward People Who Wander; Frequency and Percents

Policy Toward People Who Wander	All Responses		Only Those With Policy	
	No.	%	No.	%
Let the person wander with some watchfulness or surveillance	139	82.7	103	88.8
Restrict people's movements using restraints, geriatric wheelchairs	67	39.9	49	42.2
Assign to Reality Orientation Group	66	39.3	49	42.2
Train people not to wander, behavior modification, etc.	26	15.5	24	20.7
Other	24	14.1	22	19.0
Keep people from wandering using medication	22	13.1	18	15.5
Administer a special evaluation	17	10.1	16	13.8
Confine people's range of movement using locked wards, gates, etc.	12	7.1	8	6.9
Do not have an administrative policy at this time	51	30.4		
Total Respondents	168		116	

Note. Percents are based on numbers of respondents. A total of 349 responses were checked-off. Some respondents indicated that they had no policy and then checked off one or more of the other items on the list.

Table 39

Comments and Responses Coded "Other" for Administrative Policies

"Question" or TOPIC/Comments	I.D.
"Keep People from Wandering Using Medications"	
...only if patient is also very agitated	036
as last resort	106
moderately	139
Very limited, used only if resident behavior interferes with own activities of daily living.	154
"Restrict People's Movement Using Restraints"	
Allowed only to walk with staff certain times of the day.	007
Restraints are used only when it is felt a resident will harm themselves if wandering.	010
...as a last resort	036
...occasionally	043
...if they do not ambulate safely	049
...only if repeated several times per shift	051
...at times	067
This occurs because State no longer allows a secure area -Wisconsin respondent	079
Restrain only as a last resort to keep in building	094
Last resort	106
For brief intervals	
"Let the Person Wander with Some Watchfulness"	
When can be done safely	
Using meds and restraints along with letting people wander also have outside area where residents are free.	159
"Train the Person Not to Wander, Behavior Modification"	
...If possible	106
"Assign to Reality Orientation"	
...if possible	043
...or activity dept. to occupy mind and body	058
..and validation therapy group	139
ongoing by all staff	154
"Administer a Special Evaluation"	
..and may utilize or try one or more of the above approaches as is in the resident's best interests	106

continued on next page

Table 39 continued

Comments and Responses Coded "OTHER" for Administrative Policies		I.D.
VIGILANCE AND ALARMS		
	Routinely check whereabouts of patients who wander every 1/2 hr.	003
	Hourly checks and documentation of whereabouts of resident inservice to alert staff to problem. Door buzzers.	062
	Installed alert bells at all exits (facility is on one-floor plan).	024
	A complicated but usually effective alarm system	041
TRANSFER IF WARRANTED		
	Consider transfer to alternate care situation in difficult situations	043
OUTINGS		
	Take on frequent outings and rides supervised by staff or or family.	046
GROUP ACTIVITIES AND 1-1 ATTENTION		
	We use 1 to 1 R/O [Reality Orientation], use gerichairs for safety occasionally. Keep patients busy with activities, give extra attention.	053
	Exercise program. Keep patient busy with supervision.	064
	Examples: activities, hand work, movies.	
	increase group activities in an effort to direction attention to organized activity	102
INDIVIDUALIZE ATTENTION		
	each is dealt with as individual	107
	Due to wide range of age of residents and physical conditions, we must gear our policies to many individual methods.	065
RESTRAINT		
	We use as little restraints as possible-- both physical and mechanical, and medications	072
	use physical or chemical restraint as last resort	126
TEAM PLANNING: TECHNIQUES OF LEARNING WHO WANDERS, WHAT TO DO		
	List of known wanderers posted at nursing station and all staff familiar with wanderers. Administrative policy re wanderers and search procedures outlined for missing persons.	080
	We have a wanderers policy and procedure	083
	House policy--must sign out and go in pairs	095
PLACE IN SPECIAL AREA		
	...separate area	098

"let the person wander with some watchfulness or surveillance" (83.3%). Using restraining devices was also reported as a formal policy of 40.6%. Table 39 contains write-in comments and respondents' caveats about their policies.

Nursing Home Background Variables and Percentage Rates of Wandering Showed Little Relationship to Policy. The sample was split into two groups, those with a policy (n=115) and those without one (n=50).

Table 38 indicates suggest that institutions with policies are somewhat more likely to use medications for wandering, to "let people wander with some surveillance," and to restrict their movement with geriatric wheelchairs and medications. Those with policies are much more likely to train people not to wander and to evaluate those that do. Having a policy was also associated with having more interventions (the mean number of programs for facilities with a policy was 3.35; without one: 2.7; $t=4.00$, $p=.000$. See discussion of Programs, following.)

Larger facilities were more likely to have a policy. Based on facilities under 300 beds, those with a policy had an average of 105.8 beds compared to those without, which had a mean of 87.6 beds ($t=2.11$; $p=.036$). Facilities which scored higher on the factor score for orienting services toward Rehabilitation were more likely to have a policy than were those that scored low on this factor ($t=2.30$; $p=.023$). Having a policy was not associated with 1) level of care, 2) state, 3) whether there had been a serious consequence of wandering, 4) whether anyone had wandered away in the past three months, 5) nor with whether the sponsor was for-profit or non-profit.

Policies have not necessarily emerged in conjunction with high incident rates of wandering. Facilities with higher incident rates of wandering (trying to leave, pacing, roaming and runaways) or higher rates of disorientation were no more or less likely to have administrative policies. The least common policy (among those choices offered) was to evaluate a person who wanders; only 10.1% of all institutions reported having a policy of administering some special evaluation (Table 38).

Data Reduction: Describing Policies in Terms of Factors. As a means of clarifying the policies and making some generalizations about the approaches institutions are taking to wanderers, a factor analysis was run on the specific policies listed. Only those institutions that stated that they have a policy were included as a means of obtaining insights on just what the policies contain. (A separate analysis of the 50 cases that described what they are doing but indicated that they have no policy was attempted, but with few cases and low correlations, the factor matrix failed to converge in 24 iterations.)

Table 40 illustrates the specific items and their factor loadings. Three factors resulted from the seven policy statements entered. The resulting factor structure was good; each contained two to three items with loadings over .63 and there were no instances of split variance. However, the factors accounted for only 59.6% of the variance, suggesting that there are other combinations of policies. The three factors were named 1) Physical and Pharmacological Restraint (22.8% of the variance); 2) Evaluate and Assign to a Group (20.7%); and 3) Train Not to Wander (16.1%).

Table 40

Generalizing Nursing Home Policies Toward Wanderers:
Rotated Factor Matrix, Principle Components Method, Varimax Rotation ^a

FACTOR NAMES Specific Component Items	Physical/ Pharmacol. Restraint Factor 1 F a c t o r	Evaluate, Train Assign to Group Factor 2 L o a d i n g s	Train Not to Wander Factor 3
1. PHYSICAL AND PHAMACOLOGICAL RESTRAINT			
Use Medications to Keep People from Wandering	.737	-.048	.279
Restrict Movement Using Restraints, Geriatric Wheelchairs	.684	-.255	.052
Let People Wander With Surveillance	-.673	-.246	.183
2. EVALUATE AND ASSIGN TO GROUP			
Assign to Reality Orientation Group	.076	.842	-.096
Administer a Special Evaluation	-.158	.768	.218
3. TRAIN NOT TO WANDER			
Train people not to wander, behavior Modification, etc.	.017	-.112	.792
Confine Range of Movement Using Gate, Locked Ward, etc.	-.075	-.195	-.630
Percent of Variance	22.8%	20.7%	16.1%

Note. Total variance accounted for = 59.6%.

^a Based upon only those 118 cases that indicated that they do have a policy toward wandering. Insufficient cases were available to develop a reliable factor analysis for those institutions that did not have a policy but did check some of these items.

Policies and Admissions. One aspect where policy might be expected to influence wandering would be admissions. Over half of the responding institutions (57.6%) have no special admission policy regarding people who wander (Table 41). Of those with a policy, 42.0% actively recruit, 26.1% refer and 4.3% routinely admit wanderers. One institution does not routinely admit wanderers. Respondents wrote in comments suggesting that it is often difficult to know whether a person is a wanderer until after admission (see Table 42).

NCHS data (1979) indicate that supervision of wanderers is more time-consuming than of non-wanderers. It is possible that institutions that did not respond to this survey were more likely to have policies which minimize the numbers of known wanderers admitted. Such policies may be motivated by desires to distribute the work load and minimize labor intensive care (as described by the administrator in Study 3).

Implications of Findings on Policies. Whenever a wandering episode has serious consequences and receives media coverage, State-level interest in dealing with wandering increases (G. Warner, M.D., Division of Long-Term Care, NY; J. Spector, Ph.D., Director of Long-Term Care, NJ; personal communications). Such incidents often cause Health Departments or regulatory agencies to raise the question of whether nursing homes should be required to develop a policies on wandering. These data suggest that the policy itself would probably not guarantee enlightened service. In fact, having a policy may be associated with the tendency to be more restrictive, precluding inventiveness and consideration of individual cases. Perhaps nursing homes need guidance and models for policy development.

Table 41

Admissions Policy Regarding Wandering
Frequency and Percentage Distribution

ADMISSIONS POLICY	Number	Percent ^a All	Percent ^b W/Policy
n=		166	68
We have no special admission policy regarding people who wander	98	57.6	--
We REFER people who wander to another place or service	18	10.6	26.1
We ACTIVELY RECRUIT people who wander	29	17.1	42.0
Other ^c	18	10.6	26.1
We do NOT routinely ADMIT people who wander	1	.6	1.4
We ROUTINELY ADMIT people who wander	3	1.8	4.3

^aIncludes all 166 nursing homes that replied to the question.

^bIncludes only the 68 with some form of policy.

^cThese comments are typed out on following Table.

Table 42

Write-In Comments Regarding Admission Policies

Question Wording: What is your admission policy regarding people who wander?

Question or TOPIC/Comment	I.O.
"We REFER applicants who wander"	
3 6c We refer as we are an unfenced facility with easy access to a busy street.	163
"We ROUTINELY ADMIT people who wander"	
3 6d ...as long as they are controllable	045

WRITE-IN COMMENTS FOR "OTHER" (n=17)	
TEAM PLANNING	
3 6f We let the family know they are wandering	003
We explain to family they may wander and we will watch them the best we can and this is documented	063
Will admit wanderers with plan approved by nursing home and doctor before admission.	156
We have a policy for the wandering patient but we have a family conference and come to agreement how best this be handled-- each resident different.	159
We will admit if we feel we might be able to work them into our program.	165
CONDITIONS FOR REFERRAL	
Would refer applicants only if were were unable to deal with the problem and felt it were dangerous to staff or resident.	010
We routinely admit pt. who wanders but if it becomes a problem we suggest families that the resident be transferred to a facility that is equipped to handle wanderers.	147
OBLIGATION	
3 6 The next nearest nursing home is 60 miles away. We feel obligated to care for "our own". In the past 3-4 years, we have had more admissions who were known wanderers.	154
We prefer non-wanderers but we do admit them	038
ADVANCE KNOWLEDGE OF WANDERING	
We are usually not aware that they wander until after they have been admitted.	049
SHARED RESPONSIBILITY, VIGILANCE	
Inform family patient must have some to watch. We do not use physical restraints	064
We talk to sponsors and doctors involved. Let nurses in charge of such patients be extra watchful.	071
It becomes the responsibility of all staff members to know where patient is at all times	118
We admit, openly discuss the problem- use of physical and/or chemical restraints as well as potential danger	126
We alert staff if new admits are "wanderers" to ensure close observation	129
ADMISSION TO SPECIAL UNIT	
Must be admitted to our wing for the severely mentally impaired as this wing has the most staff supervision and highest staff ratio.	079
We have a separate wing for wanderers	098
ADMISSION WITH RESTRICTIONS ON MOVEMENT	
30 day restriction to grounds unless accompanied by staff	095
Most are placed behind a half door	136
ISSUES AFFECTING ADMISSION	
By regulation we are not allowed to admit wanderers unless we can manage the situation.	157

How Do Nursing Homes Deal With People Who Wander?

Overview. The dictionary defines intervention as "to come between", "to interfere" (Merriam-Webster, 1980). In this research, the term is used with its health care connotation: actions or activities directed toward mitigating a condition or situation.

Both heuristic modeling and and statistical techniques have been utilized to reduce the survey checklist of interventions into typologies with the aid of factor analyses. Interventions have been categorized, post hoc, into 1) Controlling or Restraining Measures, 2) Environmental Cues, and 3) Programs. Sums of these sub-sets have been computed and have been compared with percentages of wanderers and disoriented patients.

An Inventory of Specific Interventions Used. A list of "Top 9" interventions emerged from the questionnaire checklist of 20. Each was used in over half of the nursing homes studied (see Table 43). Three interventions were used by three-quarters of the sample (Taking People on Walks; Name Plates on Doors, and Door Buzzer Systems). Nearly two-thirds (63.1% and 63.3% respectively) used body holders or geriatric wheelchairs-- which are restraining devices. (See Table 44 for examples of restraining devices.) Ten of the interventions are used by fewer than twenty percent of the institutions to deal with wandering. Three-fourths of the facilities use door buzzers, but fewer than five percent have the new technology of selective monitoring systems which keep track of whether a specific individual passes through a specially, electronically equipped door.

Table 43

Frequency Percentage Distribution and Rankings for Methods Used to Deal With Wandering Vs. Those Thought Best in Preventing Problems Associated With Wandering

INTERVENTION METHODS FROM CHECKLIST	n =	168	USE		Ranks		THINK BEST ^a		
			No.	%	166		No.	%	p
Taking people for walks			132	79.5	1	9	52	31.3	.000
Name plates on doors			126	75.9	2	1	94	56.6	.001
Door buzzer systems			125	74.4	3	7	56	33.7	.000
Reality orientation, remotivation			113	68.1	4	6	67	40.4	.000
Enclosed court			112	67.5	5	10	29	17.5	.000
Name bracelets			110	66.3	6	2	84	50.6	.003
Body holders, restraints			106	63.1	7	3	81	48.8	.000
Geriatric or highbacked wheelchairs			105	63.3	8	5	74	44.6	.000
Numbering doors			95	57.2	9	4	80	48.2	.006
Special door decorations			82	49.4	10	8	55	33.1	.000
Color coding hallways or corridors			30	18.1	11	11	23	13.9	.000
Color coding bedroom doors			19	11.4	12	13	10	6.0	.000
Dutch or half doors			17	10.2	13	12	11	6.6	.025
Beanbag chairs			9	5.4	14	14	9	4.4	n.s.
Maps of units			8	4.8	15.5	15	8	4.8	n.s.
Monitoring devices, such as "Kno-Go"			8	4.8	15.5	16	6	3.6	.006
Special room for people who wander			6	3.6	17	18.5	3	1.8	.000
Ppl wear slippers rather than shoes			6	3.6	18	17	4	2.4	.000
Elevator buzzer systems			4	2.5	19	20	2	1.8	.003
Locked ward or unit			1	.6	20	18.5	3	1.8	.000
Other (write-in)				19.2		--			

^a34 respondents circled a total of 94 "best methods" that they do not currently use. Wilcoxon Rank test showed no significant differences in overall order.

Table 44

Examples of Restraining and Controlling Devices Listed in an Heuristic Array of Intrusion

TYPE OF CONTROL	Example of Device	
Body Holder	Posey Belt TM, like seat belt; or a vest, worn by person and tethered to the chair. Also includes "cuffs" or wrist restraints.	Most Intrusive and - Least Intrusive or Confining
Geriatric Wheelchair	Reclining Chair, Tray Chair, both with high back and 3-5" diameter wheels	
Dutch Doors	Half doors at keeping person confined to a bedroom	
Locked Ward	Fenced portion of building. Closed unit where only staff or very alert elders can manipulate doors or latches	
Enclosed Court	Courtyard or secure outside area	
Wearing of Slippers in Lieu of Shoes	-Slippers are meant to signal indoor activities and make walking outside difficult	
Door Buzzers	Doors emit a tone (buzz, bell) either right at door or at nurses station or security desk	
Elevator Buzzers	Elevators buzz when arriving so staff are alerted and expected to look up to see who gets on	
Signal System	Resident wears transmitter in a bracelet, ankle band, etc. and exits outfitted with receiver. Nurse station is signaled if a specific resident uses the exit. Kno-Go TM and Secura-Care TM are two examples.	

Table 45
Write-In Responses for Interventions Used

WRITE-IN COMMENTS ON INTERVENTION ARRANGED BY TOPIC	I.D.
ACTIVITY PROGRAMS	
General	
Supervised activities	064
Activity that patient enjoys	002
Planned activities throughout day and evenings	079
Supervised outings	155
There is no one method. Each resident has to be considered individually and what works for him is used.	074
Specific Activities	
Outside trips	001
Reality Orientation	053
Encourage family to take out periodically	107
IDENTIFICATION RECORDS AND AIDS	
Security informed/ pictures of wanderers given	019
Keep an up to date list of wanderers for all staff to be aware	080
Place Poloroid picture in chart if needed by police	109
--have never needed police assistance.	
We have wanderers wear I.D. bracelets. Door alarms to alert staff when patient leaves area. One to one attention	
VIGILENCE PROCEDURES	
Be ever observant	094
Trying to redirect patient away from doors.	021
Elevator is in front of nursing station so we can watch easily.	102
Direct supervision from staff	110
Surveillance, time and patience. We have had some who learned way back from special destinations	154
SPECIAL UNITS AND FACILITIES	
Special unit (locked and padded chairs and protected environment) with mattresses on the floors, etc.	023
Exercise relaxation room	161
ONE-TO-ONE, SITTERS	
Sitters	043
1 to 1	053
Encourage families to engage sitters for the residents.	139
Family visits	170
DIVERSION	
Giving resident small tasks to do in the nursing home	046
CUES AND ORIENTING DEVICES	
Picture of residents on door of their room	051
Satisfy needs as smokes, cokes, games	065
Ribbons	071
Names in oversize letters on door to room and bathroom	106
PRN for resident with poor eyesight and supervision.	
MEDICATIONS	
Some medication slows activities and impaired mobility	108
Have not tried any of those not marked. Refuse to medicate to a point where patient is unable to be up and moving about.	140

Highlights of how nursing homes deal with wandering include these findings:

*Two-thirds use the Reality Orientation program (68.1%).

*Two-thirds use an enclosed court or fenced in area (67.5%).

*Over half use name bracelets and door numerals. About half (49.4%) use special door decorations.

Though the question specifically asked about methods used in response to wandering, specific observational follow-up is needed to determine whether in fact these measures directly act upon wandering

Personal Observation and the Issue of Resident Walks. I have found "taking people on walks" is more often stated than practiced. The realities of low staffing, a ratio of 1:8 or 1:12, and priorities accorded bathing, grooming and dressing leave little time for 15-30 minute "one-to-one" walks. While walks could be supervised by therapeutic recreation staff (usually 1 person per 100 elderly residents), it is my experience that with a few exceptions, these recreation staff members focus on group crafts, games, celebrations and social events and spend the bulk of their time with socially adept clients. Family members or volunteers should be another resource for walks, but many are not confident of their ability to manage a person who might refuse to return.

It would have been helpful to have asked for the proportion of the total nursing home in wheelchairs vs. geriatric wheelchairs to compare such data with the mobility devices used by wanderers. Outings become much more challenging and time consuming when a person is taken outside in a wheelchair. The "walk" may represent being released from a

confining wheelchair for a few moments of movement prior to a bath or meal. Follow-up research should include more penetrating questions on exercise (indoors and out).

Reality Orientation. One of the most controversial topics in programming for memory impaired older people has centered on the relative merits of Reality Orientation. Introduced in 1955 by Dr. James Folsom, a psychiatrist, in a Veterans Hospital, the initial intent was to give direct care providers, nursing assistants without much formal geriatric or mental health education, a systematic way of interacting with older people (Folsom, personal communication, Feb. 21, 1985). Reality orientation refers to many different interpersonal communication techniques and group work procedures (Zepelin, Wolfe, Kleinplatz, 1981; Gubrium & Kasander, 1975). I submit that people use it for wanderers, not because it has a proven effect on wandering, but because wanderers are perceived as mentally impaired and Reality Orientation is the best known intervention for confused elderly people. Reality Orientation in practice varies widely from facility to facility. In some nursing homes, groups meet daily or weekly to drill facts on day, time and date. In others, dates and names are reviewed more informally while the caregiver changes a bed or wheels the individual to meals. In still others, the concept has developed into a highly sophisticated group activity involving the facts almost as "commercials" in between music, poetry or discussions. Finally, there are a number of facilities that have only a chart with the day, time, date and weather penned in. These Reality Orientation program need to be described on future surveys. The value of knowing that staff members are already doing Reality

Orientation, in whatever format, is that programs developed specifically for wanderers might build upon a "known" entity to increase their acceptance.

"Remotivation" was a widely used program in the 1970's. Nursing assistants were sent to special workshops and developed kits of pictures with which to stimulate responsiveness of older people. In visits to nursing homes in the last five years, I have found few nursing assistants offering the therapy. I believe this is not because it is ineffective, but because the external social support system (conferences, "pep-ups", etc) are not being offered and the basic needs of increasing numbers of frail older people are demanding time that once was available for group work. Remotivation has diminished not because of its lack of value but because of how it was "marketed" to the caregivers rather than to the administrators.

Special Wards. Thirteen institutions (7.8%) indicated that they have a special ward for people who wander. Staff were asked about the size of special units and how many of the people on the unit actually wander. The units ranged from 4 to 52 beds, with an average of 31 beds. Respondents were also asked, "of all those on that ward now, how many regularly wander or would wander if they were not restrained?" A ratio between ward size and proportion who wander was computed for each of the facilities. Percents who would wander range from 11% to 38% with an average of 23.4% (SD 28.2%). What is special about the units? Cross tabulations indicated that facilities with special units were no more or less likely to take people on walks, use/not use restraining devices, color code, use/not use cues or have courtyards. They were slightly

more likely to offer Reality Orientation (Chi Square=2.79; $p=.095$). Special wards may be special places without particularly specialized programs. Having a special ward does not imply that persons are free to wander.

Staff Members' Innovations. Staff members were given several opportunities to describe what they are doing in addition to the check-list items. Table 45 summarizes their write-in responses which were categorized into: 1) Activity Programs, 2) Identification Records and Aids, 3) Vigilance Procedures, 4) Special Units and Facilities, 5) Personal Attention (i.e., one-to-one staff-to-resident assignments or hiring special duty sitters), 6) Task Diversion (i.e., giving the resident a duty or the chance to follow along with a staff member engaged in a job), 7) Cues and Orienting Devices, and 8) Medications.

Staff were asked whether they had developed any special methods for working with people who wander (Table 46). They were given the option of stating that people who wander do not need special methods of care; only 2.4% so indicated. Of the remainder, 59.9% stated that they have not developed any methods at this time, 40.1% have improvised methods for dealing with wanderers (Table 47). Most of their write-in descriptions contained one method; a few offered two or three comments on what they are doing. Two responses stood apart from the rest because they referred to an integrated program; these have been inserted here:

Table 46

Staff Developed Methods for Working With Wanderers
Frequency and Percentage Distribution

RESPONSE CATEGORY CHECKED	No.	% ^a	% ^b
"We do NOT think that people who wander need special methods of care"	4	2.4	--
"We have NOT developed any special methods at this time"	94	55.3	59.9
"We DO have special ways of working with people who wander"	63	37.1	40.1
All Respondents ^a	161	100.0	--
Subset Respondents ^b	157	--	100.0

^aPercent ^a is based upon all three categories of responses.

^bPercent ^b excludes respondents who replied that wandering did not require special methods are omitted from calculations.

Table 47

"New Methods" Developed by Staff: List and Categories
of Write-In Comments

CATEGORY AND COMMENT

POLICY

1) On admission or as needed this problem is identified and name is placed on wandering resident list. Staff are responsible to know this list and all assist in surveillance. If found wandering out, are gently but firmly persuaded to return 2) Prevent wandering when possible through activities, reorientation Policies and procedures for approach, etc.

VIGILANCE, SUPERVISION

Only a more watchful eye
Check whereabouts every 1/2 hour
Constant attention
Alert all departments of wanderer. Continuous check on pts. whereabouts as feasible.
Close supervision by staff
Supervision.
Surveillance, time and patience.
Security checks every hour or more often as necessary
Each staff member is made aware of the problem
Checks are made frequently to check resident
We keep these residents with staff members as much as possible. They tend to wander off the grounds when staff is tied up with other problems.
We check on them every 15 minutes. Activities department schedules frequent group activities.
We are aware of where they are and watch them closer--
Providing safe environment, constant observation

TEAM WORK, STAFF EDUCATION

The entire staff including all departments have helped with wandering patients. They call and alert nursing station.
Primarily dealing with staff as most wanderers have short attention span and often no longer respond to R.O.

DIVERSION, GROUP ACTIVITY

General, Reality Orientation (sometimes combined with walking)
Reality orientation and supervised ambulation in recreation area.
Reality orientation, giving tasks to do when wandering increases, taking on outings when possible and walks.
Reality orientation; free to move about on unit. Taken for walks. Programs geared toward residents.
Reality orientation, volunteer services to do exercises and walking.
24 hour R.O. [Reality Orientation therapy] and constant supervision
Keep resident in good activity program, satisfy needs for smokes, cokes and games
...having additional activity programs to engage the patients in some type of activity.
Push activities to keep them active

Diversion Tasks.

Frequent verbal reinforcement and occupying with other interests to side step the obsession
Diversion through activity-- reroute energies
Diversional activity-- special attention until attitude toward leaving at the moment diverts to other thoughts coffee time for just them.
Giving them freedom to wander; one-to-one, volunteers
Try to get their interest redirected.
Keep pt occupied with other tasks or activities.

Continued on next page

Table 47 continued

"New Methods" Developed by Staff: List and Categories
of Write-In Comments

Walks Outside

Frequently allowing them to walk under staff supervision.
Walking on the grounds. We have a 9 acres of lawn.
Regular walks outside facility.
Planned walks

Orientation

Spent time one-on-one, trying to orientate him or her
wing
We have had some who learned way back from special destinations.

ID RECORDS AND AIDS

Identify wanderers and keep under as close a supervision
as possible.
Policies for checking I.D. bands routinely. Knowing where
residents are and alarms on doors.

ONE-TO-ONE SITTERS

As much "one to one" as possible & other motor activities
i.e., exercise to music and games of bowling, ball toss, etc.
Having a private duty aide has helped
One to one with direct supervision
Place on 1-1 while pt. is showing increased movement.

COMMUNICATIONS STYLE AND REMINDER METHODS

All staff alerted to problem. Some people need constant
reminders; i.e., signs on doors, re-emphasis of room number
time of day, where to go for meals, repeated directions and
introductions to personnel.
Encourage appropriate activities and acknowledge their
presence at functions. Ask questions that can be answered
with a nod of head in yes or no.

ACCOMPANY STAFF

Staff spends extra time with wanderers, letting them
accompany them when possible, etc.
They go on errands with staff.
Allow resident to stay with staff member,
Have them follow a staff member, doing routine things and
feel like they are helping as pass water, make beds
fold linen, etc.
For a certain few who will, we let them go free to follow
the aide at work

MEDICATIONS

In process of developing programs geared toward
wandering residents to mod. behavior without medications
or restraints.
Use of mild tranquilizers and taking for walks. Allow
them in-house wandering. [Multicode]
Behavior mod-- repeating who you are, where you are
you need to tell nurse you want to go for a walk

RESTRAINT

They are restrained for their own protection but taken
for walks every 1 1/2 - 2 hours.
Restrictions
Watch them closely, restrain when staff preoccupied.
Lots of attention. Walking. Use of restraints, control
of agitation with medication. Use of gerichairs.
[Multicoded]

continued next page

Table 47 continued

"New Methods" Developed by Staff; List and Categories
of Write-In Comments

FAMILY INVOLVEMENT

Family conferences with a multidisciplinary group
counseling and reality groups. Waivers if indicated.
Staffed day rooms for recreation.

INDIVIDUALIZED CARE PLANS

Routine set up on individual patient for type of wandering
he/she does.
Those that have wandered have a care plan that works for
them

ARCHITECTURAL/TECHNOLOGICAL

We have a separate wing leading to a courtyard. Buzzers
go off if anyone goes out any door without pushing a button.
Staff and visitors push button so bell will not ring when
they enter or leave.
We will have extensive policy, procedure and enclosed safe
areas plus electronic door monitors in a new Alzheimer's
We allow them to come and go through the door that leads
to the enclosed court.
...also on back floor so more people see them heading for
the door
Fenced yard.

GENERAL COMMENTS

4 5b --But will soon
We try to use a combination of gerichairs or wheelchairs
and taking patients for frequent and regular walks with
an aide or volunteer. Try to allow pt. to go where he/she
wants while attended.
It is done on individual basis-- most people that wander
do not realize they wander.

Walk as often as possible. Involve family, friends and volunteers in this. Still in planning stage of a R.A.P. (Resident Action Program) -- selected residents will be in a selected special area in facility or unit with a closed supervisor and more activity, as tolerated, at specific time 5 days/ week to start, to be evaluated on a regular basis and a study to be done.

-011

Persons with dementia pose a variety of management problems in long term care settings. Frequently, chemical and/or physical restraints are used to control restlessness, anxiety and wandering behavior. We have developed an intervention using music, exercise and relaxation activities in a group setting for 1 hour, three times per week on a group of severely demented elderly residents. We've also been doing education of staff regarding wandering and approaches (policy and procedure example included). We have made a study of this program. The findings demonstrated decreases in behaviors nursing staff found problematic such as sleep disruptions, wandering behavior, anxiety, even when psychotropic drugs were decreased or terminated.

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These two descriptions have several features in common with a program to be studied as part Study 3 of this research: Each describes a formal program to do something for or about wandering. Each involves a systematic evaluation, would require collaboration among departments (nursing and activities or social services, for example) and enriched activity. These two are different from the example in Study 3 because these nursing homes are attempting to reduce the use of physical or pharmacological restraint.

One insight from the list on Table 47 of methods used by staff to deal with wandering is how rudimentary the interventions seem. The comments were grouped as follows: 1) Policy; 2) Vigilance, Supervision; 3) Team Work, Staff Education; 4) Diversion, Group Activity; 5) Task Diversion; 6) Walks Outside; 7) Orientation to Place; 8) Identification Record and Aids; 9) Personal Attention (One-to-one and Sitters); 10) Communications Style and Reminder Methods; 11) Accompany Staff; 12) Medications; 13) Restraint; 14) Family Involvement; 15) Individualized

Care Plans/Assessment; and 16) Architectural, Technological. In the process of summarizing these comments and comparing them with all write-in comments on the questionnaires returned, I developed the impression that the primary way that institutions deal with wandering is by watching people-- or having the constant feeling that they should be watching them.

The open-ended comments from Tables 45, 47 and 48 could be combined into one larger list for a next study. Obtaining a frequency and percentage profile of what nursing homes are doing on the basis of this "grand list" would be an improvement over the list used in this study.

Curing Serious Problems Associated With Wandering. Twelve respondents (7.5% of the nursing homes) indicated that they have had some success in "curing" the serious problems associated with wandering. Their techniques, all fairly straightforward, are summarized on Table 49 and deal with 1) Programs or Activities; 2) Work with Families; 3) Restraints; 4) Diversions and Need Fulfillment; 5) Orientation to the Building, and 6) Environmental Technology. Here, the punchline is that 92.5% of the nursing homes apparently coexist with chronic problems associated with wandering for which they have found no cures.

Underlying Categories of Interventions. This section deals with different ways of categorizing the list of interventions. Part of the reason for reducing the lists was to obtain factor scores which could be used in statistical comparisons with background data on the nursing homes.

Table 48

Write-In Comments Regarding "Cures" for Wandering

QUESTION/COMMENT

NO, We have not found a cure" 92.6% of respondents; 4 offered comments.

No., only by restraint. We do have a policy for finding wanderers off premise.

No., only diminishing via special activities and closer supervision whenever possible.

No., usually after a few months, wandering will cease as resident forgets home is somewhere outside

No., especially not at first

You can't cure, but you can minimize

"YES" We have found ways of curing serious wandering problems (n=12; 7.5%)

PROGRAMS: Reality Orientation, Walks

Yes. Reality orientation and frequent walks on the floor unit, we've found residents to be much less restless and happier.

Involvement in activities, especially group activities ...some extent, primarily the increased programming. however, facility is not reimbursed for this.

Do various other activities

Daily R.O. and walking perimeters that are acceptable

WORK WITH FAMILIES

Work with family; a lot of attention to patient; take pt. for walks.

RESTRAINTS

Yes, restraints and staff alertness

DIVERSION, NEED FULFILLMENT

Yes, make patient feel useful. Keep them busy

If the resident has a fairly lengthy attention span we arrange for them to be supervised in the activity room most of the day.

ORIENT TO THE BUILDING

Constant re-orientation over several weeks or months seems to work with some people. How one would function in another new environment is questionable. Some people seem to retain the ability when they go home. Question: Is this due to improved nutrition and regular routine or to constant reorientation or to both factors?

ENVIRONMENTAL/TECHNOLOGY

Checking into monitoring devices

Restricted unit, staff supervisio. ff unit

Analysis 1: Reducing the List of 26 Interventions. All 23 interventions that are currently used by 15% or more of the respondents were entered into a Factor Analysis. Five factors were extracted accounting for 58.4% of the variance (Table 49). Two deal with proactive interventions: Combinations of Specific and Diverse Interventions (14.2% of the variance) and Mobility Techniques (10.2%). One deals with environmental cues: Place Indicators (11.1%). The other two appear to represent practices of range protection: Protective Movement (12.4%) and bodily Restraint (10.6%). The factor structures were moderately good; each factor had at least two elements with loadings of .5 or higher and no items split their variance. The fact that the overall results account for only 58.4% of the variance does indicate that there are a substantial number of institutions that have other combinations of interventions.

Analysis 2: Using All Available Data on Policy and Interventions. As another way of studying intervention procedures, a more comprehensive analysis was developed combining the list of 23 interventions and items on Nursing Home Policies from Table 38, see preceding section of Findings. Nine factors were extracted accounting for 58.2% of the variance (Appendix Table B-16). These include similar themes to those extracted on the basis of intervention data alone, but because they include more benign practices ("let people wander"), this list in some ways may be more conceptually instructive about the national practices. Items such as Tolerance (i.e., "Let people wander," "use door buzzers," and "have no policy") might be missed in a formal list of interventions. Similarly, Medicate to Stop Wandering (i.e., "Policy of medicating,"

"policy of restricting movement") and the non-intervention cluster of Traditional Medical Care ("Use slippers not shoes" and "provide maps")-- add to our understanding of what nursing homes are and are not doing. With more institutions, these findings might correspond to the heuristic models of interventions, outlined in the Literature Review.

Factor results from Tables 49 and B-16 might be used in a study querying the objectives of interventions to learn whether staff members believe that procedures such as restraining, using environmental cues or tolerance of wandering will change wandering behavior. The list and resulting factors were too extensive to be meaningfully used on the relatively small sample of 170 institutions. From this complex analysis of the objectives of interventions, a simpler, conceptual framework was developed for looking at typologies of interventions.

Table 49

Factor Analysis of Interventions Used by 15% or More of Respondents
 Principle Components Extraction, Rotated Factor Matrix (Using Varimax Method)

Interventions Used	Specific & Diverse Factor 1	Protective Movement Factor 2	Place Indicatrs Factor 3	Restraints Factor 4	Mobility Techniques Factor 5
Factor Loadings					
R.O., Remotivation Grp. ^a	.803	-.263	.040	-.008	-.035
Door Decorations	.507	.203	-.018	-.010	.359
Courtyard	-.185	.731	-.107	.052	.178
Name Bracelets	.126	.661	.263	.006	-.108
Door Numbers	-.085	.032	.772	.092	-.040
Nameplates on Doors	.404	.213	.609	-.030	.094
Door Buzzers	.431	.352	-.470	.014	-.248
Geriatric Wheelchairs	.075	-.145	-.071	.828	.091
Body Holders	-.099	.231	.168	.719	-.054
Taking People for Walks	-.083	.070	.036	-.090	.740
Color coding hallways	.142	-.053	.017	.129	.629
Percent of Variance ^b	14.2	12.4	11.1	10.6	10.2

^aReality Orientation and Remotivation Groups are structured methods for practicing information. The first is a technique for eliciting information on date, time, weather and place names. The second involves use of pictures to stimulate responsiveness.

^bFactors combined to account for 58.4% of the variance. Each of the named factors had an Eigenvalue of 1.0 or greater.

Analysis 3: Sub-Classifying Interventions By Genre

In working with the longer list of interventions and policies, three heuristically meaningful sub-categories emerged which reflect a combination of focus and goal. Some methods were more environmental and technological and referred to cueing for spatial orientation. A second group were either technological or procedural, but focused on restricting movement. A third broad category contained social and interpersonal efforts. In future uses of this type of survey, additional categories such as Personal Attention (assigning sitters or one-to-one contact with a volunteer), Preventative and Identification Techniques (such as the wearing of name jewelry or photographing potential runaways) might be added.

Items from either the list of interventions or the institutional policies were assigned to one of these three categories by two professionals experienced in long-term care research:

Cues (n=6): Door decorations, name plates, door numbers, color coding bedroom doors, maps, and color coding hallways.

Range Controls or Restraints (n=8): Body holders, geriatric wheelchairs, locked wards, courtyards, replacing shoes with slippers, door buzzers, elevator buzzers and selective signal systems (i.e., Kno-Go TM).

Programs (n=6): Training and behavior modification, taking people on walks, reality orientation/remotivation, using a special room, making evaluations of wanderers; developing any method on their own.

These categories were then used to study several questions:

1. How many of each type of intervention are typically being used? And, are higher rates of one type of intervention indicative of higher rates of others? That is, do institutions that offer more programs also invest more in physical restraints and cues? Or, do institutions that do more restraining offer fewer program and cueing amenities?
2. Do the interventions fall in clusters within these sub-groups and how might these clusters help clarify concepts within each type of intervention?
3. Are the numbers of programs, cues or restraints associated with other study variables, such as the size of the institution or rates of movement? Though these correlations cannot be used to study causation, they can narrow the possible variables involved and offer insights for developing inservice education programs.

How Many Cues, Restraint/Controls and/or Programs are Used? Nursing homes surveyed used more programs than restraints or cues (Table 50). An average of three programs were used per institution (3.0 of 6), 2.5 types of restraints (of 8) and 2.2 types of cues (of 6). Four percent (4.2%) of the nursing homes reported using no programs to deal with wandering, 0.1% used no restraints/range controls of any type, and nearly ten percent (9.6%) used no cues. Programs fill only a small percentage of a person's nursing home day or month. Environmental cues and restraining/range controlling devices affect the individual constantly. In general, facilities are doing a little of each.

Table 50

Number of Cues, Controls/Restrictions and Programs
USED by Nursing Homes: Frequency and Percentage Distribution

TOTAL NUMBER	CUES		RESTRAINTS/ & CONTROLS		PROGRAMS	
	No.	%	No.	%	No.	%
One	26	17.3	29	17.8	7	4.3
Two	55	36.7	45	27.6	37	23.0
Three	53	35.3	57	35.0	60	37.3
Four	15	10.0	31	19.0	43	26.7
Five	1	00.7	1	00.6	12	7.5
Six	0		0		2	1.2
SUBTOTAL	150	100.0	163	100.0	161	100.0
NONE	16	9.6	3	00.1	7	4.2
TOTAL	166		166		168	
Total Mean ^d	2.16		2.53		3.01	
S.Dev.	1.12		1.06		1.03	
Exclusive Mean ^e	2.39		2.58		3.14	
S.Dev.	0.914		1.01		6	
Total Possible	6		8		6	

^aIncludes name plates, door decorations, door numbers
color coding bedroom doors, color coding hallways, and maps.

^bIncludes body holder, geriatric wheelchair, dutch doors,
locked ward, courtyard, slippers not shoes, door buzzer,
elevator buzzer and signal systems like Kno-go TM.

^cIncludes administering an evaluation, behavior modification,
reality orientation/remotivation groups, taking people on walks,
and any response to "have you personally developed any new methods
for working with people who wander.

^dIncludes all responses, including zeros.

^eMean for those that have at least one of these methods.

The Programs and Cues. Providing more programs is associated with providing more cues; the correlation is significant but not high ($r=.271$; $p=.001$; see Table 51). Nursing home staff try to minimize time lost in taking people to the meeting place, in having people who were gathered wander off, and in having to give directions may all reduce the quality of social experience (Carroll, Mattson, Moss & Moench, 1979). If cues help even a few people to make their own way or to progress faster and more confidently, momentum builds, and the motions of a few can be followed by others.

The Restraints. There was a slight trend for nursing homes that used more restraints to have more cues, but not more programs (Table 51). This may be indicative of facility affluence or purchasing emphasis: there was more money to spend on things thought to be best for residents.

Respondents seemed to have ambivalence about the use of restraints. This topic was the source of more write-in comments ($n=20$) and caveats than any other issue raised by the survey (Table 52). Their comments raised several other questions such as the effects on sleep of being restrained at night or on dining of being restrained during meals. If restraints are the "last resort" what measures have failed? Is lack of staff sufficient reason to obtain a medical order for restraint?

Some interventions, classified as range controls or restraining devices confine the older person's range (refer to Table 44 for descriptions of these devices). Others hold the individual securely in a single body position. After thinking about the differential effects restraint presented on the checklist, an heuristic array of invasiveness

Table 51

Intercorrelations Between Numbers of CUES, CONTROLS and PROGRAMS Used
 Size of Nursing Home: Zero Order Correlations

CHARACTERISTICS		CUES	RESTRAINTS/ CONTROLS	PROGRAMS
	n	166	166	159
Number of CUES	r=	--	.124	.265
	p=		.111	.001
Number of CONTROLS/ RESTRAINTS	r=		--	-.007
	p=			n.s.
Size of Nursing Hm. In Occupied Beds	r=	.020	.240	-.032
	p=	n.s.	.002.	n.s.

Table 52

Write-In Comments and Caveates Regarding Use of Restraints

WRITE-IN COMMENTS ON USE OF RESTRAINTS (Reference Question Listed I.D.)SELDOM USE/CAVEATS ON USE

Restraints used rarely if unable to keep resident safe
 Occasionally
 Use as last resort
 At times
 Few
 Used very little

EXAMPLES OF HOW USED, WHEN USED

Only for meals
 We use restraints as a last resort when all else fails
 and we can't provide private (one to one) duty
 ..night only
 Last resort if they are combative toward others
 One individual for other's safety

COMMENTS ON GERIATRIC WHEELCHAIRS

Severe cases
 ...used for short period only after all other methods fail
 At times
 Few
 Used very little

COMMENTS ON LOCKED WARDS

...at night only

COMMENTS ON LOCKED WARDS

9-5 a.m. only

COMMENTS ON NAME BRACELETS

Name bracelets for individuals if they "wander" outside
 ...does not deal with wandering

was developed. Restraints seem to vary according to type of control:

1. Whether they control the mind or the body (or both)
2. Whether they touch the person, or are incorporated into the design of furniture or facilities
3. Whether the individual is aware of their presence (either because he or she sees them "put on" or because they are obvious rather than camouflaged or subtle.
4. Whether they actually restrict movement or secure movement within a range.

Two-thirds of the institutions are using restraints and/or body holders to deal with wandering. Table 53 illustrates the use of the heavier, more invasive methods. The majority of those, use both devices (55.5%). Only 18.5% of the entire sample use neither restraints nor body holders. Though both body holders and geriatric wheelchairs are used in a nursing home, it does not follow that all individuals are contained by a combination of devices. However, my personal observations would suggest that body holders are frequently used with geriatric wheelchairs to keep people from sliding out (Snyder, 1975). Combined use of geriatric wheelchair and body holder may result in the individual being more frequently transported, having more varied stimulation than when the person is tethered to a non-wheeling chair. It would be useful to study the effectiveness of each type of restraining method 1) on wanderers; 2) on those who are agitated; 3) on the general population.

Table 53

Summary on Singular or Combined Use of Body Holders
and Geriatric Wheelchairs
Frequency and Percentage Distribution

PATTERN OF HEAVY RESTRAINTS	No.	RESTRAINT USERS ONLY	
		ALL %	No. %
Use Neither	31	18.5	---
Use Geriatric Wheelchair Only	30	17.9	21.9
Use Body Holders Only	31	18.5	22.6
Use Both	76	45.2	55.5
SUBTOTAL	168	100.1	137 100.0

Factor Analytic Results of Interventions. Each of the three categories (cues, restraints and programs) was factor analyzed for further simplification (Table 54). Only items with a reponse of at least 10% were included and this yielded two factors within each of the three groups.

1. Control and Restraints. The two factors were named: Range Controls (such as courtyards and door buzzers) and Restraints (i.e., body holders and geriatric wheelchairs). Factor structures were moderately good, with loadings of .6 or better however they factors only accounted for 49.6% of the variance.

2. Cues. Environmental cues also clustered into conceptually meaningful factors: Ideographs (Numbering doors and name plates) and Decor (color coding bedrooms, color coding hallways and use of special door decorations). These factor structures were acceptable, with loadings for Ideographs of .7 or better and for Decor of .51 to .67. The two factors accounted for half of the variance (49.5%).

3. Programs. The first factor, Diverse and Sociable includes Reality Orientation/ Remotivation, evaluation of wanderers, and any method developed by the nursing home (under the question, "Have you developed any methods...."). The second, Motor Outlet and Redirection contains the practice of taking people on walks and the policy item "Retraining people not to wander using behavior modification." Jointly, they account for less than half (46.3%) of the variance. The items making up programs category were was not as good; in future research a fuller list of programs should be developed which includes items from the "write-in" responses (i.e., Tables 45, 47 and 48).

Table 54

Factor Analysis of CONTROLS, CUES AND PROGRAMS
 Short List Of Items Used by 10% or More of The Respondents

 1. Factor Analysis of CONTROLS

Intervention Itemization	RESTRAINTS	RANGE CONTROLS
	Factor 1	Factor 2
	F a c t o r	L o a d i n g s
Body Holders	.727	.099
Geriatric Wheelchairs	.684	.082
Dutch/half Doors	-.629	.237
Courtyards	.058	.782
Door Buzzers	-.044	.634
Variance Accounted	27.9%	21.7%

2. Factor Analysis of CUES

Intervention Itemization	IDEOGRAPHY	DECOR
	Factor 1	Factor 2
	F a c t o r	L o a d i n g s
Numbering Doors	.784	-.183
Nameplates	.740	.266
Color Coding Bedrooms	-.198	.677
Color Coding Hallways	.045	.647
Door Decorations	.214	.508
Variance Accounted	26.0%	23.5%

3. Factor Analysis of PROGRAMS

Intervention Itemization	DIVERSE & SOCIABLE	MOTOR OUTLET & REDIRECTION
	Factor 1	Factor 2
	F a c t o r	L o a d i n g s
Reality Orient/Remotivn	.760	-.217
Administer An Evaluation	.615	.082
Any Method Devel. By NH	.447	.240
Taking People on Walks	-.098	.713
Policy of Train'g not to wander, Beh. Modifctn.	.191	.702
Variance Accounted	24.6%	21.7%

In a later section, these factor scores will be compared to institutional background characteristics and rates of wandering, disorientation and building confusion.

Are Nursing Homes Doing What They Think Works Best With Respect to Wandering? Table 43, introduced earlier, contains data on what nursing homes do vs. what works best. No item emerged as an overwhelming success. In fact, only two interventions were judged "best" by even 50% or more of the respondents: name plates and name bracelets. About one-third favored "taking people on walks", "door buzzer systems", and "special door decorations". These findings could indicate 1) no one method really works best; 2) nothing mentioned on this list is outstanding; 3) nothing works all the time or for every wanderer. Other findings included:

*Door buzzers, used by nearly three-fourths, are thought best by only a third (33.7%). This may be because it is unusual for nursing homes to have buzzers on all doors; main entries, for example, are seldom connected to a buzzer system.

*Two-thirds of the institutions (68.1%) report using body holders or restraints, but only 40.4% saw them as effective in preventing wandering. Similarly, 63.3% use geriatric wheelchairs and only 44.4% judge these to be preventative.

*Courtyards were used by 67.5% and thought best by only 17.5%, perhaps because of problems getting outside and inclement weather.

*Reality orientation, used by 68.1% was deemed best by only 40.4%.

If, however, name plates on doors, name bracelets, and numbering doors are viewed as successful by even a plurality, it is interesting that these are not more widely adopted by facilities in general.

Several caveats should be kept in mind in interpreting these findings. First, the respondents were given a structured checklist. This analysis reveals how staff feel about items on the specific list. They may believe that some of the other methods (such as those written in) do work best. Certain interventions may serve other people or needs: Restraints may be used to prevent falls; name plates can be useful for staff members. The fact that an item was not judged "best" for preventing wandering should not be interpreted as meaning it is useless.

In General, Are Cues, Programs or Restraints Judged Most Successful?

By summing the total "best interventions" for cues, programs and range controls/restraints, we can compare the relative value each. From Table 55 it appears that 61.4% have not selected a cue in among their choices of what works best to prevent wandering. About a third each selected no restraints (32.5%) and/or no programs (31.3%). If the results of subsequent studies show that range controls and restraints are not effective, two-thirds of the institutions might need some convincing. Of those selecting cues as best, an average of 1.81 were selected. Of those selecting restraints/range controls as best, 1.65 were selected. Of those who chose programs as best, an average of 1.53 were selected.

A factor analysis was run to reduce the redundancy among interventions on the list (Table 56). The factors were named as:

Table 55

Numbers of Interventions DEEMED BEST in
Preventing Problems Associated With Wandering
Frequency and Percentage Distribution

Number of Interventions	CUES ^a		RESTRAINTS ^b & CONTROLS		PROGRAMS ^c	
	No.	%	No.	%	No.	%
One	34	52.3	59	52.2	64	55.7
Two	18	27.7	38	33.6	41	35.6
Three	8	12.3	14	12.4	10	8.7
Four	1	1.5	1	00.9	--	--
Five	4	6.1	1	00.9	--	--
Percent Total		99.9		100.0		100.0
SUBTOTAL 1-5	65	38.6	113	67.5	115	69.5
NONE	103	61.4	55	32.5	57	31.3
n	165		164		159	
Exclusive Mean ^d	1.81		1.65		1.53	
Standard Dev.	1.12		.80		.65	
Total Mean ^e	.70		1.12		1.05	
Standard Dev.	1.20		1.01		0.89	
Total Possible	6		10		3	

^aIncludes name plates, door decorations, door numbers color coding bedroom doors, color coding hallways, and maps.

^bIncludes body holder, geriatric wheelchair, dutch doors, locked ward, courtyard, slippers not shoes, door buzzer, elevator buzzer and signal systems like Kno-go TM.

^cIncludes reality orientation/remotivation groups, taking people on walks, taking people on walks, and any response to "have you personally developed any new methods for working with people who wander.

^dExcludes zeros, those that listed none for the category

^e"Total mean" includes those that listed none for the category.

Table 56

Interventions Selected as "BEST for Preventing Problems Associated with Wandering" By 15% or More of the Respondents: Factor Analysis Using Principle Components Extraction, Varimax Rotation

"BEST INTERVENTIONS"	ACTIVITY	DECOR &	RESTRAIN	PRECAUTIONS
	& ROOM CUES Factor 1	COURTS Factor 2	Factor 3	& SIGNALS Factor 4
Rotated Factor Loadings				
Reality Orientation	.726	.222	-.120	.128
Name Plates on Door	.722	.163	.177	-.137
Taking People on Walks	.631	-.126	-.177	.188
Numbering Doors	.470	.422	.468	.071
Color code hallways	.172	.760	-.131	.125
Special Door Decoration	.187	.658	.177	.107
Courtyards	.059	.541	-.107	.224
Body Holders	-.114	.014	.802	-.049
Geriatric Wheelchairs	.006	-.254	.702	.338
Door Buzzers	-.006	.048	.000	.823
Name Bracelets	.211	.212	.206	.649
Percent of Variance ^a	22.4	14.7	10.6	9.6

^aA total of 57.3% of the variance was accounted for. All extracted factors had Eigen Values of 1.0 or greater. Based on 162 cases. Those 300 beds or larger dropped from analysis.

Activities and Room Cues (Reality Orientation, name plates on doors, Taking people on walks and numbering doors; 22.4%); Decor and Courtyards (Color code hallways, special door decoration and courtyards; 14.7%); Restraints (body holders and geriatric wheelchairs, 10.6%); and Precautions and Signals (door buzzers and name bracelets; 9.6%). The variance extracted by the first factor, Activities and Room Cues is relatively high and suggests a fairly clear degree of staff agreement. This combination of cueing using room features and activities programs offers promise for future program development and evaluation research. However, the fact that the four factors extracted accounted for only 57.3% of the total variance signals the likelihood of other "best possibilities", as well.

Background Variables and Interventions Used

Are there institutional differences associated with the interventions used? Contrary to what one might predict, institutional size and management orientations had the only noteworthy association with interventions used.

Appendix B includes a write-up and tables for comparisons between institutional characteristics and interventions-- detailed comparisons which showed minimal or low correlations. This information may be relevant to those interested in conducting long-term care research in general or who need to maximize sampling for follow-up research on wandering in institutions.

The relationships between nursing home size and interventions used are presented and discussed in the following paragraphs.

Facility Size. Larger facilities were more likely to use more restraints/controls as contrasted with smaller ones ($df=2$; $F=7.71$; $p=.006$).

*On Restraints: The number of different types of restraints was significantly correlated with the size of the facility; larger facilities were more likely to use more controls ($r=.240$; $p=.002$)

Analyses of variance and cross-tabulations were run to compare institutions using no restraints with those that use body holders and/or geriatric wheelchairs.

*Facilities that used no restraints were smaller (84.6 beds) vs. those that used geriatric wheelchairs, body holders or a combination of these (104.0; $F=3.62$; $p=.059$ $df=3$).

*In looking at the specifics, those that used just body holders averaged 97.0 beds; those that used geriatric wheelchairs averaged 104.8 beds; and those that used both were the largest at 106.4 beds.

This may lend further credence to the role of economics in care of the wandering patient: geriatric wheelchairs are more expensive than restraining belts or vests and might be more affordable by the larger facilities. In most states, nursing homes are mandated to provide a side chair in the bedroom in addition to any wheelchair, so restraining people in their rooms in a side chair would be less costly than purchasing secondary geriatric wheelchairs.

The issue of size was evident in correlations involving the specific devices used and in the factor scores.

*Large facilities were more likely to use geriatric wheelchairs and think them best. A little over half (57.8%) of those using geriatric wheelchairs were larger facilities, 42.5% were smaller (df=1; chi square= 4.825, p=.028). Larger facilities were only slightly more likely to use body holders than were smaller facilities (n.s.).

*Larger facilities are more likely to use Range Controls (i.e., courtyards and door buzzers; p=.234; r=.002) AND somewhat more likely to use Physical Restraints (i.e., geriatric wheelchairs and body holders; p=.137; r=.078).

*Larger homes were slightly more likely to use exit buzzers: 81% of the larger ones used buzzers compared with 69% of the smaller (df=1; chi square=2.86; p=.09). This may indicate that larger facilities have more exits as well as more dollars to invest in technology.

State variations in use of geriatric wheelchairs were examined as a function of size using analysis of variance. The main effect of state was statistically significant (Multiple R^2 0.114; $F=2.708$, $df=8$; $p=.01$). (See Appendix B for findings on significant state differences.)

The association between nursing home size and use of controlling devices is key to understanding variations between large and small facilities and incident rates of wandering and will be discussed in more detail shortly.

Size, Cues and Services. Table 58 illustrates correlations between factor scores for Cues, Programs and Range Controls/Restrains and institution size:

*Larger nursing homes were somewhat more likely to offer interventions heavy in Decor (color coding bedrooms and hallways, using door decorations) ($r=.116$, $p=.138$). However, there was no significant difference between nursing homes on the basis of size and the use of Ideographs (numeral and lettering systems).

*Larger facilities tended to have more Diverse and Sociable programs, (that is programs characterized by Reality Orientation/Remotivation, administering an evaluation and self-developed methods) ($r=.143$; $p=.071$). The use of Motor Outlets and Retraining (i.e., taking people for walks and training not to wander using behavior modification, etc.) did not differ from large to small homes. The number of programs was also greater in larger facilities ($r=.147$; $p=.07$) and facilities with a Rehabilitation orientation. The numbers of programs did not statistically increase according to level of care, or administrative philosophies.

Table 57

Associations of Types of Cues, Programs and Restraining Methods
With Service Orientation (Maintenance or Rehabilitation)
and With Nursing Home Size (Bed Count)

FACTOR NAMES ^a	Nursing Home Size (in Beds)	Service Orientation	
		MAINTENANCE	REHABILITATION
<u>Cue Factors</u>			
IDEOGRAPHS	r= -.052 p= n.s.	.079 n.s.	.024 n.s.
DECOR	r= .116 p= .138	-.151 .05	.017 n.s.
<u>Program Factors</u>			
DIVERSE & SOCIABLE	r= .143 p= .071	-.084 n.s.	.215 .007
MOTOR OUTLET & REDIRECTION	r= -.084 p= n.s.	.019 n.s.	.050 n.s.
<u>Restraint/Control Factors</u>			
PHYSICAL RESTRAINT	r= .137 p= .078	-.031 n.s.	-.080 n.s.
RANGE CONTROL	r= .234 p= .002	-.115 .140	.054 n.s.

^aIdeographs included: door numbers, nameplates
Decorations included: Color coding bedroom, color coding hallway, door decoration

^bDiverse & Sociable included: reality orientation/remotivation, administering an evaluation and any new method developed by respondent's institution; Motor Outlet and Retraining included: Walking, Training not to wander using behavior modification

^cPhysical Restraint included: body holders, geriatric wheelchairs but not half/Dutch doors; Range Control included: courtyards and door buzzers.

Management Orientation and Interventions. Did management philosophies or service orientations also result in the use of different typologies of intervention? (Table 57).

*Facilities with higher factor scores on the Maintenance Orientation (i.e., Keeping people comfortable, Maintaining present physical or mental function) were less likely to report using Decor and somewhat less likely to use Range Controls. Both the Decor and Range Controls seem to presume a certain alertness and mobility in residents which may not be consistent with the perceptions of the staff of these facilities. Or, perhaps a philosophy of Maintenance/Custodial care evolves from other variables, i.e., having less money. (Recall that Maintenance oriented facilities tend to be smaller; see Table 18.)

*Nursing homes with higher factor scores for Rehabilitation had no special pattern of cue or restraint use. They did, however, tend to have more Diverse and Sociable programs ($r=.215$, $p=.007$).

Analyses were made to learn whether the issue of institution size also correlated with the numbers (not just the types) of interventions used.

*On Cues: No significant relationships were found between the numbers of cues and size, level of care, philosophy of care, and building confusion. Smaller facilities are not characterized by fewer environmental design amenities-- nor are larger facilities outfitted with more. And more or less confusing buildings have no more or fewer cues. However, citing walking as an intervention for wandering was statistically correlated with reporting more cues ($r=.170$; $p=.054$). Behavior may be creating demand for the cues-- or, the presence of the

cues may be signalling the appropriateness of walking. Use of reality orientation/remotivation was also associated with higher numbers of cues ($r=.150$; $p=.054$).

Are Intervention Patterns Associated With Rates of Movement?

What is the association between interventions and rates of wandering? One of the most exasperating aspects of a study where the institution is the unit of study the data do not permit conclusions regarding the relative merits of either specific interventions (taking people on walks vs. reality orientation) or classes of interventions (programs vs. restraints/controls). As a study of the "state of the art" these data can be used to suggest directions for further investigation and begin to winnow the list of questions for later research.

Two comparison tables using factor scores are presented for these comparisons. Factor Model 1, Table 58, includes the full list of interventions. The second set, (Factor Model 2) Table 59, presents correlations of factors scores for the subclasses of Cues, Controlling devices, and Programs. Both lists are drawn from the same basic data; each differs because of the make-up of the factor.

Since intervention data were dichotomous (i.e., "yes, we use this"; "no, we do not"), correlations of the specific items and percentage rates of wandering or disorientation were not appropriate. The possibilities of using t-tests and comparing rates for those that did and did not use the interventions was explored (and in fact the tests were made), but given the probability of chance findings from so many tests, the technique of correlating factor scores was deemed preferable.

Table 58

Associations Between Intervention Types (Factor Scores) and
 1) Percentage Rates of Wandering and Disorientation and
 2) Size of Nursing Home; Zero Order Correlations

MODEL 1: Categories for Factor Analytic Results

INTERVENTION FACTOR NAME /Examples	TRY TO LEAVE	PACE	ROAM	RUN AWAY	INDEX CONFIN	DISORI- ENT'D	HOME SIZE ^a
	C o r r e l a t i o n				C o e f f i c i e n t s		
SPECIFIC & DIVERSE (i.e., Reality Orientation/Door Decorations)							
r=	-.049	-.039	-.020	.011	.124	-.063	.132
p=					.112		.089
PROTECTIVE MOVEMENT (i.e., Courtyards, Name Bracelets)							
r=	.052	-.003	.060	.004	.012	-.083	.273
p=							.000
PLACE INDICATORS (i.e., Door Numbers, Nameplates, Exit Buzzers)							
r=	.047	.047	.137	.048	-.051	.118	-.075
p=			.079			.130	
RESTRAINTS (i.e., Geriatric Wh.Ch., Body Holders)							
r=	-.083	.002	-.033	-.073	-.066	.053	.162
p=	.291						.037
MOBILITY TECHNIQUES (i.e., Walks, Color Coding Hallways)							
r=	.128	.168	.085	.029	-.056	-.140	-.036
p=	.102	.031	.278			.072	

^aNursing home size in terms of beds occupied at the time of study.

Note. Rates based on 165 nursing homes; size based on 166. Facilities larger than 300 beds were not included.

Model 1: Suggesting the Importance of Mobility Techniques for Disorientation. Using the five factors obtained from analyzing the list of twelve interventions with 15% response rate or higher, a correlation matrix was developed comparing factor scores with percentage rates of wandering movement. The overall impression is that no correlations are particularly high, a few are negative and a few are statistically significant (Table 58).

*None of the interventions significantly correlates with high rates of runaways. If wandering is a scarce phenomenon in a statistical sense, running away is even more uncommon. It may be that running away occurs despite whatever intervention procedures are offered. Or, it may be that the data generalized from roughly 400 runaways in about 155 institutions represented by this study are insufficient for drawing conclusions. With so many institutions, there are a wealth of variables with which to contend.

*The very low but nearly significant correlations between attempt to leave and use of mobility techniques do warrant more follow-up. We need to clarify the nature of the walks and hues and types of color coding.

*What may be interesting to follow-up as well is the potential that the Mobility Techniques ("walking" coupled with environmental cues) are associated with a lower level of disorientation ($r=-.140$; $p=.072$). Perhaps there is some "excess disability" of disorientation that is minimized for at least some people as the result of these cues.

*There were consistently negative correlations between use of restraints and leaving, roaming and runaways (but not pacing). It would be interesting to learn whether this pattern holds up with case data,

and whether restraints are used selectively based upon the type of wandering behavior.

*There was a relationship between use of Mobility Techniques and pacing: taking people on walks and decorating the hallways seems to be associated with higher rates of pacing (.168; $p=.031$) and a trend toward more attempts to leave ($p=.128$, $r=.102$) but not higher percents of Runaways. Perhaps movement sets off movement and environmental enhancements stimulate curiosity but they also keep people busy inside making them less inquisitive about what is beyond. Or, perhaps mobility satisfies some need and staves off the desire to escape.

*Roaming is distinguishable from either pacing and attempting to leave, perhaps somewhat akin to disorientation. One may speculate on both directions of causality for the slight correlation between place indicators and roaming. Facilities with more people who roam may have the need for more exit buzzers, for example. But, it is also possible that more place indicators and buzzers stimulate the curiosity of these people.

These data suggest that the rates of wandering behavior fluctuate independently of the interventions used. Since the factors are comprised of interventions staff state that they use and because these interventions are in place when the runaway episodes occur, it is tempting, though not possible from correlation studies, to conclude that none of these interventions has an effect on the tendency to elope. In follow-up investigations, it would be interesting to learn whether the interventions offer either residents or staff members some palliative relief. It may be that:

1) restlessness that accompanies wandering is diminished as a result of some of taking people on walks, which would make the individual and staff member feel better. In theory, it would be easier to return a calm runaway than a restless one.

2) episodes of problematic or risky movement are minimized through these interventions (see Study 3).

3) having specific interventions for wanderers reduces negative feeling toward wanderers. The notion here is that an institution with some interventions might feel, "we're doing all we can".

Model 2: Correlations between Subclasses of Interventions and Percents of Wandering With Implications for Programs and Restraints.

For the second analysis factors derived from each of the three heuristic categories of interventions were correlated with wandering rates. This method produced slightly more significant correlations though they are still very low.

Table 59 illustrates that Decor bears little association to wandering movement. However, the higher the factor score for Decor the lower the percentage rate for disorientation. The direction is worthy of follow-up. Ideographs (door numbers and labels) showed no similar correlations.

Higher scores on the Diverse and Sociable factor were associated with lower percents of people trying to leave, but not with lower figures for the other types of wandering. Are some attempts to leave a statement about dissatisfaction with one's situation? Do group programs somehow mitigate that dissatisfaction, at least for some? Or, is it easier to offer more programs when fewer people are attempting to leave? In

Table 59

Associations of Types of Cues, Programs, and Restraining Methods
With Rates of Movement

FACTOR NAMES ^a	Model 2: Initial Categories Developed Heuristically					
	TRY TO LEAVE	PACE	ROAM	RUNAWAY	DISORIENT NONWANDER	CONFINE INDEX
	<u>Cue Factors</u>					
IDEOGRAPHS	r= .102 p= .191	.111 .155	.159 .041	.099 .202	.069 .381	-.102 .193
DECOR	r= .044 p=	.041	-.014	-.005	-.139 .076	.044
	<u>Program Factors</u>					
DIVERSE & SOCIABLE	r= -.150 p= .059	-.018	-.013	.026	-.016	.170 .033
MOTOR OUTLET & REDIRECTION	r= .043 p=	.165 .038	.057	.183 .021	-.174 .028	-.061
	<u>Restraint/Controlling Factors</u>					
PHYSICAL RESTRAINT	r= -.122 p= .119	-.038	-.079	-.069	.038	-.017
RANGE CONTROLLED	r= .111 p= .156	.120 .125	.088	.050	-.063	-.056

^aFor itemization of Factors, see Table 54.

Table 60

Numbers of CUES, CONTROLS/RESTRAINTS, and PROGRAMS and the Rates of Wandering and Disorientation; Zero Order Correlations

TOTAL FOR INTERVENTION	Attempt to LEAVE	PACE	ROAM	RUN AWAY	DISORIENTED	CONFINE INDEX
	C o r r e l a t i o n			C o e f f i c i e n t s		
Number of CUES	r= .096 p= .220	.095 .225	.088 .260	.064	-.023	-.057
Number of PROGRAMS	r= -.065 p=	.089 .265	.029	.122 .128	-.107 .182	.080
Number of CONTROLS / RESTRAINTS	r= .076 p=	.104 .183	.051	.008	-.031	-.213 .006

Note. Based on 165 respondents for cues and controls/restraints (each) and 155 respondents for programs.

follow-up research it would be useful to study these group programs qualitatively and to measure their impact on hyperactive motor behavior.

Physical restraints and range controls were not significantly related to rates of movement, though the direction of the correlations are notably different between the two. Overall, physical restraints are negatively correlated with wandering (but not disorientation). Range controls are positively correlated with the movement types and show a trend where more range controls are associated with higher percentages of residents who attempt to leave or pace. This finding piques curiosity about the merits of range controls over body restraints. If freedom to move is valued, then it would be useful to know whether range controls can be as effective or more effective than the more intrusive body holders.

Disorientation, Wandering and The Numbers of Intervention (Cues, Restraints/Controls and Programs). If the types of interventions have only slight associations with rates of wandering, are numbers of interventions more strongly associated with movement types?

On Table 60, the numbers of Cues, Programs and Controls/Restraints are compared with the percentage rates of wandering movement and disorientation. The only significant relationship to emerge was between the Confinement Index and the number of controls/restraints. The more controls and restraints that are used, the more people who are getting out as a function of those who try. Does this mean that there is resistance to multiple restraining methods (more people try to leave because of the high numbers of controls) or that more restraints are used because running away is stimulated by higher numbers of people who

try to leave? Interpretation is stymied by correlational data.

An extremes analysis was performed and institutions were arrayed in thirds, according to whether they used many or few restraints. The bottom and top sectors were compared for each of the rates of movement. Similar criterion groups were developed on the basis of numbers of cues and numbers of programs. A lengthy correlation analysis was run between the number of cues, controls and programs and incident rates of movement and disorientation.

The results heightened the information already presented:

*Facilities with more types of restraints had lower rates of confinement, that is, more runaways ($r = -.242$; $p = .002$).

*There was a slight trend for fewer programs to be associated with lower rates of runaways ($r = -.128$; $p = .12$). No similar pattern emerged between the numbers of programs and other rates of movement.

*There was a moderately high statistical relationship between the practice of letting people wander and the numbers of programs people reported ($r = .392$; $p = .000$).

*There was a relationship between the rates of disorientation without wandering and numbers of programs. Higher rates of resident disorientation were slightly associated with lower numbers of intervention programs ($r = -.155$; $p = .058$). We do not have data to judge whether it is the programs themselves or possibly the walk taken to them which affects disorientation; or whether programming is more common when more older people are oriented.

The negative direction of correlation for the non-statistically significant data on cues is noteworthy. Increases in cues are associated with lower rates of disorientation and confinement-- but are not associated with lower overall rates of pacing, roaming or trying to get out. More study of the roles of cues is needed to ascertain their effectiveness.

Building Confusion and Numbers of Cues, Restraints and Programs. Are buildings with more cues judged less confusing? Analyses were made to study the potential relationships between the staff members' judgments of building confusion and the numbers of cues available using analysis of variance on the four-point rating of facility confusion compared to numbers of cues. Though not reaching overall statistical significance, there was a slight tendency for the facilities judged very confusing to have more cues (3.6) as compared to those judged confusing (2.7), somewhat confusing (2.3) and not confusing (2.7).

A second analysis was made comparing shape of the building and the numbers of cues used. More complex buildings were associated with the use of more cues.

In the third analyses, the relationships between building shape, disorientation and size were examined along with the rates of disorientation among residents. The low proportion of the variance accounted for by any of these variables would suggest that severe disorientation may be unaffected by external cues.

Are the options for older people to move sometimes curtailed because of the confusing design of a nursing home? Staff reported that higher numbers of range controls are used in those "very confusing" buildings

(mean number = 3.6 compared to 2.4 for "not confusing" buildings; 2.6 for "somewhat confusing" and 2.5 for "confusing" buildings; $F=2.53$; $p=.059$). This suggests that residents pay a price for freedom to move as a function of architectural design.

Numbers of Programs Offered and Building Confusion. A comparison was made between the numbers of programs available in buildings based on how confusing they are judged to be. If confusing buildings were associated with low numbers of programs this could be interpreted in at least two ways: the facilities might be so complicated that staff members hold fewer programs because of the effort involved in getting people out of their rooms to some central place. Or, it could suggest that the building seems more confusing when there is less activity, when fewer people are attending programs. Results of an analysis of variance indicated that facilities that are "not confusing", "somewhat confusing" and "confusing" all have the same mean number of programs (3.2). Those judged very confusing have fewer programs (2.4) but results were not statistically significant.

It was also interesting to note that facilities judged more disorienting were those where less medication was used ($r=-.163$; $p=.04$, $n=158$). This may indicate that medication masks the judgments staff make about patient disorientation.

Integration of These Findings

Within each of the sub-groups of interventions: cues, programs and restraints/controls, there were significant or nearly significant correlations with nursing home size. The use of Decor, Diverse and Sociable Programs, Range Controls and Physical Restraints were all

positively correlated with nursing home size. The highest relative correlation was between the size and use of Range Controls. Interaction between size and use of restraints was probably the best explanation for why smaller facilities have more of all types of wandering, but not more disorientation. The smaller facilities (and by smaller, we refer to facilities under 86 beds) may perceive themselves as capable of watching patients and monitoring exits. Or, they may not have the extra funds to pay for monitoring devices. Reimbursement in the Medicaid program, which pays for 75% of the older people in nursing homes, in most states is not based upon actual costs nor upon the size of the institution. The same dollars may generate more working capital in a larger facility than in a smaller one. Or, small homes may be more tolerant of wandering.

Is size of institution really the underlying commonality between these findings? I suspect that follow-up research might show that choice of intervention relates to institution size AND costs. The more Diverse programs require labor (or volunteers). The Range Controls represent a sizeable investment, as does the technology for buzzers. Larger facilities may have features which distinguish them from smaller ones, but they may also have more dollars available to use on restraints (such as geriatric wheelchairs) rather than labor-intensive services.

The choice of interventions may be more related to institution size, building complexity and money available than the type of wandering exhibited. For example, consider the tendency for larger facilities to be more likely to use geriatric wheelchairs and smaller ones more likely to use body holders. Geriatric wheelchairs are large and they are more

expensive than body holders. It may be that small nursing homes have neither the space nor the capital to invest in these devices. Moreover, the chair becomes a portable environment (Snyder, 1975). The person is placed in a geriatric wheelchair in the morning and may not be moved until late afternoon. Meals can be taken on the tray. A catheter collection unit can be attached to the chair to collect human wastes. The geriatric wheelchair makes care efficient. Until quite recently, no one questioned whether it was effective from the older person's point of view (Burnside, 1980; Snyder, 1975; Hiatt, 1982a). The person is considered easy to move and his or her whereabouts is always known-- issues that might be more crucial in the larger facilities. I suspect that many nursing homes do not view the geriatric wheelchair as a restraint.

Many cautions are in order when looking at the data correlating factor scores. First, the factors themselves did not tell the full story, most accounted for a total of just under half of the variance, so these findings may not fit all nursing homes. Second, the data are only correlational. Third, there are other issues, such as available capital or expenditure patterns that this study has not addressed.

What this does raise is the question of whether care for wanderers is different from large to small facilities. These data would suggest that there are more wanderers in smaller facilities than in larger ones. Whether that is good or not good may depend on one's notion of the risks and appropriateness of the behavior. And, there appear to be fewer runaways and more range controls in the larger ones. The implications for families might be that, until more is known about what is best to

do, all institutions may not be treating wanderers in the same ways and in theory, one might be able to shop for a facility that has programs consistent with one's own views of what is appropriate.

It is important to point out that many institutions have no policies and have no planned system of evaluating people who wander. This suggests that whatever is happening may be coincidental, disorganized and without continuity between caregivers. No questions from this survey specifically asked why one method is used over another or how certain techniques come to be used in conjunction with each other though such information would be useful.

On the pages to follow, the two other studies constituting this research have been described. Following both of these write-ups, the Discussion, Implications and Conclusions are presented for the research as a whole.

STUDY 2: DEFINITIONS OF WANDERING

Purpose of the Study of Definitions

The question of how staff members define wandering is important to a broad, exploratory study such as this. The mail survey was useful in obtaining data on a checklist of definitions. However, given the paucity of nationwide or even small scale comparative research on wandering, it seemed important to obtain definitional data in a more flexible format, allowing staff members to offer their own definitions.

The purpose of this study was to 1) obtain open-ended definitions for wandering; 2) to develop a categorical description of these definitions for use in future research; 3) to make general comparisons between the results obtained from the checklist and open-ended question formats; and 4) to identify any conflicts or complexities in definitions which might need to be incorporated into data interpretation. Two opportunities were taken to obtain this information. Based on the experiences of the first, the second group was asked for definitions of disorientation, as well.

Methods and Procedures

Initially, two procedures were to be incorporated into the study for obtaining data from caregivers on how wandering is defined. The first was to use the mail survey from Study 1. The second procedure was to have involved querying 10-20 staff members from each of six institutions for a total of 60 or more definitions. That was all predicated on visiting six sites. In the course of contacting institutions to participate in the site visits, two contact persons made a request for a workshop for their respective communities on the topic of wandering. Their requests were independent of the timing of this study and arose

more from knowledge that someone else was interested in a topic that they found interesting. In both cases, the workshops were to be based upon contemporary literature and any findings analyzed from the mail survey at that time. About the time of the workshops, it became clear that the initial plan of visiting six sites would have to be modified in order to spend more time with the results of the mail survey and in response to unsuccessful attempts to obtain outside funding for travel. I turned to the workshops to obtain information that would have been gathered from the site visits on definitions of wandering. It seemed appropriate to the presentation and to the goals of this study to obtain open-ended definitions from the participants as the first order of the day.

The first workshop, jointly sponsored by a regional training center of the Veterans Administration and a County Hospital for older people in upstate New York, involved 64 people from fourteen institutions. The second workshop, two months later, sponsored in western North Carolina involved 64 people, including staff of 41 institutions, seven family members and six unaffiliated professionals, one who was not currently engaged in geriatrics. The fact that each workshop yielded the same numbers of respondents was a coincidence.

In the first workshop, participants were given the following instructions:

This is a workshop on wandering. As a means of starting, it would be useful to learn about how the term "wandering" is used. On the blank paper provided, please use one side to define wandering. What does wandering mean in terms of older people? Answer any way you like: with sentences, lists, examples or words. On the back of the paper, please list your type of work (nurse, etc.) and your institution.

Responses were collected by participants, shuffled, and read aloud as part of the conference. The second workshop occurred four months after the first. Additional data analysis of Survey 1 had been conducted and questions arose from that study regarding distinctions between "wandering" and "disorientation". The procedures and instructions were modified to obtain definitions for both behaviors.

This workshop has been titled, "Wandering and Disorientation". To start, we will ask you to define these terms. What is wandering? On the top of the paper provided, please jot down a definition of "wandering". "What is disorientation?" On the bottom of the paper, please define "disorientation". Draw from your personal experience with older people. Answer any way you like: with sentences, lists, examples or words. On the back of the paper, please list your connection with older people (position, family relationship, etc.). If your connection includes a job, please indicate the type of facility and size or type of agency.

Responses were collected and read aloud as part of the workshop.

Analysis Of Definitions

All definitions were entered into a word processor in whatever form they were received: lists, sentences, sentence fragments, etc. No corrections were made except two spelling errors. Unclear or ambiguous statements were entered exactly and followed by "[sic]." Using a "search and replace" feature, definitions were then clustered and sorted according to the use of key words. Clusters were then given a name, like a factor name, which seemed to capture the essence of the specific items.

Two independent readers, both familiar with aging and the scope of this study, were asked to review the resulting lists and to recommend reordering of items or relocation of categories. Each worked independently but identified the same two categories for consolidation.

Definitions for each site were kept separate for one set of analyses and combined for another. This seemed particularly important because the second group had different instructions and it was to be important to see how these instructions influenced their responses.

Comments on the Procedure. This technique for obtaining definitions is based upon ethnographic inquiry (Spradley, 1978) and content analysis (Holsti, 1969). The ethnographic procedure requires that the researcher state a "domain" or umbrella term and encourage respondents to define the term according to their own associations. While it does not provide the same type of data as a multiple choice list, it does give the researcher insights on categories of definitions by having respondents express their own terms rather than relying on the categories of the researcher. Techniques for content analysis vary according to the goals of the researcher (Holsti, 1969).

Ideally, a procedure of obtaining open-ended responses should be followed by iterative feedback. For example, focus groups or Adelphi procedures can be used to obtain reactions from people to each others' definitions. Hopefully, these data can be used by others in such procedures to tighten definitions and obtain more functional explanations of motions, wandering and disorientation. Such follow-up research could also involve polling families or non-professionals.

FINDINGS

There were both similarities and differences between the open-ended responses and the findings resulting from the closed-ended questions on the mail survey. In both cases, multiple definitions resulted. The 128 workshop attendees (both sites) gave 400 responses to "wandering". Their responses covered much the same territory as the closed ended

questions and write-in responses:

*A third of the responses (30.3%) refer to "purpose or aim". This seems to be a topic with about which there are notable differences in opinion. Of the 73 responses pertaining to either purpose or aim, 69.9% indicated that there was no purpose; 16.4% indicated that wandering does have a purpose. About seven percent (6.8%) each indicated that wandering has "no known purpose" and that wandering may or may not have a purpose. (Table 61.)

*Sixty percent of the respondents described wandering in terms of perpetual movement or pacing.

*Categories added by the respondents that would probably be useful in future studies of wandering are: 1) restlessness, 2) emotional behavior, and 3) the concept of need or urgency.

The samples differed in two important ways. One was asked for information about wandering and not about disorientation. The other was asked about both. The responses were nearly the same for both groups with these exceptions:

*One sample (North Carolina) offered 28 responses on the topic of agitation. The term was not even used in the responses received from the New York group. It is possible that this reflects some carry-over from the previous day's workshops, where the topic of agitation was discussed.

*The North Carolina sample yielded slightly more definitions (220 compared with 180).

*The North Carolina sample referred more frequently to the term "movement" or amounts of movement (32 times vs. 9). This may be one area where the request for two definitions influenced the responses.

Table 61

Responses of Conference Attendees to Open-Ended Question Requesting Definition(s) of Wandering; Frequency and Percentage Distribution

<u>RESPONSE CATEGORY/Specification</u>	<u>Response Frequency</u>	<u>Respondents</u>	<u>Responses</u> <u>P e r c e n t s</u>
<u>PURPOSE</u>			
No purpose	21	5.2	16.4
Has a purpose	12	3.0	9.4
Not knowing purpose; no known purpose	5	1.2	3.9
May/May not have a purpose	9	2.2	7.0
Both purposeful and nonpurposeful	1	0.2	0.8
<u>AIM</u>			
No aim, aimless	30	7.5	23.4
May, May Not be Aimless	4	1.0	3.1
<u>SEEKING (i.e., a purposeful act)</u>			
Looking (as a purpose or goal)	26	6.5	20.3
Act to accomplish some other objective	17	4.2	13.3
Leaving	19	4.8	14.8
<u>MOTION, HYPERACTIVITY</u>			
Pacing/Continual or Excessive Movement	40	10.0	31.3
<u>UNCONTROLLABLE, NEED STATE</u>			
Uncontrollable Urge to Move	9	2.2	7.0
Need (Need to get out, need for movement)	8	2.0	6.3
<u>ROAMING, RUMMAGING</u>			
Roaming	11	2.8	8.6
Into Other Rooms, Intrusive	17	4.2	13.3
<u>DISORIENTATION</u>			
Disoriented/Unable to Find	42	10.5	32.8
Oriented and Disoriented	1	0.2	0.8
<u>RESTLESSNESS, EMOTIONAL TURMOIL</u>			
Agitation, restlessness, hyperactivity	29	7.2	22.7

Continued on next page

Table 61 continued

Responses of Conference Attendees to Open-Ended Question Requesting Definition of Wandering; Frequency and Percentage Distribution

	Frequency	Respondents Percents	Responses
Emotion/Expression (Upset, lonely, no one to talk to)	14	3.5	11.9
<u>LACKING AWARENESS, ALERTNESS OR DEFICIENT ATTENTION SPAN</u>			
Lack of Awareness	7	1.8	5.5
Characterized by Mental Impairment	24	6.0	18.8
Wandering Mind	3	.8	2.3
Poor Attention Span	2	.5	1.6
<u>SUPPLEMENTAL INFORMATION ON ASSOCIATED BEHAVIOR</u>			
Behavior Examples (one who opens doors, repetitive, here one moment, gone the next)	33	8.3	25.8
<u>SUPPLEMENTAL INFORMATION ON MANAGEMENT IMPLICATION</u>			
Management Implications (Must be watched constantly, being in areas you should not be in)	7	1.8	5.4
<u>EXPRESSION OF HAZARD</u>			
A hazard (Oblivious to potential dangers, Lack of judgment for safety or appropriate behavior)	9	2.2	7.0
Total Responses	400	99.9	
Total Respondents	128		--

Note. Percents may not add to 100 due to rounding.

The North Carolina group may have referred to movement as a sub-set of wandering because they were also defining disorientation and using the construct to differentiate the two.

*The respondents added interesting information regarding agitation, emotion and need. Agitation, restlessness and hyperactivity were cited by almost a quarter (22.7%) of the respondents and as 7.2% of the responses as features of wandering.

*Wandering was definitionally associated with mental impairment for 18.8% of the respondents and 6% of the responses. On Survey 1, when asked about causes of wandering, mental function was the most common response.

*Respondents also defined wandering as a function of hazards (7.0%) and supervision implications (5.4%).

Definitions of Disorientation

There was more consensus regarding definitions of disorientation than definitions for wandering. The majority of respondents referred to a lack of accuracy, awareness or clarity with regard to some combination of time, place, person, reality and whereabouts. The concept of whereabouts was somewhat confusing in these definitions: sometimes it referred to direction (how to get to a destination) and other times to awareness of current location or the related awareness of one's present circumstances.

This set of definitions suggested a number of ways of studying disorientation to space and for research of the more general notion of disorientation. To my knowledge, these have not been studied as discrete phenomena:

Table 62

Workshop Attendees' Definitions of Disorientation; Frequency and Percentage Distribution

TOPIC/Example	n=	No. Respondents	Responses
		55	101
		P e r c e n t s	
<u>TIME, PLACE, PERSON; WHO, WHERE, WHEN</u>	37	36.6	72.5
-Unaware of time, place, person (combined)			
-Not able to recognize time, place, person			
-Unaware of person, place or time but may be able to function appropriately and safely if person is oriented in either one or several of these areas			
-Not knowing the societally deemed correct answers to "who? what where when why how and/or feeling uncomfortable with your own answers to those questions			
-Loss of reality concerning person, place and/or time			
-Consider disorientation to be a part of wandering, but dealing more with specifics such as time, person & place.			
<u>ORIENTATION TO WHEREABOUTS, PLACE</u>	13	23.6	12.9
<u>General Place (n=4)</u>			
-Unaware of physical environment; unaware of place;			
<u>Present Place, Locus (n=6)</u>			
-Not recognizing where one is			
-Not recognizing the type of place one is in			
<u>Destination (n=1)</u>			
-Not knowing where you're going			
<u>Origin (n=2)</u>			
-Not knowing where you came from			
<u>MEMORY LOSS, CONFUSION</u>	14	25.4	13.9
-Inability to retain knowledge			
-Inability to have recent memory			
-Not knowing			
-Confusion			
-Unable to distinguish thoughts or categorize them			
-Not mentally capable			
<u>INAPPROPRIATE RESPONSES, WRONG</u>	9	16.4	8.9
-Wrong everything			
-To question a person and get an answer that is unrelated			
-Inability to respond in an appropriate way			
-Inappropriate answers to simple questions			
-Inappropriate actions and verbal responses			

Table 62 continued

Workshop Attendees' Definitions of Disorientation; Frequency and Percentage Distribution

	Frequency	Respondents Percentages	Responses
<u>CONFUSION REGARDING TIME AND DATES</u>	6	10.9	5.9
-Unaware of time			
-Not knowing what time it is			
<u>CONFUSION OVER REALITY (n=6)</u>	6	10.9	5.9
-Not oriented to reality			
-Living in past			
-Pursuing events or activities which do not "fit" the given notion of reality			
-Not in tune with present world			
-Speaking or doing something but none of which pertains to immediate conversation or what is going on around the person.			
-Unrealistic			
<u>KNOWLEDGE OF CIRCUMSTANCES OR PRESENT SITUATION</u>	2	3.6	2.0
-Unaware of why they are there			
-Inability to relate to and respond to situations appropriately			
<u>ORIENTATION TO PERSON</u>	5	4.9	9.8
-Not oriented to names			
-Inability to recognize family or staff			
-Not knowing who you are			
<u>TWO-PART COMBINATIONS OF TIME, PLACE, PERSON</u>	3	5.4	4.9
-Unaware of "correct" time and/or person			
-Not oriented to place, time, etc. Not really aware of what's going on around them.			
-One who does not know where they are, what day and date, etc.			
<u>OTHER</u>	5	9.0	4.9
-One may be disoriented in several areas-- so being disoriented involves lack of grounding or confusion in one or all of these areas.			
-Like walking in a strange room. Frightened until you put the pieces together. ^a			
-Inability to recognize objects			
-Lost			
-Inability to sustain a brief conversation			
-Has different levels			

^aComment by an architect, non-health provider, not familiar with gerontology.

1. Qualities of the knowledge one holds itself (awareness)
2. Ability to use knowledge (identify someone or get to a goal)
3. Accuracy of Information or Situational Aptness of Behavior
4. Specific domains of capability/impairment
 - a. Clock time
 - b. Present time (where one exists in relation to a past and future)
 - c. Distinction between past, present and future events
 - d. Knowledge of one's whereabouts
 - e. Skill at wayfinding
 - f. Accuracy in identifying other people
 - g. Self-concept, awareness of one's self as distinct from other people
 - h. Social appropriateness of behavior and of communications

INTEGRATION OF FINDINGS FOR STUDY 2

Definitions of Wandering

There were many similarities between the closed-ended and write-in responses to Survey 1 and the definitions of wandering from this study. In both instances, the intentionality and orientation or awareness of the individual emerged as issues. There were also some differences: conference participants who developed their own definitions did not mention the issue of "problems" nearly as much. This may reflect their participation in a workshop (a sense of optimism that there were some alternative methods forthcoming). Or, it may be that such information which could be viewed as self-criticism, is less likely to be obtained in the workshop format where participants face the researcher. Conferees also mentioned the notions of pacing and continuous or

excessive movement somewhat more than did survey respondents. A sizeable proportion of the staff members responding to the mail survey included references to leaving the building. In neither workshop was that topic as frequently mentioned. While I find both these differences curious, I cannot explain them.

Definitions of Disorientation

One of the reasons the empirical data of Study 1 may have failed to demonstrate stronger connections between disorientation and environmental attributes is that caregivers are not identifying orientation as specifically a spatial concept. This suggests that both behavior and interventions need some clarity. The preceding list may also be useful in guiding some differential assessments to determine whether these indeed are all one general category of capability/disability, or whether (as some staff comments indicate) the individual may have different degrees of awareness. Future researchers may need to clearly distinguish "orientation" and "spatial orientation" in research with caregivers.

In the next section, we shall turn to observations of wandering and a study of hyperactive older people in an actual setting. This will provide a different type of opportunity to study the relationship between disorientation and motoric behavior.

STUDY 3: CASE STUDY OF WANDERERS IN A NURSING HOME WITH AN INNOVATIVE PROGRAM

Purpose

Study 1 addressed the lack of information on what nursing homes do about wandering and Study 2 expanded information on definitions of wandering. Study 3 personalizes these accounts by offering first-hand information from staff members, observation, and from a few family members on the wandering behavior of fifteen older people.

The specific intent of the case study was:

1. to compare characteristics of wanderers and non-wanderers of about equal status (in the sense that they are at the same levels of care);
2. to observe the mobility of those who wander comparing them to those who do not;
3. to observe and describe the behavior of people in a nursing home which has made an effort to develop a formal program for people who wander.

Methods

Selecting the Target Site. The initial plan for this research was to emphasize the fieldwork component, obtaining first-hand data by closely observing wanderers and non-wanderers in several institutions. Previously published accounts of wandering had emphasized the behavior of male wanderers (because of their conduct in veterans hospitals) and had been limited to one site at a time. The plan was to use the survey as a resource tool to generate possible sites for study, looking at a total of six (two innovative, two "standard", two substandard) nursing

homes.

Several circumstances led to a changes in those plans. First, response to the mail survey was higher than anticipated. The mail survey also generated many write-in responses, raising the possibility of learning more about the state-of-the art from institutions than anticipated. Second, two proposals for funding the research were not funded meaning that costs for site visits would need to be paid for personally.

All of this led to the decision to cut down the number of sites. However, I wanted to make sure that at least one was innovative. Two survey respondents had described innovative projects (see Study 1) but only was was currently operating and it was already being researched. I was frankly surprised that there was so little "innovation." When one considers that over 700 surveys were mailed and with a high probability that any of the respondents who was doing something innovative would have made the effort to respond, it seemed that there really was not much being done. The goal of six sites was narrowed to two: one innovative and one fairly standard (by its own admission). But, inordinate amounts of time (over a year with the involvement of two attorneys) were spent negotiating the necessary agreements with the fairly standard institution. In cooperation with my committee it was decided that the data to be generated were not worth the investment in cost, time and energy that was being exacted. So, the site work was cut back to one amenable location. Data generated from on-site research is still needed and the initial concept and instruments developed would be useful were it possible to obtain outside funds and sufficient lead time

for negotiations.

I very much wanted to learn more about innovation. One facility which had emerged from the pre-test, rather than the mail survey itself, was decided upon as the best candidate for the case study.

Reasons for Selecting the Target Site. The reasons this particular site, dubbed Meadowside, was chosen were:

1. The executive director, director of nursing and director of community services (including recreation) for the institution had identified wandering as a target organizational concern. They had identified about 15-20 wanderers, most of whom had been moved onto one ward approximately four years prior to this study.
2. A program for wanderers was in full swing and had already been published.
3. The program for wanderers did not appear particularly expensive, and did not involve major management shifts or architectural renovation.
4. The organization welcomed outside research with appropriate measures (which were mutually agreeable) for protection of resident rights.
5. The institution was of a reasonable size (134 beds), large enough to generate at least 15 people who wandered and not so large as to be quite different from those studied. (However, this is about one nursing unit larger than the mean of 106 beds in the survey.)
6. Initial contacts with a group of family members indicated that they, too, were supportive of the idea of research.

7. The building was not particularly unique in design or configuration.

8. The facility was under stable management, in very good repair and has met all basic state requirements of life safety and standards set forth by the health department.

From the point of view of representativeness, the institution is unusual in several ways:

1. It is non-profit, while the majority of U.S. institutions and of nursing homes studied were "for profit." However, the survey failed to find major differences between non-profit and for-profit facilities either in terms of percentage rates of wanderers or in terms of programs offered, so this was not deemed a serious distinction.

2. The facility is located on a remote site, not on a major highway (but in distant view of one). Though we do not have comparative data on the survey sample, this seemed to be one aspect that was of great significance in the write-in comments on serious consequences associated with wandering.

3. Families are urged to retain "sitters" or companions at their own expense for people who exhibit unusual demands, including wandering. This generates a slightly higher than average staffing ratio.

4. Overall there are more social programs in this facility, an active family support group for people with Alzheimer's disease, and unusually well-developed cross-department channels of formal and informal communication.

5. The proportion of wandering residents receiving Medicaid was 45.5%; the national average is 75%.

Other distinctions will be made in the description of the people and facilities. There were some issues which one might have expected to be distinctive, but which were not:

1. This was a religious home, but residents were about equally divided among those who were of the sponsoring faith and those who were of any other religion.

2. Medical services were not highly visible nor particularly innovative; medical care does not appear more evident or enlightened in this facility than it would be in others.

3. The facility is fairly standard with regard to use of medications, geriatric wheelchairs and body holders. They are widely used, often together.

My Relationship To the Selected Site. I initially had been invited speak at a conference sponsored by this facility, three years prior to the inception of the study. That year, and for the next two years, I made presentations at regional workshops on caring for people with memory impairment. My first visits to the institution were made in conjunction with a roundtable discussion which followed the larger conference, where a group of staff from three institutions would compare notes on working with cognitively impaired persons. I had mentioned my own research on the topic of wandering, but this was not a primary topic of either the workshops or our discussions. I was pleased later to receive a copy of a paper developed by staff at Meadowside regarding the program they had developed for people who wander (Sawyer & Mendlovitz,

1982).

I did involve this institution in pretesting the survey. But, this institution was not in one of the eight states included in the final mail survey so the thought of making them a target location for the site visit did not occur to me until it became clear that there were few other nursing homes that had made a special effort to do something about wandering.

In 1983, I called the administrator to determine his interest in participating. He polled his staff and asked that I follow-up with written information on what would be involved (see Appendix). Our process of negotiation involved about six weeks.

Protection and Permission. Forms and agreements were drawn up to assure residents, the administration of the facility, families and ourselves that the preferences of individuals regarding participation or non-participation would be respected. (See Letter to Administrator; Letter to families, Appendix-B.)

Once these procedures were agreed to in principle, I met the administrator and some of his department heads at a conference and we finalized protection procedures. The staff of the social services department made all direct contact and even mailed information letters to the families or guardians of the residents. Nursing staff, in cooperation with therapeutic recreation staff members and social services staff members drew up an initial list of wanderers. Working in conjunction with social services staff, a comparison sample of people who did not wander but were disoriented was developed. When I arrived for the site work, we jointly discovered that the comparison sample was

predominantly from intermediate care while the sample of wanderers were mostly from skilled care, the comparison sample was more verbal and more capable than I had anticipated. The staff of this social services department without hesitation helped to draw a second list, more closely matched to the wanderers and contacted the families for permission by telephone. (Examples of forms included in Appendix.) Of the 19 wanderers identified, we obtained permission to include 15 in the study. For those 15, data were obtained from the staff members and from charts. The other four were included in observational data but were considered in the same way as any other resident present during an observation.

The Research Bargain. Shafir, Stebbins and Turowitz (1980) have commented that successful studies conducted outside of a laboratory require a research bargain. My previous field work confirmed the value of making research a two-way deal. The institution needs to know what is expected and to feel that something will be obtained in return. I asked the administrator to suggest what my "payment" should be. He consulted with his department heads. They had been developing a program proposal for a model unit of care for people with Alzheimer's disease, a model which would eventually involve a new facility. I was asked to spend a day, free of charge, consulting to them on their program, which I did. I also paid for the travel (\$450.00) to the site. The institution gave me room and board, over 500 hours of staff time (some of which was obtained in small group meetings) and all manner of inestimable courtesies. I will also report back to the institution on the findings and prepare a summary for the Board of Directors and for the family members.

Time on Site. An initial trip was made to the facility which included a tour of the units involved and general introduction to the staff (1 day); three 1/2 full days were spent (including night meetings with staff) to collect the bulk of the data; one follow-up trip was made, two hours of which were spent obtaining information on how the program had evolved. In addition, 26 telephone calls were made to family members, six of which yielded usable interviews.

Study Instruments and Methods of Obtaining Information

Patient Profiles and Behavioral Descriptions. During the actual three day visit, I resided in the mansion adjacent to the nursing home. The visit started with an interdepartmental meeting, attended by twelve staff members including all unit nursing directors. After explaining the purpose of the study and showing copies of the research instruments, we developed a rough schedule of visits to the unit to work around my observation periods, maximize staff time and work around other necessary activity. I advised nursing supervisors and their nursing staff that it would take about 15 minutes to complete the information needed on each resident, but that the first case we did together could take longer. (For actual forms, see Appendix.)

Staff members from all three shifts were interviewed about each of the residents in the sample (n=30). At least two and usually four people were provided information on each older person. In addition, charted information was used to fill in details regarding diagnoses and admissions. Nursing charts are very complicated documents with information in many different sections. I was grateful to the directors of nursing who worked with me and the charts, swiftly locating the

information and updating this with current examples. Having nurses handle the charts also provided the residents with added privacy; information I did not need or did not know enough about to ask for was not read.

Observational Methods. I wanted observations of the units and of people "in action" and had grand hopes of comparing the movement patterns of wanderers with non-wandering peers. Staff suggested that the best time for such observation would be before or after meals. My goal was to observe each individual four times in a two day period, twice using a short-answer checklist and twice with a fifteen minute, open-ended protocol (see Appendix). On the first day of observation of residents' behavior, I had a list of names and room numbers. The directors of nursing introduced me personally to those on my list. I did not have information on who was a wanderer and who was a member of the comparison sample. With more research staff, all observations could have been conducted with the observer "blind" to the characterization of the residents' behavior. The process did have one value. Two people I had observed "wandering" were listed in the "comparison" sample by staff, meaning they were viewed as non-wanderers. More will be said about these later. By the third day, I wanted to observe the Energy Outlet Program which was attended by a majority of people who were dubbed wanderers. I had completed most of the paper work, so I knew more about the people I was observing and was no longer ignorant to who was a wanderer.

During the first observation, I learned that many people were restrained and in geriatric wheelchairs when not in group activity, it was not difficult to determine what they were doing. I had presumed with all the innovative programming that restraints not be used here which was not the case. Restraint was unusual on the Intermediate Care Unit, but on the second floor, it was the norm. Reasons given for restraint are outlined in a later section. The best observational data from this institution were obtained during the Energy Outlet Program, perhaps because the people were moving freely in one common area where their patterns of motion could be compared.

Telephone Calls With Families. An effort was made to contact family members and to include their data in this survey. (See Appendix for survey format.) Telephone calls ranged from 10 to 30 minutes. Fewer families (six) were included than had been hoped, in part due to scheduling problems (five attempted calls failed to reach the individual), in part because many of the families though very interested in their elders, did not have information related to the topics of this survey. Some had lost touch, were two generations removed or did not know the person's lifestyle well enough to respond. A study needs to be done of family caregivers tapping the Alzheimer's and Related Disorders-type family support groups. Just being a family member of a wandering patient does not guarantee that the person was a caregiver or has pertinent information. In retrospect this is quite logical, but it did not occur to me when the plans were made for including family members in the study. I am indebted to the families who did respond, especially those of the comparison sample who did not have a particular interest in

the topic of wandering and replied to questions anyway. The best data obtained from families resulted from a group meeting and this approach is highly recommended instead of telephone calls. Six family members of one individual met with me; their composite information was far more helpful than what was obtained from one-to-one telephone calls.

Nursing Home Description

The buildings were arranged in a U-shape, with a 50 year old mansion at the intersection which connects two legs serving elderly residents. The mansion was stately, but not wheelchair accessible. Fire laws prohibited use of a non-fire resistant structure for health care, it was not used for housing elderly residents but residents did congregate in the lower living room for group and religious meetings and family visits. It did hold offices and quarters where I was graciously housed during my visit.

Of the nursing home "wings," one was one story high (19 years old) and the other two stories (ten years old). The majority of "severely confused" (staff term) residents were on the second story of the two-floor unit where there is no outdoor access nor court. The center of the U was a beautiful garden, walkway and seating area which were used much of the year. Though not actually enclosed, it was protected by natural geographic drop-offs and a cleverly designed connecting walk with hand rails. It would be difficult for an able bodied person to leave this area and get to either the highway or entrance road.

The interior of the building was painted or vinyl papered gypsum board; floors were highly polished vinyl asbestos tile, lighting were fluorescent tubing, colors are muted pastels and not particularly



Figure 7 Aerial View of Meadowside

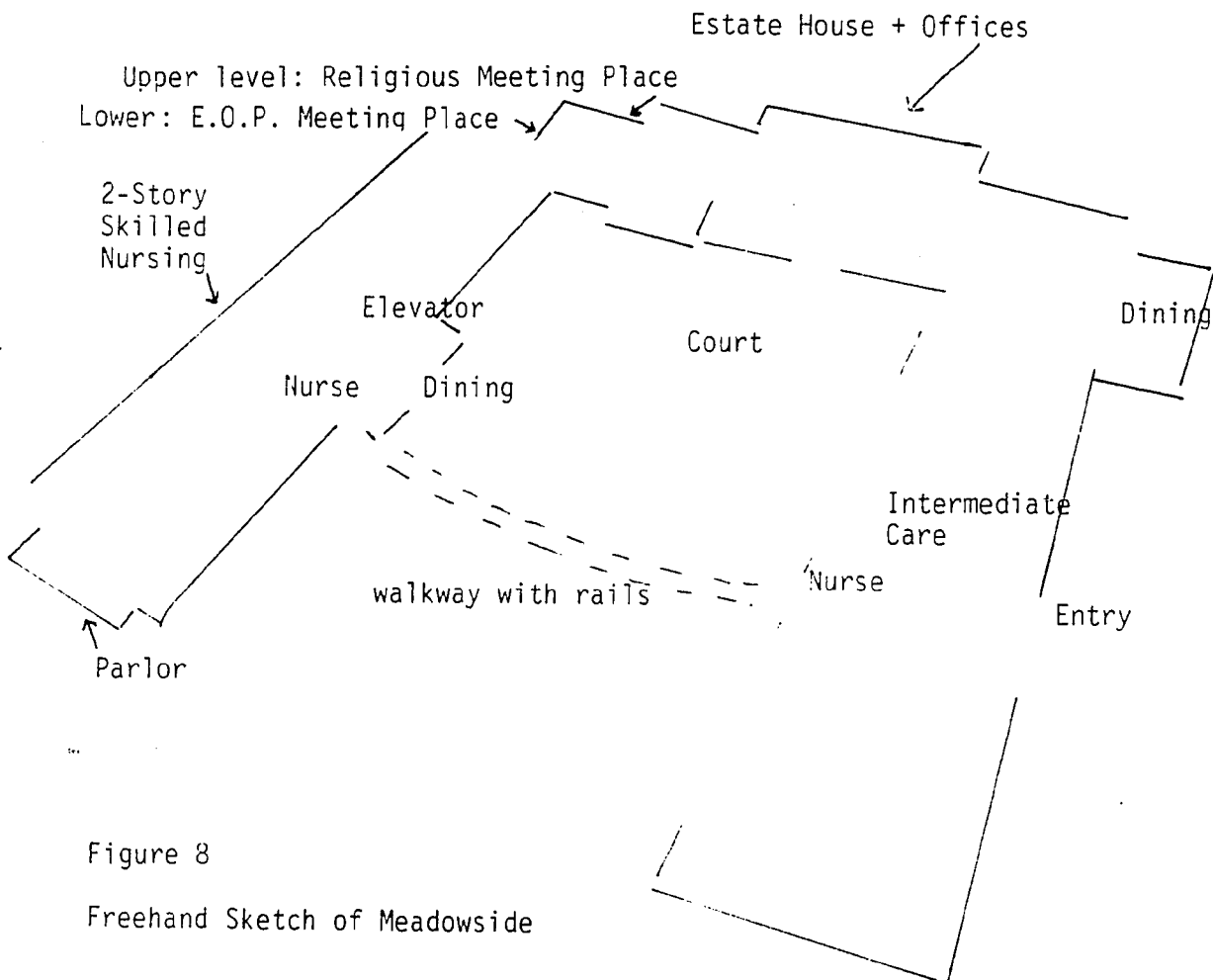


Figure 8

Freehand Sketch of Meadowside

distinguishable; the floors, walls and ceiling were all of the same tone. There was a minimum of textural variety or art work in communal areas, though resident rooms were quite individualized with small personal possessions, coverlets and lamps. A few have brought chairs from home, as well. Door decorations were not the norm, though some had been developed by staff members. There were a variety of name plates including fixed plaques and large hand lettered posters on some rooms (particularly for new residents). There was no apparent color coding nor specialized treatment of door jams. The administrator indicated that their color schemes have no particular plan.

An orientational scheme or plan had been developed within the past year. Large realistic posters were placed at the non-windowed ends of hallways. I must admit that I never perceived this as a system until after the administrator's interview. Wall decorations were chosen by staff, though Board members would prefer to make these choices and the topic is a sensitive one (here as in many other institutions).

The administrator rated his building (using a school system of A for "tops" and F for "failure" as follows):

- A Ease of Maintenance
- D Available Space for Resident Use
- A Bedroom Spaciousness
- A Number of Restrooms
- C Nurses Stations (he does not like "hostile" hospital-like glass)
- C Design/placement of doorways (feels there are too many exits)

- D Spaces for visitors
- F Outdoor areas (feels there is nothing for the second floor)
- B Furnishings in general
- B Chairs (many types surveyed individually, this was the response to all)
- DK Elevator design (location okay, but would like more than one)
- C Lighting level (rated poorest in bedrooms, best in halls)
- C Noise level (he indicates problems are from machine noise, conversation, echo/reverberation, televisions (either individual or communal))
- C Freshness of air (he indicates there is no way to control this)
- B Odor (I agree; this building does not have an odor problem)
- B Decor (When asked how he would rate the use of color, he gave it "B" and noted that no particular plan or scheme had been used in selecting colors).

Using the checklist developed for the mail survey, Study 1, I would describe the building as:

Clean	Airy	Modern	Efficient	Glossy
Institutional	Orderly	Busy	Noisy (very)	

I found the building lighting difficult: very bright in some areas and quite shadowy in others. This was true during each of my three visits to the facility.

Throughout the nursing home sections, the building was contemporary in style and furnishings. Bedrooms were slightly larger than typical, but beds were parallel on the head wall meaning that one resident had greater window access while the other was closer to the storage and

toilet facilities. Bedrooms on the first floor looked out on grassy meadowside or a court garden. The view along the exterior windows of the Intermediate Care section was more active and changing than is the view for residents on the first floor of the Skilled Care unit. The view from the second floor Skilled Care Unit where most of the wanderers were located had a remote, distant quality and did not provide a view to activity-- unless one was close to the window and looked down at the right time.

The three nursing units (defined by the presence of discrete nursing staff) were similar in appearance. Most of the rooms were double occupancy, though residents were permitted to rent a double room and retain it as a single. Seven residents included in this study resided in private rooms; all but one of these were in the "wandering" group. Housing so many people in private quarters is atypical; most nursing homes offer an overwhelming majority of two person or even 3- and 4-person rooms (NCHS, 1979).

The intermediate care facility unit had more personal elements. For example, social services maintained a display featuring the personal mementos of one resident at a time (photos, special clothing or awards, maps showing travel, insignia of professional or personal interest). The furniture consisted of a number of "bouncing", contemporary rocking chairs in light vinyl. The central gathering space overlooked one of the primary entrances.

The two Skilled Care Facility units had no such displays. Television rooms were located far from the nurses' station rather than contiguous. Residents were often clustered in rows of wheelchairs in front of the

nurses' station in the hallway, especially prior to meals. In the afternoon, visitors were common and made use of nearly every lounge, dayroom and wide area along the hallway (typically away from television sets) for their visits. In the Skilled Care Facility (more so, I believe than in the Intermediate Care facility) a few family members spent a substantial portion of the day with the older person, sitting together in the bedroom or outside.

There was a cellar, containing a laundry, maintenance shop, staff dining room, and a large auditorium where the Energy Outlet Program (EOP) met. The meeting room for the EOP will be described in conjunction with a description of the program.

The mansion portion, which was used fairly frequently by most nursing home residents at least those who have visitors, was richly textured and had many items which lent the ambiance of southern estate "tradition" unlike most nursing homes.

Staffing and Staff Facilities

The nurses' stations were designed as rooms, with glass-enclosed fronts. Side doors were kept open communicating some sense of accessibility of staff members. Many times, staff were not in the offices, but out with residents. In the different times I have visited, I have come away with a general sense that the staff liked their work and enjoyed mingling with the residents.

This was a formal, somewhat clinical institution. Nursing staff are in uniforms. Language or argot were also formal, especially on the afternoon and evening shifts. There was a sense of neatness evident in the grooming of the residents, the care of the facilities, and work of

the cleaning staff. Staff are caucasian and black and generally from the area; few share the religious and ethnic backgrounds of the sponsoring organization. Residents come from all over the state and many have not been familiar with the community of the home prior to coming to live here.

I genuinely liked the staff members, not only because they went out of their way to facilitate the research, but also because it was a pleasure to watch them interact with the residents. Their styles covered the gamut. One day, an outing to a fair was held. The recreation staff and volunteers were all geared up to take even the most severely impaired residents along. Nursing staff members worked diligently to dress them appropriately, kindly and respectfully explaining such procedures as why some were being "diapered" for the occasion. There was some joking about residents (behind their backs), but remarks were not mean-spirited nor deprecating and seemed more to alleviate staff tension or provide a reason for speaking.

Like many nursing homes today, this one must rely on temporary employment agencies for some staff coverage. Even these people were professional, respectful, industrious and pleasant. A few times when I felt caregivers were coddling or were ignoring the requests of residents, I later discovered that the neglecting individuals were "sitters" or family members. There were differences in the approach of the day, afternoon and night staff, with the day people seeming to know most about the older people and the night staff knowing very little (even having difficulty with their names).

The major contacts of the older people were with nursing, social work and activities staff members and with housekeeping and maintenance (floor cleaners). The communication across departments-- from an outsider's vantage point-- seemed quite good both at the department head levels and among cross-departmental co-workers (food service staff and nursing assistants; nursing assistants and therapeutic recreation staff). I came to feel that this might be because they had jointly planned events together, that the events were viewed as successful, and that the department heads and administrator fostered cooperation through formal and informal communications. Many "points" were made by activities staff with nursing as the result of the success of the Energy Outlet Program. This program, initiated by the staff member who supervised the therapeutic recreation staff, was being conducted by nursing assistants during my follow-up visit.

The administrator balanced his own involvement and the delegation of responsibility and authority. He knew families and residents by name. And, he knew staff, but it was the department heads who assigned tasks and handled specifics. He made an effort to be visible and accessible to residents and to staff and made noonday announcements in the Intermediate Care resident dining room (transmitted through the building via the P.A. system).

Allocation of Residents. Residents had been assigned to one of three nursing units: the first was certified as Intermediate Care and served the majority of most capable residents. The first floor of the opposite unit offered Skilled Nursing Care (more supervision) and a mix of moderately mentally impaired to fairly alert but physically impaired

residents. The second floor served the majority of severely mentally impaired residents.

Most residents of the first floor, intermediate care unit, took their meals in a central dining room, located fairly near to their unit. A few residents from the opposite side of the building, first floor also ate there. Otherwise, residents ate in the dining rooms centrally located on each of their floors. Food was served on trays, dished up from an adjacent kitchen. In my opinion, this nursing home had one of the best, most homelike meal services of any institutions I have visited (and eaten in).

Bathrooms were adjacent to bedrooms and typically shared by two residents. There were also centrally located bathrooms, across from the nurses' stations. The layout of the resident wings (see floor-plan) generally consisted of a long hall with a slightly expanded central area. The building had an open, airy feeling despite the fact that the only views to the outside are from bedrooms, from the dining rooms or from the lounges.

Doors on the unit where the majority of wanderers lived had been outfitted with a buzzer signal which would go off unless deactivated whenever the door was open. The control was high and out of the visual field of the majority of short, stooped female residents.

Hallways were long. The administrator commented, "I wonder if long hallways are good or bad? We have 3-5 people who are in and out, up and down all the time... a pack of people who wander the hall like a pack of dogs." He would like to know whether long halls make the wandering worse or make the people feel better.

Administrative Philosophy and Policy

The executive director made the following points during our interview:

On his Philosophy of Care. Meadowside's administrator distinguished between his program goals and the traditional health care mentality toward rehabilitation. He wants to see activity, but without the expectation that the person will be cured or return to some previous state of mental alertness. "That a person can make eye contact may be progress...if she remembers a name, that's a big thing. You must accept the small things, things that would be uneventful by other standards." He felt long-term care should be neither rehabilitation nor custodially oriented.

On Administration's Awareness of the Issue. Wanderers have caused administration "some" difficulty, not because they visit administrative areas (which were upstairs in the estate house), but because they require a "fair amount" of program time.

On The Major Policy Issue Wanderers Raise. "Restraints, what type of restraints and what restraint policy is best?-- this is our biggest dilemma." They had investigated medications and locks. He has an aversion to wrist restraints (cuffs tied to chair arms or bed rails which preclude arm and hand motions). They tried bean bag chairs three years ago (low-to-the-floor shapeless chairs filled with small foam pellets). The older people "rolled off" and he felt they were dehumanizing. People were rendered powerless. He found them effective but "cruel" and "undignified." In retrospect, he noted that this was an "embarrassing" stage in the search for the right solution. They also

tried "baby gates" (like the dutch or half doors referred to in Survey 1). "People climbed over." They raised the gates; people climbed under. They were removed. The move of people to the second floor and consolidation of staff to work with the wandering clients was, in his judgment the best compromise between the need to protect and his aversion to locked wards. Because it has no outside access and the elevator is adjacent to the nurses' station, the unit functions like a controlled unit without visible controls.

Wanderers And Staffing. The administrator judged that wanderers were the main reason more staff are required in the care of the mentally impaired population. He felt that his organization was not yet geared up to where they should be, but that the use of family-paid sitters helped supplement staff. Some sitters are reimbursable through Medicaid in his state. He wondered how long it would be before staff on special units asked for "combat" pay or whether wage differentials are indeed appropriate. There were 180 staff total, including regularly scheduled consultants.

Legal Issues. Wandering had raised legal/ethical issues for the home. The administrator cited an example of wandering coupled with a sexual encounter which forced discussion on the rights of two consenting adults and their competency to consent. Wandering had also raised liability questions regarding injuries that might occur when one left the grounds.

Admissions. It was difficult for older people who had Alzheimer's disease or related disorders to obtain admission to nursing homes in this part of the state. The state was highly developed in terms of family support groups for Alzheimer's disease; there was interest in the

workshops sponsored by this facility on the topic (many who attend are family members). This home had turned away people who were known to be regular wanderers of the type who ran away because they have so many doors and felt they were not yet in a position to serve them.

Costs. In this state, rate differentials could be charged private paying patients. The following figures are for daily rates charged. Medicaid reimbursed this facility \$38.00 for a person in semi-private ICF accommodations and \$54.50 for semi-private SNF accommodations (the national average per day is \$48.00, in the Bronx, it is \$120.00). Private or self-paying (non-indigent) patients paid \$57.00 for ICF and \$68.50 for SNF semi-private rooms. Private accommodations in Skilled Care cost \$72.00.

Sample Description

Wanderers and Non-Wanderers. The on-site study involved data collection on 37 individuals, 15 of whom were wanderers with complete data, four others were wanderers but staff were not asked to complete background descriptions on them because of non-permission from family members. Of the 37, ten were male (27%), and 27 female (73%), comparable to the sex ratio of this nursing home and of most nursing homes nationally.

Data comparing non-wanderers with wanderers showed no statistical differences based on marriage, mental status, numbers of moves made in the home, motor skills, and range of motion or outdoor lifestyle prior to institutionalization. It had been hypothesized that wanderers have more unexpressed anger (Monsour, 1980). But these wanderers were judged by staff members to be about equal to non-wanderers in their ability to express anger (14 or 70.0% of the wanderers and 11 or 64.7% of the non wanderers were judged as being able to express anger). On Table 63, the

Table 63

Selected Physical and Mental Comparisons of Wanderers and Non-Wanderers
in The Site Study; Frequency and Percentage Comparisons

TOPIC	Wanderers		Non-Wanderers		
	No.	%	No.	%	
Age Profile					
53-79	n=11	10	50.0	1	5.9
80-84	n= 9	4	20.0	5	29.4
85-88	n= 9	4	20.0	5	29.4
89-97	n= 8	2	10.0	6	35.3
Marriage					
Now Married		5	25.0	1	6.9
Widowed or non-married		10	75.0	16	93.1
Health Profile					
Mental Impairment		15	75.0	12	70.0
Short Term Memory (Recent Events)					
Minor Problem		1	5.6	2	16.7
Moderate Problem		6	33.3	4	33.3
Severe Problem		11	61.1	6	50.0
Long Term Memory (Remote Events)					
Minor Problem		4	22.2	2	16.7
Moderate Problem		7	38.9	2	15.4
Severe Problem		7	38.9	4	30.8
Heart Disease		11	55.0	10	58.8
Stroke		5	25.0	0	--
Arthritis, Joint Diseases		3	15.0	4	23.5
Fractures		4	20.0	9	52.9
Diabetes		2	10.0	3	17.6
Glaucoma		1	5.0	1	5.9
Cataracts		3	15.0	4	17.6
Moves in the Nursing Home		3	15.0	5	29.4
Exertion Required in Job or Former Life					
High		3	25.0	1	11.0
Moderate		6	50.0	6	66.7
Low		3	25.0	2	22.2
Motor Activity Level in Job or Former Life					
High		3	25.0	2	20.0
Moderate		2	16.7	5	50.0
Low		7	58.3	3	30.0
Range of Activity in Former Life					
Travels		2	18.2	1	20.0
Wide		1	9.1	0	--
Average		1	9.1	2	40.0
Narrow		8	63.6	2	40.0
Outdoors Interest					
Outdoors loving		2	28.6	2	50.0
Outdoors incidently		1	14.3	1	25.0
Not "outdoorsy"		4	57.1	1	25.0

two groups are described in terms of health information. Three differences emerge: 1) people who wander were less likely ever to have had a hip fracture (chi-square = 3.04; 1 df; p=.080; 2) wanderers were younger (chi square =9.40; 3 df; p=.02) and 3) there is a trend such that wanderers have greater deficits in long term, but not short term memory (chi square=3.70; 2 df; p=.157). Of these, one of the most intriguing is the information on hip fractures. Older people are quite vulnerable to hip fractures; these become a major factor in institutionalization (Waller, 1978). Is it possible that more people than those who wander have the potential of becoming wanderers, except that the pain or discomfort is too great? It is also noteworthy that more wanderers had living spouses than did the nonwanderers.. This may reflect the general demographics, i.e., that wanderers tended to be younger than their non-wandering peers. I suspect that this is also a very real reflection of the burden of care required of a family member (who may also be elderly) because of the unpredictable behavior of some wanderers. Non-wanderers may stay out of the institution longer; younger frail people who do not wander may be more readily cared for at home by their spouse.

Some data on Table 63 are missing. This is one of the frustrating aspects of doing research on "old-old" nursing home clients. Sometimes, these people had been institutionalized so long that no one seemed to remember what they were like-- the data simply were not available. Charts are "thinned" on an annual basis or more often. This nursing home uses notebooks, so somewhat more is kept than some of the institutions I have studied, where only the narrow, hospital style of metal charts are used. But, once a person is diagnosed as mentally

impaired, I have found that other health information often gets lost in this "thinning" process. For the Tables, percents are reported based on the numbers of answers available to the question.

The Wanderers as a Group: A Profile with Descriptive Statistics.

Of the 15 people labeled and studied as wanderers, 20.0% (n=3) had not wandered in the past three months; 73.3% had; and staff disagreed about whether the behavior of one was wandering or not. The three who had not wandered were either restrained (n=1) or ill (n=2).

The common feature of people described by these staff as wanderers were that they move more than the norm for their peers (13/15; see Table 64). Half of those who are wanderers are also characterized as disoriented (6/15). The same proportion are judged as having a problem paying attention. A fourth have tried to leave at some time within three years prior to the survey. Nursing staff members were given the opportunity to write-in additional definitions. The term most frequently added was "rummages," a topic which seems to be of great concern to this institution. Nearly a third of the wanderers were characterized by rummaging (getting into someone else's drawers, going through staff papers, searching out utility closets). It is interesting that this was not mentioned in the survey in any of the problems associated with wandering although it was one of the most often listed problem for staff here.

The staff members of this institution have broadened their definition of wandering to include excessive motor behavior which does not necessarily involve walking or wheeling. This happened as a result of their experience with their Energy Outlet Program (and was sufficiently important to be marked by changing the name from "Wandering Program" to "Energy Outlet Program" or E.O.P.). Half of those who are called

Table 64

Characteristics of Wanderers, Site Study;
Frequency and Percentage Distribution

<u>Defining Characteristic (from Checklist)</u>	<u>No.</u>	<u>Percent</u>
	<u>n</u>	<u>100.0</u>
Moves more than the norm	13	86.7
Is disoriented (in conjunction with wandering)	6	40.0
Has a problem paying attention	6	40.0
Is aimless	3	20.0
Presents a problem for staff	10	66.7
Other		
Rummages	5	33.3
Has tried to leave	4	26.7
Hoards, Fingers things, other Hyperactivity	8	53.3

wanderers also exhibit patterns of hoarding, fingering items, inability to sit still and tendency to leave the bed when urged to take a rest or turn in for the night.

STUDY 3 FINDINGS: Patterns of Wandering

One person of the sample of 15 wanderers was characterized as trying to leave about once a week (6.7%); three others made attempts to leave about weekly (20%). Eleven (73.3%) did not try to leave at all.

Table 65 summarizes the patterns of movement for 15 wanderers as a whole. The specifics rather than averages are presented since there are so few cases. These data illustrate a few dominant patterns:

*There seem to be two dominant styles of motion, about equally characteristic of the sample: one group has a goal, the other moves for its own sake. This offers some confirmation to the notion that there are different styles of wandering.

*The emotional characteristics of wanderers appear to be more varied, with some fairly agitated and the others quite calm; the full gamut appears to be represented.

*Interrupting the wanderer also appears to subject the caregiver to a full gamut of reactions, with slightly more being agitated if interrupted than calm.

*It is apparently unusual among this sample for wanderers to be alert; three-fourths are quite confused.

*These wanderers tend to be judged as "well-behaved," though there are three who were judged more "mischievous." I was advised that the troublesome characteristics of some are very time consuming (examples: opening drawers and taking food, taking anything that is left, wandering around in the dining room and taking from others' plates). In this facility, most examples of mischief were related to rummaging. One

Table 65
Summary Patterns of Wandering

CHARACTERISTIC/DESCRIPTION	Rating					
	No./%	1	2	3	4	5
APPARENT GOAL OR PURPOSE						
No Apparent	8 53.3					7 46.7 Seems to Have Purpose
NEED TO BE ON GO, BUSY, IN MOTION						
No Appar. Need	4 26.7			2 13.3	9 60.0	Seems to Need Motion
REACTION WHILE MOVING						
Calm	4 26.7	1 6.7	4 26.7	1 6.7	5 33.3	Agitated
REACTION IF INTERRUPTED						
Calm	2 13.3	3 20.0	3 20.0	5 33.3	2 13.3	Agitated
GENERAL MENTAL STATUS						
Alert	1 6.7	1 6.7	2 13.3	3 20.0	8 53.3	Confused
DESCRIPTIONS OF PERSON						
Well-Behaved	4 26.7	2 13.3	4 26.7	4 26.7	2 13.3	Mischievous
Admired	5 33.3	2 13.3	4 26.7	1 6.7	2 13.3	Disliked
KNOWLEDGE OF WHERE SHE/HE IS						
Knows	2 13.3		3 20.0		10 66.7	Confused
KNOWLEDGE OF WHERE SHE/HE GOES						
Knows	2 13.3	2 13.3	1 6.7	2 13.3	8 53.3	Confused
KNOWLEDGE OF WHERE SHE/HE HAS BEEN						
Knows	1 6.7		1 6.7	1 6.7	10 66.7	Confused
ABILITY TO GET BACK WITHOUT HELP						
Can	3 20.0	1 6.7	1 6.7	1 6.7	7 46.7	Cannot
WILLINGNESS TO ACCEPT HELP						
Willingly Accepts	7 46.7	1 6.7	2 13.3	2 13.3	1 6.7	Resists

Note: All percentages are based upon 15 individuals. Some items contain data for fewer than 15 cases. This is no consensus was reached by staff members; that is, two people were seen as being quite different and it did not seem appropriate to compute an average. In lengthy discussions with the staff involved, it appears that one individual was just perceived quite individually or is undergoing some shift in personality (it is the emotional and orientational questions about which there is disagreement). The other seems quite different in day vs. evening hours.

pertained to entering staff offices to make telephone calls (many, many times). Mischievousness is not the best word, it has a childlike interpretation; however, staff were quite clear on the implications.

*People who wandered in this nursing home were not typically disliked by either peers or by the staff; in fact, the perseverance and energy of some were awesome to a few of the staff members interviewed. The ability of some of the "pacing" style wanderers to move again and again was commented upon staff who find working on their feet quite demanding.

One of the areas where this analysis was most helpful was in clarifying the issue of disorientation. This topic was ambiguous in both the mail survey and the open-ended definition study (Studies 1 and 2). I would use these types of questions again and integrate them into care planning.

Staff members and two families were first asked to rate the wanderers in terms of their knowledge of their present whereabouts. Two-thirds were judged by staff members as unaware of where they were. Two were judged aware and two had muddled notions, knowing sometimes or seeming to have what were described as "schizophrenic" and "dreamlike" image of where they were, mixing details from home and institutional life. ("She knows she's here, but thinks her son owns the place and that it is a house where others are allowed at her or her son's discretion." "One time, I'll think he is clear that he's here, then he'll turn a corner and be looking for someplace we lived years ago.")

About half of the residents have no idea where they are going when they wander. What must be terribly frustrating is that two-thirds did not know where they have been. Nearly half need help in getting back,

though it is interesting that 20% (3 people) were wanderers who could get back alone. Not only do some need assistance returning, but three were described as resisting efforts of caregivers to return them.

Analyzing Data from This Small Sample for Patterns of Wandering. Much of what has been published on caring for older people who wander seems to presume that wandering is monolithic, that generalizations can be made that apply to the population of all wanderers. In contrast, some of the empirically based data and case studies raise the possibility that there are types or styles of wandering (Snyder et al., 1978; Dawson & Reid, 1985; Hiatt, 1981b; Hussian, 1981).

To explore the possibility of such patterns, the statistical data on hyperactivity patterns was studied using a factor analytic procedure. This process must be viewed as exploratory and should be replicated with larger samples. There are likely to be methodological problems encountered in factor analyses of samples as small as fifteen (minimums of twenty to fifty cases are advised, and even samples these small may yield unstable findings). However, the question of typologies was deemed sufficiently important to warrant examining whether data seemed to cluster in a single factor solution or separate out into any different types. The data would not be sufficiently robust to help determine the range of types, but, if more than one factor solution was found, it might suggest that different patterns of wandering or hyperactivity do exist.

A first analysis was performed on the list of characteristics of wanderers (Table 64). Three typologies emerged (see Table 66). The analysis suggested that three features of behavior may be worthy of follow-up: 1) agitation level; 2) orientation and wayfinding facility; and 3) the role of motion.

Table 66

Factor Analysis of Characteristics of Wanderers: Descriptions focusing on the Wandering Episodes: Varimax Rotated Matrix

Critical Behavior	TYPOLOGY OF WANDERERS		
	=Agitated	-----Not Agitated-----	
	=Oriented	Disoriented	Oriented
	=Moves for Relief ^a	Moves to Obtain Goal ^b	Moves for Own Sake, Stimulat ^c
CHARACTERISTIC	Factor 1	Factor 2	Factor 3
Agitated if interrupted	.962	-.028	.040
Knows where been	.902	.014	.096
Resists help	.830	.244	.108
Agitated while moving	.760	-.197	-.315
Knows where going	.754	-.038	.473
Goal directed	.101	.858	.145
Mischievous	-.310	.727	-.141
Knows where he/she is	-.385	-.663	.223
Alert	.083	-.179	.723
Abil. to get back alone	.574	.030	.673
Moves for motion sake	-.460	.308	.669
Admiration by peers	-.084	.491	-.552
Variance Accounted For	37.4%	19.5%	15.8%

Note. Total variance accounted for = 72.7%

Ideally, there should be at minimum, four cases per variable.

There are 15 cases in the study and some variables have fewer than four cases. This analysis is for exploratory purposes.

^a It is proposed that this type of movement occurs as a reaction to agitation.

^b This type of movement occurs intentionally, to obtain a goal or get somewhere; to change one's circumstances.

^c This type of movement provides its own reward, i.e., greater stimulation, improved recall, social reinforcement.

The role of motion resulting from the typology varied in several contrasting ways. For Restless, Oriented Pacers (Factor 1), the motion seemed to offer relief for the heightened agitation or restlessness. In this instance, wandering might be thought of as the result of agitation. This type of wanderer was described neither as goal directed nor as one who moved for its own sake.

The Goal Seeking Disoriented wanderer (Factor 2) was more likely to be characterized as intentional with respect to movement patterns. Staff members were more likely to be able to identify this type of person's goal(s) or destination. It was interesting that this type of wanderer was also described as "mischievous"; this may or may not hold up in subsequent analyses. If mischievousness does characterize the goal-directed wanderer, then caregivers might be more carefully questioned about the construct itself. Mischievousness may reflect the staff members' judgment of the ends to which a wanderer will go to finagle a way out (see Dawson and Reid, 1985 for a discussion of their experiences with "tricky" wanderers). For this type of wanderer, agitation was not a major concern. Such a finding may reflect some characteristic of these individuals or may show the benefits of the Energy Outlet Program in diffusing agitation. In my previous study of types of wanderers (Hiatt, 1981b), there were agitated, goal-directed wanderers among the patients of a state psychiatric hospital.

The third typology, Industrious Non-Agitated Wanderers, was characterized by a person who moves for the stimulation of the movement itself. The movement may be pleasurable or may facilitate social contacts. This person may fit the prototype, "happy wanderer." It has been my experience

that this motion may not be a serious problem if the individual is able to return and if individuals or exits are adequately protected through technological and human surveillance.

On Table 67, the three types of wanderers from Table 66 are analyzed with selected variables from the study. Factor scores were compared with health, demographic and lifestyle data. This analysis suggests that there may be other attributes of the individual, beyond the issues of movement, goal and wayfinding which will help to distinguish among the types of wanderers.

The goal-seeking disoriented wanderer would appear to be a real programming challenge. In this study, these were people characterized by frequent memory impairments for both recent and remote events and difficulty with concepts of time. This was also a patient who had been in the nursing home longer.

The agitated, oriented individual who moves for relief tended to be older than the other types studied. This may represent distinctions between presence or absence of Alzheimer's disease. This institution has no effective method of evaluating Alzheimer's disease (using some of the advanced techniques for saccadic movement detection, for example). However, the probable diagnosis of Alzheimer's disease was more likely to be given to younger clients at this home. It would be interesting to learn whether that is an artifact of recency of admission and popularity of the label, or whether there is a connection between age, this form of hyperactivity and/or other aspects of wandering.

It was also interesting to note that one style of wandering was associated with increased communication problems, substantiating earlier data (Snyder, et al., 1978; Monsour & Robb, 1982).

Table 67

Associations Between Types of Wandering and Selected Study Variables
Zero Order Correlations

SELECTED VARIABLES	Restless, Or- iented Pacer Factor 1	Goal Seeking Disoriented Factor 2	Industrious Non-Agitated Factor 3
Freq. of Mental Impairment	r= p=	.72 .002	
Orientation to Present	r= p=	.49 .063	
Short Term Mem	r= p=	.84 .000	
Long Term Mem	r= p=	.95 .000	
Age	r= p=	.46 .007	
Length Stay	r= p=	.49 .063	
Orient to time	r= p=	.37 .175	
Communication Problems	r= p=		.81 .000

Note. Correlation coefficients not shown were below .30 and failed to reach statistical significance. This analysis needs to be viewed with caution due to the small number of cases used to develop the factors themselves.

Risks and Serious Consequences. Meadowside's most recent runaway was a person who had "started down the road" three weeks prior to the on-site study. The person was safely returned.

Nursing staff members were asked on a case-by-case basis whether anyone was placed at risk as the result of the wandering behavior of each individual. "Anyone" was defined as either the wanderer or peers or even staff members. Three wanderers were described as being at risk, all due to lack of judgment regarding the impact of their own behavior. Prior to this study, one individual had been lost in the Mansion portion of the building in the process of looking for a toilet at night (not wishing to disturb a roommate) and had been unable to return. Staff members did not characterize this as wandering behavior and since he was found the next morning unharmed (still in the bathroom hallway), the episode was characterized as non-serious. Within the previous month, another individual had wandered out of the building. This person was found without major difficulty. As in the Survey 1 findings, staff at Meadowside characterized the potential risks as great, though the actual serious consequences befalling wanderers in their care were fortunately minimal. Exits were recently outfitted with special hardware to assist staff in monitoring what was viewed as the escalation of potential risks.

What Stops People's Wandering? Staff members were asked to discuss what seems to affect the movement, either reducing its frequency, changing the individual's interest in wandering or curtailing the behavior altogether.

The two most frequent responses were that one-to-one attention stops wandering (8 persons; 53.3%) and the Energy Outlet Program minimizes it (8 persons; 53.3%). (The EOP was raised by staff under "other.") Other things that stop wandering included: elapsed time (n=2; 13.3%), the person tires her/himself out (n=4; 26.7%); medications (n=5; 33.3%); meals (n=1; 6.7%) and a series of other suggestions I would characterize as "distractions" (n=8; 53.3%). These included formal tasks, talking to the person, rubbing her back, giving her something for holding, and phone contact with family.

Five of the 15 wanderers are kept in restraints for part of the day. One was restrained and then released because "they don't work," "they hurt him," "he fought them and could escape." Other interventions used parallel the open-ended comments obtained from the survey "she/he has to be watched whenever she/he is wandering" (n=6; 40%); "she/he must be kept from bothering others" (n=6; 40%); "use any means possible to keep her/him busy" "keep occupied" (n=5; 38%). One is placed in a geriatric wheelchair when wandering "becomes a real problem" because of supervision (staff are needed to bathe or care for other people).

Causes and Starting Points. Responses from the mail survey gave no hint of any difficulty handling general questions about causes of wandering. Therefore, I anticipated no difficulty in using this same question list with staff members and families in evaluating specific cases. However, nurses and nursing assistants found this a difficult set of questions, giving many "don't know" replies. Only the topics of noise, hunger and crowding seemed to be somewhat easier for them to judge. Four of the wanderers did wander more in noisy situations (26.7%); and a third each were more active in crowded situations (i.e., when the corridor in front

of the nurses' station was crowded, when facing a crowded elevator, when in a large group as after meal time) and when they were hungry (n=5 each). The rest of the list was dropped after it seemed to tax the patience of staff. We turned our conversation to what made the issue of causation so difficult for them to discuss. Their replies: 1) doctors make specific judgments about causes; it is not a nursing or nursing assistant's role; 2) "we really don't know"; "all of these sound good, but we do not really know whether they apply;" 3) "I don't think we were there when the wandering started."

The difficulty in pegging a starting point for wandering also came through from the family interviews. When asked to describe the circumstances surrounding the first wandering episode, even the family members who had offered direct care were either unable to respond or began speaking of other kinds of behavior changes. I now believe that this is because most wandering is not marked by an event such as a runaway episode. In no cases in this study was there a one day change known to any staff member or family; that is, no one started wandering one day who had been sitting calmly the day before. Despite my efforts to use terms like "walk about a lot" or "stray from a direct route or walking course", many family members of wanderers did not identify this type of behavior as "wandering". In one instance, this may have been an issue of unwillingness to acknowledge a change, but in others, I believe that the family did not see the behavior or did not see it as wandering. In discussing wanderers, family members commented, "he gets a little restless" or "she's antsy but I would be too," or "she doesn't follow-up on her thinking". Family members seemed more attuned to changes in thinking, but not particularly alert to the motor behavior. In one

instance, a person who paced nearly perpetually and at a fast clip was characterized by a regularly visiting family member as, "well, I guess he does stay active". It may be that wanderers are less prone to wandering when with family members. The greatest insight I came away from this part of the study with was that if an institution wanted to involve family in care planning regarding wandering, they might be defining a "problem" unknown or unacceptable to the family. Better communication may require that phrasing emphasize the memory, emotional stability or overall activity levels. Ironically, it may be that staff are less attuned to memory changes because they have not known the person throughout adulthood as most family members have.

What is the Energy Outlet Program

Jan Sawyer, Director of Community Programming and A.A. Mendlovitz, Executive Director, have described their efforts in two papers, one presented before the Gerontological Society of American (1982) and one before the American Association of Homes for the Aging (1984). The only write-up of the program appears in a 1982 paper. The following description is based upon that paper. The Appendix includes write-up of an observation made of the group during the site visit (September, 1984).

Origin.

Despite a staffing model which is generally seen as acceptable, behavior problems that mushroomed from wandering activity began to influence unit life in a number of detrimental ways.

Wandering residents displayed few positive social skills. They could not be effectively grouped for recreational activities or for events calling for social interaction. For the most part they strolled freely throughout the unit making each area their own. They entered other residents' rooms indiscriminantly, and plundered their drawers and closets. Often they would travel down the halls in groups of two's and even three's.

Although constant agitation, rummaging and pillaging were the most serious problems, combativeness and aggressiveness toward the other residents and staff also posed dangerous situations. The unpredictability of these residents was frightening.

...Medicine carts could not be safely staffed by a single nurse because wandering residents would pick up medications while her back was turned...Staff was upset and morale was extremely low.

...Our first attempts to respond to wandering behavior were to limit the areas accessible to the wandering residents...

Reality orientation was encouraged and statements such as, "Mrs. Jones, this isn't your room. See, your things are over here...were heard innumerable times during the day.

The Home's professionals did not view sedation as a means of solving problem behavior...

Philosophically, we were opposed to physical restraints, and these were rarely used in spite of the grave problems caused by wandering residents...

When none of these techniques for managing wandering behavior proved adequate, we designed a structured program specifically for the individuals who wandered. This project was known in-house as 'The Wanderers' Program'

It is interesting to note that the descriptions in their article imply a homogeneity of individual characteristics which were not revealed in the case studies. As the program had been in operation for over a year when this research was done, it was not possible to determine whether people are more diverse as a result of the program or whether the program was developed for the "worse cases" and ultimately as people were evaluated for admission, more candidates were assigned. It is noteworthy that two of the wanderers who are quite aggressive and verbal were not involved in the program during my visit because they disrupt the dynamics for either group participants or those who wander during the group meeting.

ENERGY OUTLET PROGRAM ROOM: Special areas set aside for exploration or focal activities.



Figure 9
Energy Outlet Program Room
Animal Land

Images and items associated with animals.

Figure 10

Display board called "Weather station" cues outdoor conditions.

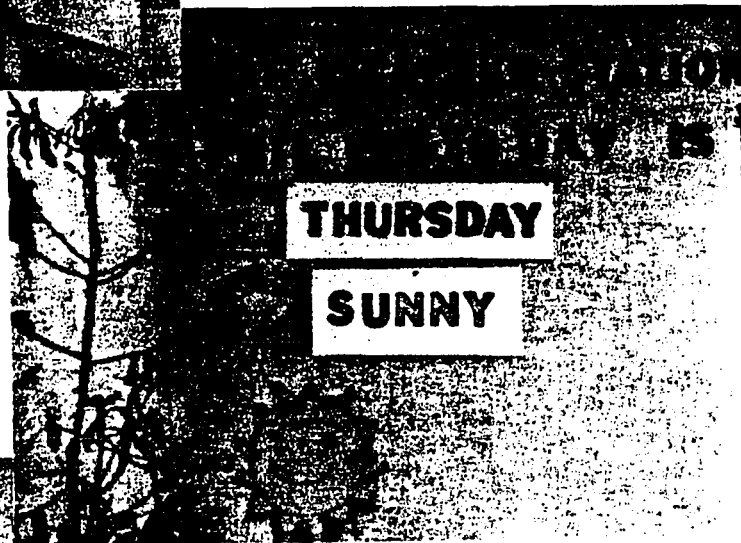


Figure 11

Large "Welcome" wall has each participant's name and some photos. (Names distorted for anonymity.)

Energy Outlet Program (E.O.P.) Room: Featuring niches and special areas and objects. Illustrations do not include all props or objects used.



Figure 12 Energy Outlet Program Cues of Homelife

Behind the partition are images and objects associated with child-rearing (see below) and play. Cupboard of cooking utensils (old and new) is available to participants behind the "What's Cooking" sign.



Figure 13
Program Cues of Children

Visitations by actual youngsters and items reminiscent of playthings in years past supplement these objects.

Goals of the Program. The five goals of the program were also outlined in Sawyer and Mendlovitz's 1982 paper:

1. To provide residents who wandered with a controlled and protected space for wandering;

2. To provide these residents with the opportunity to experience success and enjoyment in activities tailored specifically to their abilities;

3. To maintain or develop basic physical and mental skills;

4. To provide for caretaking needs, such as toileting, physical safety and nourishment; and

5. To provide other residents and staff with respite from wandering and hyperactive behavior.

After observing this program, I would suggest that the program has several other objectives:

6. To provide an environment where styles of movement and speech which are not tolerated on the nursing unit can be used without impunity and even put to appropriate use;

7. To offer a group setting with high level, multi-level stimulation specially designed for people with limited attention span, by staff totally devoted at this time to these people;

8. To provide an energy outlet through singing, clapping, movement, vocalization, walking, group stretch/exercise and whatever means are available;

9. To provide a setting filled with objects and scenes which are organized around themes, which are available to be touched, used or simply experienced. Props include: books, toys, clothing, pieces of fabric, linens and games.

10. To provide spatial "niches" and sub-settings which support group interaction at one time (conversation circle), snacks and music at others (tables), and exploration at any time (small niches created behind portable screens with curious objects on the walls and floors). Environmental management is key to this program (Sawyer and Mendlovitz, 1982, p. 5), and includes meeting in a place where there are no distractions, no background noise, and in a location distant from their living quarters. "Residents had free access to all objects and all areas of the room, including closets, bathrooms and storage rooms" (p. 5).

The last two points have been developing over the last year of the program and were most evident in my follow-up visit. See Observation, Appendix.

Operation. The program began in January, 1981 and at first involved about ten residents. The number who attend ranges from 10 to 15. The Energy Outlet Program is a group of people and two staff members (with on-call assistance from nursing staff as needed). Many staff members have "cycled" through the program, and as of 1984, it was run by nursing assistants who had been trained by therapeutic recreation and administrative staff.

The program runs for two hours, four afternoons a week. Originally, it was developed for ambulatory wanderers, but within the first ten months, people in wheelchairs were admitted as well. Admission to the program was based upon a team developed "Interdisciplinary Resident Care Plan," that is, staff from nursing, activities, social work, etc. nominate a person for the program. Staff members try to keep people of similar capabilities in the group, most often serving those with severe

memory loss and a strong tendency toward wandering.

Each meeting contained a Sesame Street type format of short sequences but general theme. Sequences include music, exercise, sensory stimulation (including a heavy emphasis on tactile objects and textures), memory recall and nourishment. "Staff were advised to avoid stress, criticism and negative responses. They were only to intervene if there was a question of resident safety" (p. 6).

Outcome of Energy Outlet Program. Program evaluation of this type of work is riddled with methodological difficulties. To the credit of staff, they attempted some evaluation anyway and looked for simple, behavioral indications of change both in the individuals and in the responses of the nursing staff who regularly cared for them.

Within four sessions, five of the ten original participants were able to join hands and follow directions, not only individually but as a group...As the program continued, longer attention spans and greater socialization occurred. Improvement in motor skills, eye-hand coordination and reaction to staff-induced stimulation was evidenced. Residents in the program seemed contented and happy. Episodes of incontinence were far less frequent, and several of the residents are now able to let staff know in advance when they need to use the bathroom. Interestingly enough, there is now very little wandering during the Wanderers' Program, and the residents take almost no notice of the items put out for their investigation.

On the Unit, staff reported much relief from wandering and agitated behavior when the residents returned from the Wanderers' Program...Far greater socialization between wandering residents began to occur on the Unit. Residents began to recognize each other on the floor and often-- rather than walking the halls...some of the program participants would choose to sit together in the activity room.

...the confusion and noise level on the Unit has been significantly reduced and staff and alert residents report much greater satisfaction with unit life.

Within a year, the program title was changed to Energy Outlet Program. This was in part because of the change in wandering behavior observed.

This is not to say there is no wandering. What seems to be different about the organization than many I visit is that the tension generated by wanderers is diminished. This may well be because the program gives nursing staff a few hours of relief each afternoon. It may also be that having some way of dealing with a chronic behavior makes everyone feel better-- even if the behavior itself undergoes only minor changes. During my visits I found that the motion was there, but in all but two cases, the sense of restlessness and desperation that characterizes many wanderers... (and the units on which they are housed) was not present. (For additional observations, see Summary, following the Observation included in the Appendix.)

Reflections on the Energy Outlet Program

The Energy Outlet program functioned on many levels. For some, it is a fast-paced, variety group with a combination of activities geared toward identity and self-concept, attention span improvement (ball toss relying on reflexes of stimulus/response), focused discussion ("pink"), texture (use of lotion) and use of texture to stimulate person-to-person interaction (giving each other excess lotion). The substitution of personal names in the songs seemed very rewarding to nearly everyone. The work at the weather station (patterned after a Reality Orientation technique, but using more props) was perhaps the most abstract of the

activities. In a different room, access to a real window (this is a windowless space) might have made that more meaningful. The group often uses an adjacent, enclosed outdoor space when weather is good, and the doors are left open so some can wander outside.

The shift of being serenaded to joining in on the singing seemed to capitalize on interest level. The move shift in music to dramatic old time tunes, marches, folk songs and classical pieces also was an interesting technique for responding to the diversity of people in the group. Despite the group focus, there were numerous examples of accommodating individuals such as teaching one gentleman to play the harp, dancing with one woman, and maintaining conversations with those who could speak back and forth.

The tolerance of wandering-- even into an adjacent bathroom --was interesting. The room had been thoughtfully arranged to capture the interest of those "on the move". Four residents of the twelve in the group moved nearly continuously. One faded into and out of the group. One went from focusing along with the group to wandering. And two were fairly mobile throughout the two hours. One talked for nearly one full hour, but left the group fairly quietly and in my evening observations was much quieter on the nursing unit. It was noteworthy that no staff member or peers hassled the wanderers about joining in, not even at snack time. At the same time, no one suggested where they "should be". This is one difference from what happens on the unit, where people are frequently advised of something to do other than wandering but where wanderers are also given instructions about what

they could or should be doing. There was a shift in the two hours between the people responding as individuals to the staff members, and an increase in relatedness to each other (passing things, non-verbal support for each other, sharing gestures such as trying to get out). This awareness of older peers was more evident here than I had observed it on the nursing unit. Whether this was some group dynamic, the relative openness and seating arrangements possible here, or the fact that this room is much quieter (when music, etc. died down) than is the nursing unit (where we have noise from mechanical to human sources and less to absorb it. Staff members had turned off a ventilation unit to get this space to be quiet).

The possibilities for carry over (use of memory) when the people return to the unit were utilized by several nursing assistants. There were words exchanged at the end of the group among staff, and the nursing assistants (who were from a fresh shift) picked up on the "pink" theme, reviewed some of the songs sang, referred by name to the foods eaten, and seemed genuinely pleased to see the residents.

One is struck by the role of playthings and toys. Are childhood objects central to the program or are these the only props available? It would be interesting to replicate the program using items and objects with clearly adult attachments. Similarly, "pink" is an evocative color to choose in the work with objects. It is a color which may not have been as familiarly used by the men (few of whom had brought pink objects). I would like to see more work done on the use of objects in discussion groups and on methods of conducting such groups so that they have an adult character. In rereading the protocol

I was more aware of the childish overtones than I had been while on site.

There were three active wanderers who were absent from this group. One was excluded because, according to staff, she did not mix well, became combative and inhibited others. Another became withdrawn in group activities and hostile to other wanderers. A third was attracted to one of these members and the spouse and staff found the overt expressions of affection unacceptable in this group context.

The Energy Outlet program appears to specifically address several of the topics staff members had identified in Survey 1 as causes of wandering: boredom, desire for homelife (at least familiar objects, music and scenes are used), restlessness, sense of being "shut in" and curiosity. Underlying many of the physical and social amenities seem to be efforts to stimulate, to encourage responsiveness, and to increase attention span. One of the more interesting features of the group was how a nucleus of formal activities of very short duration could operate effectively in conjunction with the bevy of wanderers who circled the periphery. Two sets of needs were met simultaneously without apparent compromise to either. In fact, the group activity appeared to help those who were perambulating the bounds. I believe it would be useful to film and replicate this type of program, modifying selection procedures, specific activities, space, duration, leaders and the balance of group members (from participants to perpetual wanderers) to learn more about its effects. Such information could help others identify the key features of this program and to adapt the technique to their centers, as appropriate. It may be that what makes the program useful is its departure from the formal, task orientation of the nursing home.

DISCUSSION

Reflections on Definitions

Wandering was characterized by motions accompanied 1) general disorientation, 2) lack of direction or purpose, or 3) agitation. Wandering seemed to refer to those who were physically active but whose judgment was unreliable. The distance, speed and mental status of the wanderer seemed to vary. Staff members wrote-in terms such as "compulsive", "restless", "bored", "invasive" suggesting that wanderers are characterized by emotional states as well as mental ones. More respondents characterized wanderers as aimless than as purposeful. Variations in definitions are not surprising given the small numbers of wanderers per nursing home and limited experience of caregivers. The case-by-case work of the site visit indicated that differences in definition may represent differences in types of wandering and wanderers. Better definitions of wandering will require data for a larger sample of individuals on: 1) motion pattern, 2) direction of motion (toward a goal, random, patterned but not goal directed), 3) emotional state, 4) mental competency, and 5) duration.

Many caregivers seem fixed on "aptness" of the motion. Taking a dialectical perspective, wandering may pose a paradox: a confused individual pursuing some rational behavior or a rational individual behaving in a confused way. Whether there is a goal or not may be only one piece of information necessary to describe the behavior of a wanderer. Rather than resolving the issue of whether wandering has a

goal or aim, it may be important to tolerate the ambiguity in human behavior, accepting variations among and within individuals as an aspect of labile mental function.

These studies of definitions suggest that functional descriptions need to be used to study wandering and to develop programs. It is my feeling that the term "hyperactivity" may be more useful in generalizing across these categories of movement and may have less surplus meaning than "wandering". The notion of orientation or disorientation to space should then be viewed as a second functional behavior, not necessarily accompanying hyperactivity.

Given the variations in definition, one might expect that nursing homes would carefully evaluate each person's wandering and individualize intervention accordingly. However, ninety percent of the nursing homes had no policy of assessing wanderers. Without systematic evaluation, it may be more difficult to maintain continuity in caregiving. Better evaluation would seem to be a first step in finding appropriate responses to wandering.

Staff Members' Impressions of Causes of Wandering

One method of defining and evaluating wandering is to consider its underlying causes. Consistent with the variety of definitions, staff members identified an average of nine causes of wandering. The results obtained from factor analytic studies suggest that caregivers view wandering in terms of 1) its potential to produce new opportunities, like fresh air or the stimulation of motion itself; and 2) concomitant emotional conditions (unhappiness, desire for homelife and frustration).

Staff members also identified 3) situational factors (reactions to family visits, jobs and hobbies and medications). Other causes named included spatial orientation or newness to the building, attentional deficits, and mental health/mental function.

Staff were requested for information on the causes of wandering in a two step process. Their first responses included all possible causes, the second included those that were most likely. It was interesting that the factor which accounted for most of the responses in the larger list, Irritants (i.e., noise, medications, pain, crowding and hunger) did not even appear on the more selective list. The role of environmental attributes and wandering needs further study. It is also possible that nursing staff members are not taking the environmental irritants seriously perhaps because the topics fall outside of their responsibility or professional training.

This list of causes must be viewed with caution: though the data represent staff members' thinking and might be used to stimulate further research, there may be other causes or priorities of causation involved. Wandering and Memory. Respondents identified memory loss as a significant cause of wandering. This is supported by literature on the topic (Hussian, 1981; Monsour & Robb, 1983; Snyder et al., 1978). From the case studies it appears that some wanderers are caught between partial losses in memory. It may require less mental function to "stay put" than to move about. It takes some doing to leave a facility, to break out of restraints or to move in the same patterns day after day. It would be useful for future researchers to investigate which aspects

of memory people possess, as well as which are lost. Data from the case studies (Study 3) suggested that some forms of wandering may result from differential losses in short vs. long term memory. Researchers have suggested that there is a memory for fact, for action and for emotion which may be related to specific areas of brain dysfunction (Milner, 1984). It is possible that patterns of wandering illustrate strong facility for motor recall, but weaknesses in the other two areas. Wandering concomitant with restlessness or emotional outbursts may illustrate deficiencies in emotional recall. Pacing may be characteristic of people who have capabilities for recalling fact (long-term memory) but difficulties in short-term or recent memory. Knowledge of a style of wandering may offer insights into one's memory and knowledge of one's memory defects may offer insights into styles of wandering.

Proposed Model for Understanding Runaways vs. Attempts to Leave

Two topics related to wandering deserve some special attention: attempts to leave and actually running away. What might it mean if an organization has many runaways? Figure 8 is model which might be used by nursing homes to evaluate their present situation. Average rates of runaways determined in this study were 2.4 per institution (however the study did not include institutions over 300 beds). For attempts to leave, averages were about 5.2. To use this paradigm, an institution would estimate whether it has high or lower numbers of each. Reading into the appropriate "box", the administrator may see some implications of the pattern.

FIGURE 8

Proposed Model for Understanding Patterns of Runaways and Attempts to Leave, With Implications for Management and For Risks Involved

		RUNAWAYS	
		MANY ^a	FEW
MANY ATTEMPTS TO LEAVE ^b	I. RISKY FOR RESIDENTS DEMANDING OF STAFF This type nursing home may need policy and patient evaluation It may be a small home, perhaps with few resources and programs It may be older and under stimulating It probably is not rehabilitation oriented. Wandering problems may be indicative of other needs.	II. MAY INDICATE EFFECTIVE ENERGY OUTLET AND MOVEMENT OPPORTUNITIES May indicate successful exercise/energy outlet program May be managing wandering "problems" without curtailing movement. Probably a larger home From a researchers' standpoint, we want to learn more about these organizations	
FEW ATTEMPTS TO LEAVE	III. MAY BE RISKY AND CONFINING FOR RESIDENTS Staff may need training on surveillance Home may be heavily restraining or restricting many forms of movement. Home may need informat'n on technological system or devices to monitor exits Check that programs for memory impaired clients are adequate.	IV. NO PROBLEM, NOW May have alert population and/or successful programs Check that it is appropriate that rates of pacing and roaming are low; i.e., are restraints curtailing appropriate motion/energy outlet? Develop policies and monitoring methods so that they are not caught by surprise Probably a large home	

^aBased on this study, having more than 2.4% run away during a three month period (June-August) would be "Many." Less than that number would be "few."

^bMany would be more than 5.2% at any given time.

Policies and General Approaches to Wandering

The majority of respondents to this survey, 70%, did have a policy on wandering. Write-in comments were encouraging: respondents described policies that focused on vigilance, personalized attention, team planning and precautionary measures. When we take a categorical (factor-based) look at the policies, they appear to fall into three clusters: 1) physical and pharmacological restraint; 2) evaluation and group assignment; and 3) training not to wander. Looking item-by-item at the choices given respondents, the most commonly cited policy was to "let people wander with some surveillance". A case could be made that this is a "non-policy" policy.

Having a policy did not necessarily indicate that one has programs, but having no policy is associated with having fewer programs. To me, this suggests that nursing homes may need some assistance with policy writing and implementation. It appeared that the development of a policy on wandering can result in more immediate use of restraints. A well-rounded policy, one that includes evaluation and some group intervention, is characterized by only about a fifth of the responding institutions.

Perhaps it is not the policy itself that is as important as the thinking process and meetings that are involved in developing it. Until more is known about wandering, it would seem useful to develop fairly diverse policies specifying 1) assessment and recognition of individual differences; 2) alternative interventions with restraints being lower in priority and regularly reviewed; 3) observation responsibilities; 4)

risk management; 5) emergency procedures; and 6) how staff should search for causes (and remediate where possible). It is my opinion that a policy also needs to include a commitment to determining the possible values of movement for each individual and stipulate methods of communicating information on hyperactive, disoriented or wandering individuals across departments, staff and with families and other residents.

There seemed to be a connection between the outlook of an organization, toward "rehabilitation", and the tendency to have a policy. The management orientation of nursing homes such as "maintaining present levels of function" or "keeping people comfortable" are worthy of follow-up. Such policies may result in staff members becoming resigned to nearly any behavior that presents itself.

Do Institutions Unwittingly Contribute to Wandering?

The study has established no sure set of institutional features that cause wandering-- nor was the research designed to do this. What it does do is suggest some possibilities.

There was some indication from correlational data that that resource poor institutions, those that are Outworn, for example, had more problems with runaways. Why might this be so? Outworn facilities may have other insufficiencies: lack of funds, lack of staff or annoying features that the marginally alert older individual seeks to escape. These resource poor institutions tended to be smaller. In the same two or three minutes that a staff member is attending to another priority, a wandering individual would get farther away.

Extremes in institutional life may be a problem to people who wander. The Outworn nursing homes may stimulate certain types of wandering while those that are sensory overloaded may stimulate the behaviors of others. This is consistent with the observations of staff members who cited Irritants as a probable cause of wandering. It is not clear whether environmental variables have a minimal effect upon wandering behavior or whether nursing staff members are less attuned to exogenous variables.

The topic of "homeyness", sometimes stated as a paragon of virtue, needs to be taken more seriously as an issue in orientation, at least for marginally impaired individuals. If results from this study hold up under replication, it would suggest that familiarity, coziness and comfort have a special psychosocial significance. This raises questions for how larger, efficient, modern institutions or those with a Utilitarian design could incorporate homelike features.

The Question of Size

Rates of wandering motion and running away were consistently higher in the smaller institutions. Within each of the sub-groups of interventions: cues, programs and restraints/controls, there were significant or nearly significant correlations with nursing home size. The use of Decor, Diverse and Sociable Programs, Range Controls and Physical Restraints were all positively correlated with nursing home size. The highest relative correlation was between the size and use of Range Controls.

Is size of institution really the underlying issue? The more Diverse programs require labor (or volunteers). The Range Controls represent a sizeable investment, as do the technologies (e.g. buzzers). Smaller facilities are distinctive from larger ones in several ways. Smaller facilities may have less money available for the restraining devices; geriatric wheelchairs are space consuming and may not fit into a dayroom designed for a forty bed nursing home.

The choice of interventions may be more related to institution size, building complexity and money available than the type of wandering exhibited. For example, consider the tendency for larger facilities to be more likely to use geriatric wheelchairs and smaller ones more likely to use body holders. Geriatric wheelchairs are large. It is hard for the user to travel and staff can keep track of residents more easily-- issues that might favor the use of geriatric wheelchairs over body holders in large facilities. They are, however, more expensive than body holders. It may be that small nursing homes have neither the space nor the capital to invest in these devices. I suspect that many staff do not view the geriatric wheelchair as a restraint and/or have not considered the importance of movement to older people's emotional well-being.

These findings raise the question of whether care for wanderers is different from large to small facilities. These data would suggest that there are more wanderers in smaller facilities than in larger ones. We have insufficient data to judge whether smaller facilities are therefore better for wanderers (because more movement is tolerated) or worse

(because risks are greater). It was interesting that rates of disorientation did not vary with size. Numbers of innovative programs do not vary with size. And judgments about what is best to do to prevent wandering were also the same for large and small institutions.

The implications for families might be that, until more is known about what is best to do, all institutions may not be treating wanderers in the same way and in theory, one might be able to shop for a facility that has programs consistent with one's own views of what is appropriate.

It is important to point out that many institutions have no policies and have no planned system of evaluating people who wander. This suggests that whatever is happening may be coincidental, disorganized and without continuity between caregivers. No questions from this survey specifically asked why one method is used over another or how certain techniques come to be used in conjunction with each other though such information would be useful.

Has a Case Been Made for Intervention?

The data from this study make it impossible to show direct relationships between interventions and higher or lower rates of wandering. However, from questions asked it appears that staff members perceive intervention is important; 98% of the directors of nursing indicated that people who wander require some special methods of care. Forty percent of those have developed "special ways" of working with people who wander.

While 61% of the nursing homes in this study indicate that they are currently having a problem with wandering, the overwhelming majority (93%) have no interest in "stopping people from wandering" when asked about the best possible outcome of the research on wandering. Problems attached to wandering ranged from the time and responsibility required of staff for supervision to staff members' own feelings of anxiety or ambivalence over restraining. Risks most often feared were highway fatalities and exposure to weather extremes. The fear of risk appeared to be greater than the actual numbers of problems experienced. This may suggest that staff members are monitoring people and exits. However, the fact that they still perceive wandering as a problem suggests that there are underlying misgivings about being able to monitor wanderers. Interest in new technology was high (according to the best outcomes perceived for the study), suggesting its use as a means of assisting staff in surveillance.

What might the goals of intervention be? Based on respondents' replies to a checklist of best outcomes that one could expect from wandering, three-fourths (76%) wished to make places safer for people who wander; 71% wanted to keep track of wanderers; 61% wanted to learn how to cope with the fact that there will always be wandering and wanderers; and 54% wanted to give people who wander greater freedom; 45% indicated an interest in getting people to be kinder wanderers. What is interesting is how supportive approaches contrast with the practices of controlling wandering and using physical restraints. A lingering question becomes, why are nursing homes still restraining? Could it be

that they do not know how to change?

Is Wandering Risky

One of the reasons for adopting restraints may well be the reaction risks. There is some support for this in the write-in comments. There is also a suggestion that the serious consequences may be perceived as more risky than they in fact are. The majority of institutions (79%) have not experienced serious consequences as a result of wandering. This may be a credit to their vigilance and interventions or may suggest that incidents of injury are rare. Institutions located on or near highways and in harsh climates appear particularly risky for wanderers (based on write-in comments). This suggests that location of the institution may be a key consideration in new construction and/or the selection of a safe environment for a person who wanders.

The question of risk and of the consequences of wandering is difficult to evaluate in statistical terms. One wanderer may have a profound impact on peers and on staff. The injury and death of a single wanderer may have lasting effects on a community and neighboring nursing homes. I came away from this survey with a new respect for the nursing home that worries over individuals who are disoriented and might "slip away" or boldly attempt to leave. High rates of runaways are associated statistically with high rates of other forms of movement; but the association is strongest with the attempts to leave. Technology for monitoring these attempts has improved. Though many institutions (73%) use door buzzers, it was surprising that some of the newer methods for individualizing the monitoring are not more widely used. I expect that

this will change in the future.

What Are the Institutions Doing?

The data suggest several ways of looking at what nursing homes are doing. If we look at the list of options offered on the survey to respondents, strategies for dealing with wandering include 1) Specific and Diverse programs (from Reality Orientation/Remotivation to door decorations), 2) Protection, 3) Place Indicators, 4) Restraints and 5) Mobility Techniques (taking people on walks, color coding hallways).

The list of interventions was heuristically divided into cues, restraining/controlling devices and programs. Ninety-six percent of the sample had at least one, but most often two, three or four programs. Ninety-nine percent use one or more controlling measures (only 18% do not use either restraints or geriatric wheelchairs). And, ninety percent use at least some form of cues. Of the many types of cues, two clusters or categories emerged (from factor analytic studies): Ideographs (using numbers and name plates) and Decor (color coding, door decorations). Of the checklist of interventions (which was admittedly too limited now that we have the benefit of the write-in comments) two categories emerged: 1) Diverse and Sociable programs, typically evaluation and group work; and 2) Motor Outlets (taking people on walks, using behavior modification to redirect behavior. The longer list of restraints was reduced to two major types: 1) those worn by or touching the person: Physical Restraints; and 2) those that limited the area of one's movement: Range Controls (i.e., buzzers and enclosed areas).

A small proportion of institutions (10%) have developed special wards, but many of these serve people other than wanderers. Nursing homes with these wards frequently offer the reality orientation; other than that, they are no more or less likely to be tolerant of wandering, to minimize or use restraints and/or to increase environmental cueing.

The write-in comments were rich in examples of other interventions. These included 1) activity programs and an emphasis on enriched activity; 2) identification records and aids, 3) vigilance procedures (measures to improve one's ability to watch out for people who wander), 4) personalized attention, 5) cues and orienting devices, 6) task diversions (giving the person a sense of responsibility or developing ways to accompany staff during duties). Other methods which have been developed by staff involve 7) creation of special units, 8) outside courts and 9) uses of technological monitoring device. Respondents also commented on staff 10) education and team work as innovations for wandering.

Two nursing homes out of 704 mailed out (or about 699 discounting returns for address change) described multi-faceted programs of enriched services, minimized restraints and research.

Restraints as Interventions

With about two-thirds of the respondents using either body holders and/or geriatric wheelchairs, there is evidence of fairly widespread use of physical restraint in these nursing homes. However, this is a drop by 20% from data collected in a survey on uses of restraints, ten years ago (Farnsworth, 1974). Of the entire sample, nearly half (45%) used

both body holders and geriatric wheelchairs. Eighteen percent (18.5%) use body holders without the geriatric wheelchairs. This survey inadequately tapped the issue of pharmacological restraint (use of medications to control wandering) but write-in comments do suggest that this is also a procedure adopted by some facilities. It is also possible that nursing staff do not recognize the role of some medications on wandering.

In workshops with staff (Study 2), the following reasons for using restraints were advanced: disorientation, keeping people from getting into each others' things and protecting peers from intrusion, to free time so that others' needs can be met. In my observational experience, they are also applied to position a person in a chair (when a better solution might be to select a chair to fit the individual).

Data were not collected on the question of whether restraints aggravate wandering. Institutions with more restraints do have fewer runaways on the basis of those who attempt to get out (referring to the "Confinement Index"). It is clear that some staff members believe that restraints are not the best method for preventing wandering. While about two-thirds (63.1%) of the nursing homes report using restraints, only half (48.8%) believe them to be one of the best preventions. While restraints may work, what we have not been able to satisfactorily resolve is whether restraints are "good".

When the entire list of interventions was divided into three groups: restraints, cues and programs and then correlated with each other, there was no consistency between use of restraints and the use of programs and

cues. Some institutions heavily restrain and have programs for wanderers. Others do not. There is a trend for those with more restraints to have more cues. This may indicate that the institution that has the money to invest in controlling measures also has the resources for environmental amenities.

Disorientation and Cues as Interventions

Cues such as color coding do not appear to mitigate rates of runaways; there is no correlation between these devices and rates of high or low movement. And, there are only spurious relationships between the numbers of cues and the rates of disorientation. It is possible that caregivers and researchers may want to distinguish among:

1) the spatial disorientation of an individual, a state of cognitive impairment

2) disorientation to time, to place name, to people, to social norms (i.e., situationally appropriate behavior)

3) the qualities of a building which make it confusing to a wide range of users, including those with cognitive impairments.

Cues may be helpful in the latter situation, to overcome the annoying effects of lengthy halls or ambiguous angles and exits. And, some types of cues may be more useful (decorations on the door for example) in facilitating an individual's skill at locating his or her bedroom. These would be examples of using environmental features to reduce "excess disability", or unnecessary confusion. However, such cues may not mitigate wandering nor disorientation of those with gross cognitive deficiencies. In fact, in some instances, cueing may actually help the

very confused individual locate an exit and escape. This suggests that an institution that wants to develop a more richly cued environment would do well to adopt technological or other security procedures for monitoring exits.

The Do-Nothing Approach

Doing "nothing" about wandering may actually evoke or stimulate wandering or stimulate the emotional conditions which are antecedents to wandering. It appears unlikely that "letting people wander" is a proactive intervention in the sense of "an active step adopted to mitigate behavior". Letting people wander was not associated with a program of "taking people on walks". A family investigating nursing homes for a hyperactive older person should probably look beyond the policy of letting people wander to determine what else is offered to stimulate and relax these people. Letting people wander is not necessarily a "program". Specifically, are wanderers evaluated and are there individual and group activities for such individuals? We do not know whether letting people wander is somehow better than restricting or restraining, though the fact that this policy was so overwhelmingly used is some indication that it is preferred.

Program and Design Implications

Despite the fact that "taking people on walks" was judged the most effective way by the most institutions in dealing with wandering, only 34.8% of those in the study had an enclosed outdoor area for walking. Is it difficult for staff to implement the walks that they believe are best because there are not interesting and secure places to go and/or

because the spaces available require costly supervision? The tradition of designing nursing homes after hospitals (emphasizing bedroom-based care) coupled with government imposed standards for nursing home design have minimized social gathering areas. Because social areas are often generally designated in terms of square footage and not defined in terms of the desired features or layouts, it has been my experience that spaces tend to be multipurpose, too tightly furnished for wheelchairs and offer few features worthy of exploration (Hiatt, 1984).

If movement is important to maximization of mental function, we may see a revolution in furniture design, furniture arrangement and facility design. Chairs will need to be selected for safe and easy transfer, for rocking or motion rather than confinement. Technology may be used to free people from the more confining geriatric wheelchairs. Facilities may be created with interesting, irregularly shaped areas which allow exploration and free movement without appearing confining.

CONCLUSIONSOn the Nature of Wandering

From all three studies, it appeared that wandering does pose nursing homes with a series of problems ranging from unpredictability of individual behavior, risks associated with leaving a building, and frustration over the appropriate interventions. The behavior is all the more troubling because it is difficult to define. Definitional problems could well reflect 1) the fact that there are different styles or types of wandering; and 2) the inexperience of most institutions with all types.

Wandering behavior may be difficult to distinguish from other forms of restlessness and motoric activity. It is possible that the institution needs to look at the agitation or emotional content of the behavior first, the wayfinding skills and orienting capabilities of the person second and the functions of the movement third to devise a meaningful program. Hyperactivity seems to be a better term for the behavior than wandering since it focuses on the motor function and bears no reference to lack of purpose or aim which wandering may connote. However, this term is not widely used by staff members and they would need some education or other encouragement to see wandering in light of the degree of movement rather than the mental status of the wanderer, the outcomes or the risks involved. In the long run, wandering should be studied as a developmental construct and perhaps subsumed for diagnostic purposes under the general category of "hyperactivity" in the Diagnostic and Statistical Manuals of the medical profession.

Institutions average 11 to 18 hyperactive clients per 100 patients with smaller facilities having more of each type of wanderer: from runaways to people who pace, roam, or try to get out. Among problems facing caregivers who might be interested in improving the care of wanderers are: 1) there is no nationally evident practice of assessment; 2) hyperactivity may have a multiplicity of causes; 3) there may be no clear starting point and/or the families may be unaware of wandering or focused on other issues such as memory.

There are many strategies for dealing with wandering; however, there appear to be no overwhelmingly successful techniques for preventing or curing wandering. There is surprisingly little that is really innovative. Interventions range from Reality Orientation groups to procedures for identifying residents to methods of team care, communication and vigilance. Restraints are still quite common, especially in the larger facilities which may partly explain why larger institutions (over 86 beds) reported fewer wanderers. There is some evidence that fewer nursing homes are using immobilizing restraints (body holders and geriatric wheelchairs) than ten years ago. It is difficult from this study to know why restraints get used rather than some other methods. It may be that the smaller facilities do not use some types of restraints and/or range controls (like door buzzers) because they are costly. Apparently, nursing homes fall into two major clusters: those more oriented toward restraints and those featuring programs (most often Reality Orientation). Regardless of whether they use restraints or programs, many also let some people wander. However,

without some form of assessment letting people wander may not be in the best interests of the individual. For some elderly people, wandering may signal a need which requires attention; for others it may be a palliative coping strategy (helping them to feel better).

There is some indication that more wholistic programs may be viewed as more successful, where a wholistic program includes assessment, group work, taking people on walks and the use of environmental cues (especially door decorations). It may be that a change in environment, place to explore, and opportunities for increasing attention span and for supporting motor behavior and exploration, along the lines of an Energy Outlet Program, could serve diverse needs of those who wander in an institution. It seems unlikely that hyperactivity will or should be cured; stopping wandering was not the desired outcome of the overwhelming majority of respondents to this study. Ultimately, the types of services which benefit people who wander may well have applicability for older people in institutions who are memory impaired and do not wander.

Hyperactivity may be accompanied by disorientation (it was for forty percent of the 15 cases studied). However, approximately a fourth of the population of the 170 nursing homes surveyed were disoriented but did not wander. Disorientation has typically been discussed as one phenomenon: grouping memory skills and spatial awareness. Both these assumptions about disorientation and the limited interventions on disorientation should be studied further. Some difficulties in wayfinding may result from the complexity of the building itself, (i.e.

simplified layouts, fewer angles and clearly visible landmarks). Building cues such as nameplates, door decorations and door numbers may be useful to assist wayfinding, probably moreso to people with only minor impairments.

On Long-Term Care Research and Reform

This study yielded many methodological insights relevant to studies of behavior of institutionalized older people. The topic of wandering was chosen because it seemed small and manageable. I have gained a new respect for the complexity of U.S. nursing homes and what is required for either research or reform. The diversity of the nursing home industry suggests that nationwide changes service delivery will not be easy. Just as research samples may need to be stratified, so should educational programs on wandering be targeted according to the "market" or institutional features involved.

As an environmental psychologist, it would have been quite satisfying to find that one could modify a behavior such as restlessness by modifying the environment. This study did not result in clear-cut or strong relationships between environmental factors and general rates of wandering or disorientation. It did suggest that there are institutional variables, such as size or extremes in stimuli, which may figure into these behaviors. Solutions to problems of risky runaways or disoriented older people are unlikely, based on this research, to be found by adopting environmental measures alone.

What this study set out to do was to narrow the issues for subsequent research. The dialectical perspective, a philosophical approach of

accommodating rather than resolving conflicts in findings, was quite useful in reaching a new understanding about wandering. Where former studies had advanced one definition or intervention over all others, the dialectical approach to these data encouraged a look at why different definitions, policies and interventions have emerged. The findings would appear to be richer and more useful as a result of this strategy. Just as there is likely to be more than one type of wandering, I believe that we will ultimately find several different systems for optimizing the quality of life both for the person who wanders and for their caregivers.

IMPLICATIONS

For the Study of Wandering

Wandering needs to be studied not as one phenomenon, but in terms of the different behavior and emotional states which seem to characterize people. Terms such as pacing, roaming or disorientation without wandering should be substituted for the term wandering. And data need to be collected on motions of many types-- including the motions of those with very low rates of movement.

In my judgment, the very next studies of wanderers should focus on non-institutional wandering. These studies are necessary to clarify definitions, causes, interventions and risks of wandering which are unencumbered by the characteristics of institutions (size, staffing, changes, place variables, etc.). However, given the realities of institutional care for wanderers at least in the near future, attention might then be turned back to institutional settings where a number of questions remain to be answered.

Studies of institutional wandering should be conducted on a larger scale, where samples are carefully stratified by size, complexity and programs. Studies need to be conducted on a long-term basis. This research did not clarify how wandering starts and how it progresses. Though few institutions indicated that they were successful in developing innovative ways of dealing with wandering, the efforts of those that have creative programs should be studied quite carefully. Ideally, studies should include comparisons of different types of innovation.

The following research suggestions for follow-up institutional research have emerged from this study:

1. We need a method for including more cases, across many institutions. For economical purposes, facilities might be stratified by size/complexity and wandering patterns studied within facilities under 90 beds, from 90-300, and over 300 beds. A special survey is needed for facilities over 300 beds to help deal with different building types and other special issues. From larger studies, more work is needed on the types of wanderers, suggested here.

2. From the site visit, it was interesting to find that there appeared to be no clear beginning to wandering. This issue may create problems in anticipating runaways and encouraging non-risky movement. Further research is needed to learn whether this is an artifact of this study or characteristic of populations as well. Staff members and families need some guidelines on early identification if at all possible.

3. The facility typology, developed on the basis of adjective checklist, might be expanded and used as background information in other research. Information on size, additional adjectives (noted in the text) and age of the facility are needed. For studies of wandering, information on unit size, location of exits, monitoring of exits and locations of nurses stations relative to wanderers and to exits would all be instructive.

4. Subsequent research would benefit from a study of programs which incorporated staff ideas presented here.

5. Observational studies and long-term studies on restraint and control use and on environmental cueing are strongly recommended. We need studies that track the reaction of people to restraints and to cues according to the pattern of wandering or disoriented behavior.

6. Management studies would be helpful on processes and costs for reducing or eliminating restraints and geriatric wheelchairs.

7. A study is needed on what has lowered institutions' rates of risky runaways so that the relative merits of different interventions can be weighed.

8. A study or consumer panel on the rights of people to take risks, on the rights to runaway to leave, to pace, to remove restraints needs to be devised. This study should include the risks posed to caregivers and the inconvenience or risks to peers.

9. A separate study on rummaging and pillaging is needed to understand why this particular behavior occurs.

10. Wandering could be studied in the context of other motor behaviors: self-touching, calling out, rocking, picking, etc.

For Alternatives to Restraint

Over the past 15 years, several research projects have allowed me to observe caring practice for mentally impaired older persons in some 300 U.S. institutions. Based on interaction with staff from these and more institutions at conferences, I have come to believe that alternatives to restraints will require several specific research studies:

1. Research on the functions of movement of older people with mental impairments and of restraint will need to be conducted and results

widely published in readable forms.

2. Nursing staff will need compelling evidence that restraints do not necessarily impede runaways.

3. More research will be needed on falls, further reinforcing data indicating that restraints do not protect older people from falls or fractures.

4. Comparative analytical research on the relative impact of restraint vs. exposure to risks will be needed.

5. Studies of staffing must be conducted establishing where restraints are used in lieu of human supervision. Studies on how to implement higher levels of mobility and activity among caregivers may also be needed.

6. Caregivers, programs, facilities and furniture will be needed to stimulate exercise and offer an energy outlet.

7. Research on medications will be needed to minimize side-effects of unsteadiness, agitation, disorientation or wandering. Staff may need assistance on identifying wandering as a possible side-effect of medications.

8. Research is needed on technology to secure places (indoor or out) for safe movement.

9. Better chairs need to be designed based on as-yet-uncollected ergonomic data. (Such chairs will also need to be marketed within the price range of institutions or family members.)

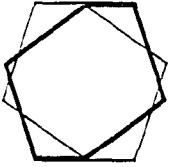
10. Methods will need to be implemented for evaluating the motor, orientation and wandering behavior of each individual and for

translating findings into an individualized plan of care (Hiatt, 1985a).

In so doing, it would be my guess that we will not only provide a more appropriate environment for aging, but one which has fewer features which signify institutionalization.

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The Graduate School and University Center
of the City University of New York

Center for Human Environments
Graduate Center: 33 West 42 Street, New York, N.Y. 10036
212 790-4551

date January 18, 1984

Executive Director

Dear

This is to put in writing the details of cooperation in a study of Wandering Behavior of Older People. Once you read this letter, fill in the appropriate blanks, and sign it, please return a copy to me. I shall keep one copy and make another for the appropriate research committee at the Graduate Center of the City University. We need to have the copy on file before I can actually begin the on-site study.

Project Study Title:

Wandering Behavior of Older People: A study of hyperactivity, disorientation and the spatial environment

Project Leader

Lorraine G. Hiatt, M.A.

Project Acknowledgement (Here, "I" refers to the executive for the health care institution)

I hereby acknowledge that on _____, 1984, I was informed by Ms. Lorraine G. Hiatt of the City University of New York, Graduate School and University Center, of a project concerning wandering behavior of older people in institutions.

Project Purpose and Methods

The research deals with the orientation, wayfinding and movements of older people and seeks to understand factors that contribute to the tendency toward wandering and disorientation. The study will involve observation, staff interviews and optional resident and family member interviews. The researcher will only interview older residents with the consent of the nurse supervisor on duty and will terminate the questioning if the individual shows any signs of distress or displeasure. Some demographic and health data will be provided to the researcher by nursing staff from the individual patient charts we keep. I have been informed of the information being collected and concur that the researcher is not requesting objectionable information.

INSTITUTIONAL AGREEMENT AND CONSENT FORM

I have been advised that the research will involve no more than five days in this institution and it will be at least one year before a complete report of results is available to us.

Project Outcome

I understand that we cannot expect this study to provide specific explanations or cures for individual cases of wandering or disorientation. I also understand that the results may help us understand whether some motor behavior serves a purpose to older people, what the risks are, and what procedures seem to work best as interventions based on what is done here and in other institutions.

Project Liaison

We have named _____ of the _____ department of our institution as contact person regarding any questions raised by our staff, family members or older residents regarding this research. This person will also be available to respond to questions of the researcher.

Agreement to Inform Staff

We agree to take at least two steps to inform our staff of the study: 1) we will post a notice regarding the study, study schedule, and purposes of the research which includes information on whom to contact within and outside this institution for more information; 2) we will orally remind the staff of the research through our customary meeting and announcement procedures.

Agreement to Inform Family Members

We further agree to send a joint letter to family members or caregivers of the individuals selected for this study, requesting that they make themselves available for a brief telephone interview on the topics of the research. We understand that the families are under no obligation to participate.

Options for Non-Participation

No negative consequences will accrue to any individual who chooses not to cooperate with this research or who chooses to withdraw from the study. No prejudicial care nor administrative consequences will accrue to any individual denoted as a wanderer, a non-wanderer, or a person disoriented to place.

We understand that as an organization we may choose to terminate our involvement in the study at any time without resulting negative consequences or hard feelings. We may also withdraw the participation in the project of any staff member or older person at any time.

Agreement Regarding Anonymity of Findings

We have been advised that all information will be coded anonymously, that no names of older residents, families, staff or any others will be used. We have also been advised that we may certify whether we, as an institution, wish to be acknowledged by name in the acknowledgements section ONLY of the study report and/or publications and that our request will be followed explicitly.

- ____ Yes, we DO want to have our cooperation acknowledged by the name of our institution in an acknowledgements section of any reports or publications resulting from this work.
- ____ No, we do NOT wish to have our cooperation acknowledged by name and do NOT want the name of our institution to appear in the acknowledgements section of any reports or publications.

INSTITUTIONAL AGREEMENT AND CONSENT FORM

Understanding Regarding Protection of Records

We understand that the records developed in conjunction with the study will be kept secure and will not be made available to anyone outside this study.

Understanding Regarding Who To Contact With Questions

We understand that if at any time we have questions about the research, we may contact Ms. Hiatt, her research sponsor, Dr. Leanne Rivlin, or Dr. Roger Hart, liaison for the Office of Sponsored Research at the addresses/phones listed below.

Lorraine G. Hiatt, Project Director (212-874-7713)
Leanne Rivlin, Ph.D. Research Supervisor (212-790-4551)
Roger Hart, Ph.D. Liaison, Office of Sponsored Research (212-790-4551)
Graduate Center, City University of New York
33 West 42nd St.
New York City, NY 10036

We look forward to our cooperation on this study and appreciate your time and interest.

Sincerely,

Lorraine G. Hiatt, M.A.
Project Director/Researcher

Reviewed and agreed,

Printed Name _____
Position _____
Address _____

If as a part of your policy and procedures, this information was reviewed with a Research, Utilization Review or other Committee, please so indicate:

Name of Committee _____

Date of Approval _____

By: Name of Authorized Committee Representative _____

Signature of Authorized Committee Representative _____

LGH/ms

LETTER TO FAMILIES REGARDING THE STUDY

APPENDIX

September 21, 1984

Dear Family Member:

We are involved in a research project comparing individuals who are not disoriented, and do not wander to those who do have this behavior. We are requesting your help in this research.

We had always thought that there was little available published information on just what techniques work best for assisting people who pace, roam or are confused with regard to directions. We were recently contacted by a researcher, Lorraine Hiatt, who is doing nationwide research on this same topic.

Mrs. Hiatt has worked with the Blumenthal Jewish Home for the last four years on a number of our programs. In 1982 she met with our Board and this last week she presented a workshop on wandering behavior at our conference on Alzheimer's disease. She has just completed a mailed survey of 170 institutions regarding techniques for working with just this group of people. She is now interested in making actual on-site visits to expand the survey information.

Mrs. Hiatt has proposed to us that she come, at her expense, to document the pattern of movements of a group of about thirty residents. Half of these would be people who HAVE had minor to severe difficulties and half would be people who are similar in age and health but HAVE NOT experienced problems with movement or orientation.

Her work involves obtaining information from five sources: speaking with staff, abstracting demographic data from records, observing patterns of movement in dayrooms and halls of the building, and asking one question regarding location of an office within the building. She would also like to make telephone contact with family members regarding the older person's lifestyles and patterns of walking and directional awareness. She has conducted similar studies in other facilities and has chosen us because we have developed methods for working with people who wander.

We are asking families, with their longtime knowledge of the individual, to respond to a short set of questions that should take no more than 20 minutes. Calls would be scheduled at your convenience. The questions are not personal and no information is asked about anyone's financial status. You are under NO obligation to respond and you are free to tell Mrs. Hiatt that you do not want to respond to any of the questions at any time during the call.

As a result of this study, we are hoping to learn more about the behavior of older people, specifically, why some are disoriented or wander and why some do not. There are no promises made about whether the study will help us resolve these problems for any particular individual.

Letter to Families Regarding the Study, continued

APPENDIX

Page 2

We are interested in participating because we want to learn more. We will receive a report of the findings in about four months which we invite you to read in full. We will also publish a brief report of this in our newsletter. Or, if you want to be interviewed, you will have the opportunity to get your own copy. No one in the study will be mentioned by name in any of the written reports coming from this study, not you, the older people or our staff.

If you have any questions about this study, either now or after you are called, you may contact Edna Blevins, Social Worker for A-Wing residents or Lauren Jones, Social Worker for B-1 and B-2 residents. Also, you may speak with the project researcher in person, Lorraine G. Hiatt, Center on Human Environments, Graduate Center, City University of New York, 33 W. 42nd Street, New York City, NY 10036 (212-790-4551). If at anytime you have questions about the research procedures, you may also contact Dr. Kathleen Christiansen, representative for Office of Sponsored Research, Graduate Center City University of New York, (212-790-4551).

PLEASE RETURN THE STAMPED SELF-ADDRESSED CARD IMMEDIATELY so that we will know that you received this letter and are aware of this study.

Sincerely,



Al. A. Mendlovitz, NHA, ACSW
Executive Director

enclosure (postcard, see following)

APPENDIX

CONTENTS OF POSTCARD ACCOMPANYING LETTER TO FAMILIES REQUESTING
PARTICIPATION AND PERMISSION FOR RESEARCH:

Re: Study of people who wander and those who do not:

I have read the enclosed information, dated September 21, 1984. I understand the information provided and am clear that I may contact a Social Worker at any time if I have questions.

I am WILLING to have my family member included in this study.

I am WILLING to be called during October, 1984 and to participate in a brief telephone interview on this topic.
Call me at this number:

Best time and day to call:

I prefer NOT to have my family member included in this study.

I prefer NOT to be called, but my family member CAN be included.

Signature _____
Date _____

Reverse side of postcard was addressed to the nursing home.

The nursing home was also shown as the return address.

APPENDIX

CONTENTS OF PERMISSION FORMS ON FILE WHERE PERMISSIONS WERE OBTAINED BY THE NURSING HOME'S SOCIAL SERVICES DEPARTMENT OVER THE TELEPHONE.

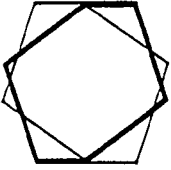
FACILITY LETTERHEAD

Re: (Name of Resident)

I HEREBY GIVE VERBAL PERMISSION FOR MY _____ TO PARTICIPATE IN A RESEARCH STUDY ON WANDERING BEHAVIOR CONDUCTED BY LORRAINE HIATT OF THE CENTER FOR HUMAN ENVIRONMENTS, GRADUATE CENTER, CITY UNIVERSITY OF NEW YORK. I ALSO GIVE VERBAL PERMISSION TO BE CONTACTED BY MS. HIATT TO DISCUSS BRIEFLY WITH HER MY _____'s LIFESTYLE AND PATTERN OF WALKING AND DIRECTIONAL AWARENESS.

SIGNATURE (Proxy by Social Worker)
PHONE (of family member/contact)
RECEIVED BY (Name of Social Worker)
DATE _____

Wording and format of permission document.



SURVEY INSTRUMENT

The Graduate School and University Center
of the City University of New York

Center for Human Environments
Graduate Center: 33 West 42 Street, New York, N.Y. 10036
212 790-4551

October 3, 1983

Dear Colleague:

I am a researcher who has worked in nursing homes and developed studies around topics of interest to caregivers and older people alike. I became personally interested in the topic of WANDERING when a friend wrote me and described the plight of a man who wandered away from a nursing home. Her question, "what should we do about older people who wander" has no simple answer. I am writing you to learn more about what you and your organization know and do about wandering, so that we may all share in this information.

It has been estimated that today, there are 110,000 older people in U.S. nursing homes who wander. In the last 50 years, research has been published for fewer than 50 such people!

Enclosed are some questions on older people who wander and on your views on what should be done about wandering.

Your opinions will be used as the basis of studying older people who wander. The results of your views will be ANONYMOUSLY reported in articles for nurses, administrators and social workers. We will not name any nursing homes.

Take a few minutes and share your views. Please respond this week.
Thanks for your help.

Sincerely,

return—postage enclosed

Lorraine G. Hiatt, M.A.
Environmental Psychologist/Gerontologist
Center for Human Environments
Graduate Center, City University of New York
33 West 42nd Street
New York City, NY 10036

TO: DIRECTOR OF NURSING

Survey Annotated with Major Findings in Italics

<u>STATE</u>				<u>SPONSORSHIP</u>		<u>HHS REGIONS</u>
Maine	15	8.8%				
New York	23	13.3		For Profit	142	83.5%
Virginia	24	14.1		Church	23	13.5%
Alabama	14	8.2		Government	5	2.9%
Wisconsin	36	21.2				I 38 22.4
Missouri	19	11.2				II 38 22.4
Colorado	24	14.1				III 55 32.4
Oregon	15	8.8				IV 39 22.9
TOTAL	170	100.0%				

LEARN WHY PEOPLE WANDER

Frequencies and Percentages are annotated in italic type

A BRIEF SURVEY ON OLDER PEOPLE WHO WANDER

1. FACILITY NAME _____
Address (if incorrect on label): _____
2. What is your position?

<u>89.3%</u> a. Nurse	<u>8.3%</u> c. Administrator
<u>1.6%</u> b. Social Worker	<u>1.8%</u> d. Other: Describe _____
3. How long have you been with this home?

<u>16</u> <u>9.5%</u> a. Under 1 year	<u>33</u> <u>19.5%</u> d. 3-4 years
<u>36</u> <u>21.3%</u> b. 1-2 years	<u>90</u> <u>49.7%</u> e. 5 or more years
4. Which best describes the neighborhood in which your facility is located?

<u>54</u> <u>31.8%</u> a. City/urban	<u>34</u> <u>20.0%</u> d. Suburban
<u>58</u> <u>34.7%</u> b. Small town, village	<u>24</u> <u>14.1%</u> e. Rural, country
5. Where are most of your residents or patients from? Check all that apply.

<input type="checkbox"/> a. Predominantly city/urban	<input type="checkbox"/> e. Some city/urban <i>All or Some</i>
<input type="checkbox"/> b. Predominantly small town	<input type="checkbox"/> f. Some small town <i>No. %</i>
<input type="checkbox"/> c. Predominantly suburban	<input type="checkbox"/> g. Some suburban <i>66 51.6</i>
<input type="checkbox"/> d. Predominantly rural, country	<input type="checkbox"/> h. Some rural/country
<input type="checkbox"/> i. Other: _____	

PART I: HOW YOU DESCRIBE WANDERING

1. The term "wandering" can have many different meanings. Please check all of the things that you feel characterize a person described as a "wanderer."

n = 167

- 42.9% a. Moves about more than is normal for elderly people.
- 66.7% b. Is disoriented to the building.
- 38.5% c. Has a problem paying attention, a "wandering mind".
- 46.2% d. Is aimless.
- 62.1% e. Presents a problem for staff.
- f. Other (describe) "*Leaves Building*" = 30.2%; *All "Other"* 15.4%

2. In the last three months (July-Sept., 1983), have you had any patients or residents who wander either inside or away from the building? *n* = 158

- 94.6% a. No
- 5.4% b. Yes
- c. Not sure

3. Do you consider wandering to be a problem at this time? *n* = 168

- 33.3% a. No
- 66.1% b. Yes

If yes, briefly, describe why and for whom wandering poses a problem.

4. What do you think would be the best result from research on wandering in the near future? *n* = 168; 667 responses

Check THOSE that would be the BEST that you could expect.

Percents based on number of nursing homes

- 7.1% a. To stop people from wandering.
- 76.4% b. To make places safer for people who wander.
- 72.2% c. To find new methods for keeping track of people who wander.
- 61.5% d. To learn how to cope with the fact that there will always be wandering and wanderers.
- 23.1 e. To get adequate payment for the care of people who wander.
- 45.0 f. To get more agreement on ways of dealing with wandering.
- 24.3 g. To get people to be kinder to people who wander.
- 58.4 h. To give people who wander greater freedom.
- 35.7 i. To make people who wander and their families more responsible for the risks involved.

PART II: NUMBERS OF WANDERERS IN YOUR CARE

1. Overall, how many people are residents of your institution? (All areas.) _____
Number

2. Levels of Care (Fill in NUMBER of beds you have of each type)
- | | |
|---------------------------------|-----------------------------------|
| _____ a. Skilled Nursing (SNF) | _____ d. Personal Care/Adult Home |
| _____ b. Intermediate (ICF/HRF) | _____ e. Apartments |
| _____ c. Acute Care | _____ f. Other _____ |

3. For your skilled and intermediate care (SNF plus ICF) what is your present actual census (NUMBER of filled beds)? Range= 13 - 800 beds

4. Considering all of the older people cared for in the nursing home or licensed nursing care portions of your facilities, estimate how many older people fit the following categories.

Fill in the NUMBER
of People Who ...

Mean Percent Per Facility

5.2% a. Have tried to go home, leave or get out?

5.1% b. Pace more than the average.

7.8% c. Roam around or are on the move a lot?

23.2% d. Are disoriented to the building, but do not wander?

5. In the last three months, has anyone wandered away from the building, outside onto the street or grounds?

19% a. No

81% b. Yes:

Mean Percent Per Home

How many different people have wandered away? NUMBER 2.4%

_____ c. Not sure if anyone has wandered away.

6. What is your admission policy regarding people who wander?

Check ONE choice. *n=166*

57.6% a. We have no special admission policy regarding people who wander.

0.6% b. We do NOT routinely ADMIT people who wander.

10.6% c. We REFER applicants who wander to another place or service.

1.8% d. We ROUTINELY ADMIT people who wander.

17.7% e. We ACTIVELY RECRUIT people who wander.

10.6% f. Other _____

7. What best describes your approach to the older people in your care?
(Check those that BEST describe what you do.)

58.1% a. Keep people comfortable.

71.3% b. Maintain present level of physical functioning.

65.9% c. Maintain present level of mental functioning.

73.1% d. Rehabilitate people to return to a lower level of care.

3.0% e. We are in the process of change (new management, new building,) and our philosophy is being worked out.

8. Which ONE of these three statements best describes your services?

30.5% a. Our services are geared toward physical care.

1.2% b. Our program is geared toward mental functioning.

44.9% c. Our services are geared toward rehabilitation.

PART III: IDEAS ON CARING FOR PEOPLE WHO WANDER

1. What describes your ADMINISTRATION'S POLICY toward people who wander?

CHECK ALL that apply. *n=168; 424 responses*

- 30.4% a. We do not have an administrative policy on wandering at this time.
 13.1% b. Keep people from wandering using MEDICATIONS
 39.9% c. Restrict people's movements using RESTRAINTS, GERIATRIC CHAIRS, etc.
 7.1% d. CONFINE people's range of movement using LOCKED WARDS, GATES etc.
 82.7% e. LET THE PERSON WANDER with some watchfulness or surveillance
 15.5% f. Train people NOT to wander, behavior modification, etc.
 39.3% g. Assign to Reality Orientation group
 10.1% h. Administer a special evaluation
 14.1% i. Other

Preceding percents based on number of nursing homes.

2. Does your institution have any special unit or ward for residents who become wanderers or who pace or roam around?

- ___ a. No
 ___ b. Yes; How many people are on that unit, all together? _____
 Of all those on that ward NOW, how many regularly wander or would wander if they were not restrained? NUMBER WHO WOULD WANDER _____

3. CHECK OFF any of the methods on this list which you use to DEAL WITH wandering. *For Use, n=168; for Think Best, n=166*

USE		THINK BEST
5.4%	a. Beanbag chairs	4.4%
63.1	b. Body holders, restraints	48.8%
11.4	c. Color coding bedroom doors	6.0
18.1	d. Color coding corridors or hallways	13.9
74.4	e. Door buzzer systems	33.7
10.2	f. Dutch or half doors	6.6
2.5	g. Elevator buzzer systems	1.8
63.3	h. Geriatric or high backed wheelchairs	44.6
67.5	i. Enclosed court	17.5
.6	j. Locked wards or unit	1.8
4.8	k. Maps of units	4.8
4.8	l. Monitoring devices, such as "KNO-GO"	3.6
75.9	m. Name plates on doors	56.6
66.3	n. Name bracelets for individuals	50.6
3.6	o. Patients wear slippers rather than shoes	2.4
57.2	p. Numbering Doors	48.2
49.4	q. Special door decorations	33.1
3.6	r. Special room for people who wander	1.8
79.6	s. Taking people on walks	31.3
68.1	t. Reality Orientation, remotivation groups	40.4
19.2	u. Other (Describe)	(not computed)

4. Please back go over the previous list and CIRCLE the procedures that you think WORK BEST in PREVENTING problems associated with wandering.

5. Have you or other staff developed any methods for WORKING WITH people who wander? *n=161* If so, please describe these methods and how they work.

- 39.1% a. We do NOT think that people who wander need special methods of care.
 58.4% b. We have NOT developed any special methods at this time.
 2.5% c. We DO have special ways of working with people who wander (Explain):

6. Have your found any ways of CURING serious wandering problems? *n=161*

- 92.5% a. No
 7.5% b. Yes; explain:

FOLLOW-THROUGH

1. If you would like a copy of the findings of this study, please check below and let us know where to send them. (It will take until fall of 1984 to learn of the results.)

91.7% Yes, send a copy.

Send it to: Name or Department _____
Address _____

7.7%

No, I do not need a copy.

2. Would you be willing to have a study made of the people in your care who wander at NO EXPENSE to you or to the elderly people and with the understanding that careful attention would be paid to protection of the privacy and human rights of your patients and staff.

37.3% a. We are not willing to participate in such a study.

52.8% b. We might be willing.

PLEASE INCLUDE THE NAME AND TELEPHONE NUMBER OF A PERSON TO CONTACT.

Name:

Phone:

9.9%

c. We would be willing.

PLEASE INCLUDE THE NAME AND PHONE NUMBER OF A PERSON TO CONTACT.

Name:

Phone:

THANK YOU.

To mail. Please fold on dotted line so that my address faces outward. Staple or tape the form in half.

TO: Lorraine G. Hiatt, M.A.
Center for Human Environments (Fifth Fl.)
Graduate Center, City University of New York
33 West 42nd Street
New York City, New York 10036

DEMOGRAPHIC AND HEALTH PROFILE

-Methodology Notes-

Purpose, Description, Administration and Analysis

Purpose

The purpose of the demographic and health profile is to systematically collect information on people who wander to compare and contrast with similar data for people who do not wander. Such information may indicate that there is a relationship between certain variables and the tendency to 1) wander, 2) be disoriented to place (but not wander) and/or 3) be free of disorientation and not wander.

Specifically, the items allow us to analyze the relationship between sensory function, memory, physical health, and the tendency to wander. Items also allow us to consider whether people who wander are more or less likely to be in pain, have certain communication problems and/or have a history of selected occupations or interests. Variations in visitation will also be ascertained from this profile.

Description

The Demographic and Health Profile is five pages of questions asked of staff directly involved in the care of older people who wander and a comparison sample of those who do not. Most of the information is standardly reported in the patient's admitting diagnoses and "Cardex" (updated) chart.

Questions include sex, age, length of stay and information on the older person's previous occupation (amount of exertion required, motion required, and the geographic range involved). A check-list of physical disabilities (based upon the most common ailments determined through the National Center for Health Statistics) is included.

Respondents are then asked a series of check-list items on functional aspects of vision, hearing, ambulation, continence, communication, attention span, orientation to time and place and memory. Following up on the memory questions,

respondents are asked whether a formal diagnosis has been made regarding prevalence of Alzheimer's disease, depression, dementia, organic brain syndrome, or a brain tumor or damage. Caregivers are asked to judge if the person is presently in pain.

The last item is a general set of check-off categories on whether the person has visitors, who visits and how often they visit.

Administration

This profile is prepared as a guided interview. Typically, a charge nurse and/or social worker will have access to the patient files. The researcher will share a copy of this profile and orally ask the questions. The staff member will abstract the appropriate responses from the patient's chart or records. This approach keeps much of the charted information confidential.

SITE VISIT INSTRUMENT

DEMOGRAPHIC AND HEALTH PROFILE: Guided Interview Questions

[This information is being collected for older people who wander and for a comparison sample of those who do not.]

*1A. Name (to be CODED in data analysis; requested here only to allow for completion of background information and matching to family):

1B. Wanderer or Nonwanderer (circle one)

1C. Sex

MALE
 FEMALE

1D. Marital Status:

a. Currently married
 b. Widowed
 c. Separated or Divorced
 d. Never married

2. Date of Birth _____

3. Dates admitted by level of care, FLOOR AND ROOM _____

a. Admission dates by level of care _____
_____ present floor
_____ present room

b. In the last three months, number of moves: _____

*c. If wandering has begun since being in the institution, where did the person live when the wandering began?

*4a. Previous occupation:

*4b. Comment on the AMOUNT OF EXERTION associated with this occupation, if known.

0. Don't know
 1. Had to exert more or work harder than the average
 2. Had average amount of exertion
 3. Occupation was less demanding than average

*4c. Comment on THE MOTION associated w/activity:

0. Don't know
 1. His/her occupation required a great deal of motion, walking driving or physical activity
 2. The occupation required about average motion or movement
 3. The occupation was fairly sedentary, like a desk job, or required less than average motion or movement

*4d. Did this person TRAVEL or ENGAGE IN AN ACTIVITY THAT REQUIRED A WIDE RANGE?

Example: Wide range would include: cleaning house, gardener, sales, grave digger, hitchhiker, floorwalker, etc.

Moderate range: jobs requiring standing and some movement as factory line worker, nurse, etc.

Narrow range: seated desk jobs.

0. Don't know
 1. His/her activities involved travel
 2. His/her activities involved a WIDE RANGE
 3. His/her activities involved a MODERATE RANGE
 4. His/her activities involved a NARROW RANGE

*Denotes questions asked of families.

SITE VISIT INSTRUMENT

*4e. Did this person's JOB or LIFESTYLE involve outdoor activity?

- 0. Don't know
- 1. He/she was an "outdoors" or "city street loving" person.
- 2. Being outdoors was incidental to his/her job or lifestyle.
- 3. He/she was not particularly involved out of doors.

5a. Physical Disabilities (Check-off factors which, at present, limit the activities of daily living of this individual.)

- a. Mental impairment, "senility", chronic brain syndrome, senile dementia, decline in intellect, memory and judgment, loss of orientation.
- b. Diseases of heart, "Heart trouble"
- c. Paralysis due to stroke
- d. Arthritis
- e. Amputation or stiffnes of limbs or of extremities
- f. Diabetes
- g. Glaucoma
- h. Cataracts
- i. Mental retardation
- j. Mental illness
- k. Paralysis or palsy not related to stroke, arthritis or rheumatism
- m. Hearing impairment
- n. Vision Impairment
- o. Impairment in speech or communication
- p. Respiratory Ailment
- q. Amputation
- r. Other: _____
- s. None of the above

5b. What was the admitting diagnosis?

5c. Sensory Function. For each of the following, indicate the degree of impairment related to daily activities:

1) Vision

- a. Appears to be able to see well, distinguish faces, edges and could read with or without correction.
- b. Has some difficulty distinguishing faces, edges, or reading.
 - Uses magnifier?
 - Uses other low vision aid?
- c. Has moderate difficulty distinguishing faces, edges or reading.
- d. Severely vision impaired
- e. Can only distinguish presence or absence of light
- f. Blind

2) Hearing

- A. Appears to be able to hear well, to understand what is spoken or heard on radio or television, with or without corrective devices
- B. Hears if volume is increased or sits close to speaker or sound source
- C. MODERATE: Hears but does not seem to understand: (CHECK IF YES, A PROBLEM)
 - 1) conversation
 - 2) radio or T.V.
- d. Severe hearing impairment: CAN ONLY HEAR CONVERSATION WITH EXTREME EFFORT OF PERSON SPEAKING
- e. Can only distinguish presence/absence of sound
- f. Deaf

6a. Ambulation

- a. Able to be mobile under own power, without assistance THROUGHOUT BUILDING
- b. Mobile under own power without assistance in circumscribed area (bedroom and immediate nursing unit, only)
- c. Needs some assistance to be mobile (Describe)
- d. Dependent upon others to be mobile.

6b. Mobility Protheses used on the unit

- a. None
- b. Handrail
- c. Cane
- d. Walker
- e. Brace, PROSTHETIC LIMB
- f. Wheelchair
- g. Power wheelchair
- h. Amigo or other similar cart
- i. Human Assistance (Arm)
- j. Other

6c. Secondary Protheses used, such as off the unit (REFER TO PRECEDING LIST).

—

*7. Communication: Check all that apply.

- 1. Establishes eye contact, if blind, orients head toward speaker
- 2. Uses facial expressions to communicate meaning, i.e., smiles if pleased or happy or is offered something he wants, frowns if sad or unhappy.
- 3. Uses gestures to communicate meaning, i.e., points to food if hungry.
- 4. Uses gestures to support verbal communication; nods head to accompany "yes".
- 5. Uses single words or short phrases to communicate
- 6. Can respond to a select number of topics, i.e., food, sleep, basic needs.
- 7. Fully communicative

*8A. Attention span:

- 1. Cannot sustain attention to a target topic, person or activity
- 2. Regularly has periods of difficulty sustaining attention to a target topic, person or activity (comment):
- 3. OCCASIONALLY Has difficulty sustaining attention to a target topic, person or activity
- 4. Can sustain attention to target topics, persons or activities.
- 5. Other: For example, sustains attention w/family members but not others.

*8B. Under what conditions, if any, is this person's attention best?

*8C. Under what conditions, if any is this person's attention worst?

*9a. Memory (FILL IN BLANKS WITH "NONE", "MINOR", "MODERATE", "SEVERE")
TIMING OF EVENTS
RECENT PAST REMOTE PAST

DEGREE OF _____
MEMORY LOSS _____

*9b. Frequency of memory impairment

- a. Never forgets
- b. Less than once a week
- c. About weekly
- d. More than once a day
- e. Nearly always (comment on exception)
- f. Always forgetful

*9c. Has a medical diagnosis been made of any of the following?

- a. Alzheimer's Disease
- b. Depression
- c. Dementia
- d. Organic Brain Syndrome
- e. Brain tumor or damage
- f. Epilepsy, psychomotor or parkinson's disease

*10. Orientation to place

- a. Can function in any surrounding
- b. Can function without VERBAL direction only in familiar surroundings
- c. Needs direction to function even in familiar surroundings, but can respond appropriately to instruction
- d. Needs PERSONAL assistance to be oriented to place; cannot respond to directions alone.
- e. Sedentary, stationary or bedridden and therefore, cannot judge.
- f. Other

*11a. Orientation to CLOCK time

- a. Uses a clock or watch on his/her own
- b. Occasionally requests assistance or information on clock time
- c. Regularly requests information or assistance on clock time
- d. Seems unaware and/or disinterested in clock time.

11b. Orientation to daylight/darkness

- a. Has no trouble distinguishing night, day and in-between times of day
- b. Has some trouble distinguishing time of day (describe)
- c. Disoriented to night vs. daytime (describe)

11c. Orientation to passing time

- a. Seems aware of what occurred in the past vs. the present
- b. Occasionally confused with respect to present and past
- c. Regularly confused with respect to present and past
- d. Totally unaware of present and/or past

12. Continenence/Incontinence

Comment on continence in terms of the following: (Use "NO PROBLEM", "OCCASIONAL PROBLEM", "FREQUENT PROBLEM")

	BOWEL	BLADDER
A. DAYTIME	_____	_____
B. NIGHTTIME	_____	_____

13. At the present time, is this person in any pain?

- a. no
 b. not if medicated
 c. minor
 d. moderate
 e. severe

*14a. Does this person express anger?

- a. Don't know
 b. No
 c. Yes
 IF YES:

b. How often does this person seem angry?

- a. Much of the time
 b. Occasionally
 c. Seldom, rarely

c. How does the person cope with anger? (Examples: speaking, becoming quiet, moving around, writing letters, crying, complaining, becoming physical, seeking privacy.)

*15. Does this person have visitors?

- a. Don't know
 b. No
 c. Yes

- How often does someone come to visit?

- (1) About daily
 (2) At least weekly
 (3) Monthly
 (4) Other _____

- Who visits this individual?

- a. Family _____
 b. Friends _____
 c. Clergy
 e. Volunteers
 f. Others

- What is the age range of the majority of visitors? (CHECK ALL)

- a. Don't know
 b. Children (under 18)
 c. MUCH Younger than the person
 d. Somewhat younger than the person
 e. About the person's age
 f. Somewhat older than the person

SURVEY ON INDIVIDUAL CASES OF WANDERERS
-Methodology Notes-
Purpose, Description, Administration and Analysis

Purpose

The purpose of this brief (4 page) survey is to obtain data on each individual wanderer's behavior before and during wandering and to collect information on how staff respond to the individual's wandering episodes.

Description

The five-page survey of individual cases of wanderers is organized in four sections containing a total of 26 questions, several of which have sub-sections. A number of the questions are repeated from the short-answer format of the Institutional Survey; however, where the Institutional Survey tapped general patterns, this instrument refers to the behavior of one person. The institutional survey was also typically filled out by an administrative staff member; this instrument is completed by direct caregivers such as nursing assistants and unit ward staff.

Part I clarifies the definition of this person's movement/wandering pattern(s). Questions include how often the person wandered away from the building (based upon past three months), the nature of the wandering, and whether wandering is considered a problem at present. Respondents are asked for any information they have on how the wandering started, when, whether it was prior to institutionalization and if the staff were aware of the wandering prior to institutionalization.

Part II deals with specific detail of wandering episodes. Respondents refer to the most recent incident of wandering and describe when and where it occurred, who was involved, how the individual behaved and what methods were used in returning, changing or redirecting the behavior. Respondents are then queried as to whether the wandering posed a risk or inconvenience to the wanderer or to anyone else. Staff respond to whether this episode is typical and if not, are asked to outline

a more typical example.

In a series of ten items with an interval rating scale, respondents are asked to scale the behavior of the person while wandering according to whether there was a purpose or goal, whether the person seemed calm or agitated, how the person responded to an interruption, alertness/confusion, and whether the individual was perceived as mischievous/well-behaved, admired/disliked and oriented/confused to present surroundings and destination. Staff are also asked whether the person could return without help and whether the person returns willingly or reluctantly.

Staff check-off any methods used to deter or redirect wandering, if appropriate, and describe their hunches as to any factors that may contribute to the tendency to wander.

Part III focuses on ideas for caring for the person. Staff are asked to check-off useful techniques from a specific list of interventions and then asked about any interventions they have devised. A general checklist of more subtle programmatic and environmental items is provided so that staff can indicate whether entities such as signs, color coding or name bracelets are available and whether the units are locked, electronically monitored or otherwise controlled.

Administration

This is prepared as a guided interview. The researcher will sit with a small group of direct caregivers. This typically includes two nursing assistants and a nurse supervisor or social worker.

Each person has a copy of the survey questions. Items are read by the researcher, discussed, by participants and responses are written in by the researcher. Where there are differing points of view, these are annotated by the researcher directly on the form. Only one survey of individual cases of wanderers is completed by the group.

NOTE: If family members are available for an interview, they are administered a separate copy of this survey, asterisked questions only.

SITE VISIT INSTRUMENT

SURVEY OF INDIVIDUAL CASES OF WANDERERS

I.D. _____

First Name and Last Initials of Person _____
 Facility _____ Floor _____ Room _____
 Role(s) of Person(s) who helped fill in this information _____

*PART I: GENERAL NATURE OF WANDERING

The term "wandering" can have many different meanings. Please check all of the things that you feel characterize THIS person, described as a "wanderer."

- 1. Moves about more than is normal for elderly people.
- 2. Is disoriented to the building.
- 3. Has a problem paying attention, a "wandering mind".
- 4. Is aimless.
- 5. Presents a problem for staff.
- 6. Other (describe) _____

*7. In the last three months (July-September, 1983), has this person wandered EITHER inside or away from the building?

- 0. Not Sure
- 1. No
- 2. Yes

*8. How often has this person done the following things? Fill in the number that corresponds to your answer.

- 1. Daily
- 2. More than once a week
- 3. Only about once a week
- 4. Less often than once/week

- a. Has tried to go home, leave or get out?
- b. Paces more than the average:
- c. Roams around or is on the move a lot?
- d. Is disoriented to the building, but do not wander?

*9. Do you consider his/her wandering to be a problem at this time?

- 1. No (Explain): _____
 - 2. Yes
- If yes, briefly, describe why and for whom wandering poses a problem.

*10. Please provide any information you have on:

- a. How this person's wandering started?
- b. When it started?
- c. Whether it was prior to or following institutionalization.
- d. If staff knew about the wandering prior to admission (if appropriate)?

PART II: DESCRIPTION OF WANDERING EPISODES

*1. Describe the most recent wandering episode involving this person. Include information on:

- a) When it occurred
- b) Where it occurred
- c) Who was involved
- d) How the individual behaved throughout
- e) What methods were tried and what methods were successful in returning, changing or redirecting behavior.

*f) As the result of the wandering, was the health or well-being of the wanderer or anyone else at risk?

- 1. No
- 2. Yes, explain

*g) Was any other patient/resident, staff member or family member inconvenienced by the wandering episode?

- 1. No
- 2. Yes, explain

*h) How typical is this incident of this person's wandering?

- 0. Don't know
- 1. Very typical
- 2. Typical
- 3. Unusual

*2. If this was an unusual episode, please describe what you consider more typical behavior for this individual. Include same information from above, as appropriate:, i.e.,

- a) when it occurred
- b) where it occurred
- c) who was involved
- d) how the individual behaved throughout
- e) what methods were tried and what methods were successful in returning, changing or redirecting behavior.

*3. Descriptions of the person while wandering.

Directions: On each line are two alternative descriptions of behavior. Circle the number closest to how the person appears to behave WHILE wandering. If the person is equally like either alternative, circle number 3. If you cannot judge, circle the "0", to the left of each item.

0	a. HAS NO APPARENT GOAL OR PURPOSE	1	2	3	4	5 SEEMS TO HAVE A GOAL OR PURPOSE
0	b. PERSON HAS NO APPARENT NEED TO MOVE FOR ITS OWN SAKE	1	2	3	4	5 PERSON SEEMS TO NEED TO BE "ON THE GO", BUSY, OR IN MOTION
0	c. AGITATED WHILE MOVING	1	2	3	4	5 CALM WHILE MOVING
0	d. AGITATED IF INTERRUPTED	1	2	3	4	5 CALM IF INTERRUPTED
0	e. ALERT	1	2	3	4	5 CONFUSED
0	f. MISCHIEVOUS	1	2	3	4	5 WELL-BEHAVED
0	g. ADMIRER	1	2	3	4	5 DISLIKED
0	h. KNOWS WHERE HE/SHE IS	1	2	3	4	5 CONFUSED ON WHERE HE/SHE IS
0	i. KNOWS WHERE HE/SHE IS GOING	1	2	3	4	5 CONFUSED ON WHERE HE/SHE IS GOING
0	j. KNOWS WHERE HE/SHE HAS BEEN	1	2	3	4	5 CONFUSED ON WHERE HE/SHE HAS BEEN
0	k. CAN GET BACK WITHOUT HELP	1	2	3	4	5 CANNOT GET BACK W/O HELP
0	l. RESISTS EFFORTS TO RETURN	1	2	3	4	5 WILLINGLY ACCEPTS EFFORTS TO RETURN

*4. Describe your hunches about factors which might have precipitated this person's wandering episode? (Consider: physical, psychological, social, environmental)

*5. What makes this person stop wandering? (Check all that apply.)

- Verbal requests or instructions
- Elapsed time, i.e., seems to stop after a while (how long?) _____
- Tires him/herself out
- Medication takes effect; TYPE USED/DOSE _____
- Mealtime, snacks or eating
- Change in time of day, i.e., becomes daylight or night.
- Personal attention
- Group activities
- Other _____

PART III: PROBABLE FACTORS IN WANDERING

There have been many explanations suggested for wandering. Since there has been so little research on this topic, your experience would be helpful in shaping future studies. BASED UPON YOUR EXPERIENCE WITH THIS PERSON, which of these do you think contributes to the tendency to wander? Check any which you believe are probable factors in wandering.

1. PROBABLE CONTRIBUTOR

- A. Senility, brain syndrome or dementia
- B. Old age
- C. General disorientation to place
- D. Genetic factors
- E. Newness to room or building
- F. Restlessness
- G. Unhappiness
- H. Boredom
- I. Change in weather; full moon
- J. Pain
- K. Medication
- L. Frustration
- M. Joy of movement
- N. Former jobs and hobbies
- O. Sounds or noise in the environment
- P. Crowding (The relative numbers of people in a given space)
- Q. Hunger
- R. Sense of being "shut in"
- S. Financial difficulties
- T. Reaction to family visits
- U. Curiosity
- V. Desire to goad staff
- W. Preference for homelife
- X. Search for fresh air
- Y. Other _____

2. PLEASE GO BACK AND CIRCLE THE ONES WHICH YOU THINK ARE MOST RELEVANT.

PART IV: IDEAS ON CARING FOR THIS PERSON

1. Which of the following have you tried with this person? Check those that apply.

- a. Prevent problems through physical RESTRAINT.
- b. Use MEDICATIONS to keep him/her from wandering _____
- c. Use GERIATRIC WHEELCHAIRS or "table chairs".
- d. PROTECT and WATCH him/her and keep them from taking risks.
- e. Keep person FROM BOTHERING others.
- f. Keep people who may wander BUSY with activity classes.
- g. Behavior modification
- h. Assign them to Reality Orientation Training.
- k. Other (explain):

2. Please go back and CIRCLE THOSE METHODS THAT WORK WELL.

Draw a LINE THROUGH those methods that did NOT WORK AT ALL.

3. Is this person on a special unit or ward for residents who become wanderers or who pace or roam around?

- 1. No
- 2. Yes; How many people are on that unit, all together? _____

4. CHECK OFF any of the methods on this list which you use to prevent wandering ON THE FLOOR OR UNIT IN WHICH THIS PERSON RESIDES.
- a. Beanbag chairs
 - b. Body holders, restraints
 - c. Color coding bedroom doors
 - d. Color coding corridors or hallways
 - e. Door buzzer systems
 - f. Dutch or half doors
 - g. Elevator buzzer systems
 - h. Geriatric or high backed wheelchairs
 - i. Enclosed court
 - j. Locked wards or unit
 - k. Maps of units
 - l. Name plates on doors
 - m. Name bracelets for individuals
 - n. Having patients wear slippers rather than shoes
 - o. Numbering Doors
 - p. Special door decorations
 - q. Special room for people who wander
 - r. Walks
 - s. Other (Describe)
5. CIRCLE those methods that worked well FOR THIS PERSON.
6. DRAW A LINE THROUGH methods that did NOT work at all FOR THIS PERSON.
7. Have you or other staff developed any methods for working with this person?
If so, please describe these methods and how they work.
- a. We have NOT developed any special methods at this time.
 - b. We do not think that people who wander require any special care.
 - c. We DO have special ways of working with this person (Explain):

SITE VISIT INSTRUMENT

QUESTIONS FOR THE RESIDENTS IN THE STUDY

I.D. _____

I. KNOWLEDGE OF DESTINATION EN ROUTE- [To be asked by nursing assistant or nurse caregiver]

A. "Oh, Mr./Mrs./Miss _____, where are you going? (or, "Where are you on your way to?"

-Wait for response

-Remember response

-Reply, "Okay, that's fine, just asking." (Unless to do so would be inappropriate.)

-Report response to Researcher.

 Coding:A. _____ 0. Could not be asked/was not asked this person
 _____ 1. No Reply
 _____ 2. Reply Unclear, unintelligible
 _____ 3. Responded (Select One)
 _____ a. Gave a precise destination
 _____ b. Gave a precise destination which is unlikely;
 i.e., "home", "out", "to the market"
 _____ c. Asked a question, "How do I get to...."
 _____ d. Gave a statement, "I want to get to...."
 _____ e. Indicated unsurity, "I don't know."
 _____ f. Indicated movement without destination:
 "I'm not going anywhere," I'm just getting
 some exercise.
 _____ g. Other _____

B. Is this response typical, in your experience, of this individual?
 _____ 0. Don't know
 _____ 1. Yes, typical
 _____ 2. No, not typical. If it is not typical, what would be? (Use the list
 from 3 a-g above _____

C. Did the individual do as he/she indicated to the staff member?
 _____ 0. Don't know
 _____ 1. Yes
 _____ 2. No: Describe where he/she went or what resulted.

PART II: KNOWLEDGE OF WHEREABOUTS AND ABILITY TO GIVE DIRECTIONS

[To be asked by the Researcher, as if she/he were a visitor, of each study participant, after obtaining permission from the nurse supervisor. Care should be taken to restrict the comment to the target individual so that others are not encouraged to respond for the individual.]

- A. "Excuse me, do you happen to know where we are now?"
 -Record whatever answer(s) is/are received.
 0. Not asked
 1. No response
 2. "I don't know"
 3. Name of building _____
 4. Floor or name of unit _____
 5. Other: _____
- B. Was this information essentially correct?
 1. NO
 2. YES
- C. "How can I get to the _____ front office?"
 -Record whatever answer(s) is/are prompted
 0. Not asked
 1. No response
 2. "I don't know"
 3. "Ask....." or asks a nearby resident
 4. Simple route instructions, "Take the elevator, stairs..."
 5. Detailed route instructions
- D. Were the instructions useable/correct?
 1. Yes
 2. No

4. Context: What is the context of the specific building(s) in terms of the facilities under the management's ownership or sponsorship?

_____ a. This is a multilevel care campus (list levels)
 _____ Housing _____ Apts. _____ H.Aged _____ ICF _____ SNF
 _____ Other _____

_____ b. Dual type structure (list levels from above)

_____ c. Single level _____

_____ d. Other _____

5. Physical Organization:

_____ a. Health Services are centralized (where) _____

_____ b. Services are decentralized and close to residents.

6. Services Location:

a. Where is the nursing station?

_____ 1. At a hub of all units

_____ 2. At a hub for each different unit

_____ 3. Other _____

b. Where is the administrator's office?

_____ 1. Within view of the front door

_____ 2. Near the entry point

_____ 3. Other _____

c. Where is the bookkeeping office?

_____ 1. Within view of the front door

_____ 2. Near the entry point

_____ 3. Other _____

d. Where is social services office/admission office?

_____ 1. In an administrative area _____

_____ a. Near entry

_____ b. Elsewhere in building _____

_____ 2. On each resident's unit

_____ 3. This is the same as the administrator's or bookkeeper's office.

e. Where does dining take place?

_____ 1. There is a central dining room (type of clients that use it):

_____ a. ambulatory

_____ d. all mental abilities

_____ b. all mobility types

_____ e. staff

_____ c. alert

_____ f. other; describe:

_____ 2. People eat on their units...(fill in number for each)

_____ a. in a room specially for dining _____

_____ b. in a room used for many purposes _____

_____ c. in hallways _____

_____ d. in bedrooms _____

_____ e. other _____

8. UNIFORMITY, VARIABILITY

Rate the uniformity of the following using this rating:

1 - similar; 2- some differentiation (examples); 3- major differentiation
0 - not applicable (space not included)

RATING	DESCRIPTION
___	1) color
___	2) furnishings
___	a) style
___	b) amount
___	3) textures
___	4) objects/decor
___	5) amount of decoration
___	6) ambient noise
___	a- generated by older people
___	b- generated by caregivers or visitors
___	c- generated by mechanical building systems
___	d- from equipment
___	e- from audiovisual or entertainment items
___	f- other sources, including outdoors
___	7) odor (include incontinence, smoke, food, cleaning supplies):
___	8) air flow, circulation
___	9) level of activity in corridors
___	10) lighting level
___	11) prevalence of glare
___	12) traffic pattern (Key to the map)
___	a- of nursing staff
___	b- of older people
___	c- all other sources
___	b. Dayrooms/dining rooms (if multi-purpose)

___ c. Location of doorways and elevators

___ a- locking or control of entries

___ b- appearance of entries

___ d. Other rooms, services on the unit (ice machine, outdoor patio, etc.)

9. Building Configuration:

Describe the building configuration: i.e., multi-story, single story. Draw an elevation and sketch in what can be found on each floor (services, types of people, ancillary space, etc. include location of dining areas, chapel, activities areas, physical therapy, etc.)

10. BUILDING SIGNAGE AND ORIENTATIONAL SYSTEM(S)

- ___ a. What is the overall square footage of the building, exclusive of a cellar or attic?
- ___ b. How many intersections are there per floor? List if different for different floors.
- ___ c. In primary areas used by people who wander, how many...
(use several columns if people who wander are distributed through the building)
- ___ 1) corridors longer than 20'
- ___ 2) corridors longer than 60'
- ___ 3) intersections available
- ___ 4) angled intersections (less than 90 degrees) available?
- ___ 5) CORRIDOR views to the outside (give direction and siting):
N =
S =
E =
W =
- ___ d. How is color used? (Check off if color has been developed in some system; then describe. Leave blank if colors have not been developed as part of some planned orientation system, but do include descriptions)
- ___ 1) bedrooms
- ___ 2) corridors
- ___ 3) dayrooms
- ___ 4) color coding
- ___ e. How do color choice, color amounts, lighting and texture work together?
Use this code: 1) dull; 2) light muted; 3) moderate intensity; 4) bright; 5) brilliant (in reference to lighting) 6) white
- ___ 1) bedrooms
- ___ 2) corridors
- ___ 3) dayrooms
- ___ 4) color coding
- ___ f. How do colors compare with those of most health care institutions?
Use this code, use more than one responds, as needed: 1) relatively quieter; 2) average; 3) relatively bolder; 4) relatively more interesting; 5) somewhat "circus like"
- How does researcher respond?
- ___ 1) bedrooms
- ___ 2) corridors
- ___ 3) dayrooms
- ___ 4) color coding
- _____
- _____
- _____
- _____

g. Rate and describe each of the orienting features available:
 0= doesn't apply, 1=confusing; 2=somewhat confusing;
 3= neither confusing nor helpful; 4=somewhat helpful 5=helpful

- ___ 1) Signs
- | | |
|-------------------|--------------------------|
| ___ a) print size | ___ d) location of sign: |
| ___ b) contrast | ___ e) position of sign: |
| ___ c) legibility | ___ f) character |
| | ___ g) distribution |

___ 2a) Standard Graphics
 description:

___ 2b) Supergraphics
 description:

___ 3) Distinguishable objects or features at decision points (landmarks)
 description:

___ 4) Kiosks or information panels
 description:

___ 5) Transport corps or volunteer
 description/availability:
 who (older residents, staff, volunteers)

___ 6) Announcements
 types made, directions given

___ 7) Training or practice
 description:

___ 8) Use of odors (popcorn to announce groups, etc.)
 description

___ 9) Trailing systems (floor patterns, footsteps, lines)
 description

___ 10) Textured cuing

Rating	Description
___ 1) at handrails	_____
___ 2) on dangerous doors (knurling)	_____
___ 3) for signs	_____
___ 4) at elevators	_____
___ 5) for elevator buttons	_____
___ 6) for door labels	_____
___ 7) for beds	_____
___ 8) for possessions, drawers	_____

___ 12) Are corridors named?
 description:

___ 13) Maps
 description:

14) Lights as direction signals
description:

15) Exit acknowledgment
description: traditional exit sign or:

16) Comment on any signs or sign/verbal behavior such as naming
which are conflicting:

17) Other (individualized labeling of bathroom, etc.)
description:

18) Can residents bring their own furniture?

- a. no
 b. yes

Types: (circle) chair(s), chests, other: _____

19) Can residents put things on the wall?

- a. no
 b. yes

Type: (paintings, paper, shelves, all types) _____

Where: (bedroom, which wall(s)) _____

(other):

20) How are personal belongings handled in the bedrooms?

- a. None are evident
 b. SNF- Proportion of rooms with notable personal objects
 c. Unit Serving Wanderers- Proportion w/ notable personal objects

Check types of personal objects:

- a. Photos, small possessions
 b. Chairs
 c. Dressers, lamps, tables, desks, sewing machine, etc.
 d. Other _____

Places apparently available for personal possessions:

- a. Wall surface next to bed (head or side)
 b. Closet doors
 c. Wall surface across from bed (if appropriate)
 d. Shelves, in view
 e. Other _____

SOCIAL CHARACTER OF SPACE

1. Using this scale, describe each of the behavior settings available to people who wander; then contrast those with settings available to the comparison group.

	Numbers of Persons Who Gather						
	1	2-3	4-8	9-11	12-24	25-40	40+
Dayroom
Hallway
Bedroom Type 1
Bedroom Type 2
Bedroom Type 3
Dining Room
Other:

2. Describe where the individual would go for each of the following social opportunities. Then comment on how readily they are available.

PLACES- LOCATIONS

Where This is Found

Availability

a. Privacy

1) Visual

2) Actual

b. Dyad/Intimacy

1) By choice

2) Forced

c. Small social areas (under 300 sq. ft.)

c. Medium social areas
300-500 sq ftd. Large social areas
Greater than 500 sq. ft.
Less than 1,000e. Very large social areas
Over 1000 sq. ft.

f. The largest assembly place is....

This holds _____ people or _____% of the residents

QUALITIES OF SOCIAL AREAS- Name: _____
(Includes lounges, porches, courtyards)

1. LOCATION

2. Users

3. Access (to whom, policies, free or controlled)

4. Supervision

a. Arrangement

FormalHaphazard

b. Seating

Lined-up.....Clustered

c. Scale

Single Large Small

Group.....Groups

d. Focus

None.....Many

List:

e. Orientation

Inward.....No Special.....Outside

Varied

f. Actual Flexibility

SetChanging

Arrangements

g. Used

Unused.....Heavily

Used

h. Density

Small no.....Distributed.....Crowded

People

i. Furnishings

Bare.....Cluttered

j. Stimulus

Overload.....Deprivation

k. Other uses of this space

___ 1) storage 2) linen sorting 3) charting

___ 4) meetings of staff 5) smoking, break room

___ 6) Other:

INDICES OF PROTECTIVE FEATURES

Circle extreme, fill in details for "selected areas or uses".

	Selected Areas/Uses	
Locked Ward	Throughout _____	None Available
Bars/Wires on Windows	Throughout _____	No Where
Operability of Windows	Can operate _____ By One's Self	Windows unopenable or locked
Metal Mirrors	Throughout _____	No Where
All Built-ins Tied Down	Throughout _____	No Where
TV Controls	Unavailable/ _____	All Accessible
Temperature Control for Heat in Room	Unavailable/ _____ Out of Reach	All Accessible
Geriatric Wheelchairs	Used _____ Throughout	Not Used
Dutch Doors for Bedrooms	Used _____ Throughout	Not Present
Gates at Exits or Elevators	Used _____ Throughout	Not Present
Foot Coverings	Pts wear _____ no shoes; wear slippers	Own shoes worn
Access to Outer Wear	Available _____ to All	Not Available
Courtyard	Visually _____ Open	Visually enclosed
Restraints	Worn _____ Throughout	Not used
Protective Wall Covering	Used _____ Throughout	Not used
Guards	At exits _____	No guards

SITE VISIT INSTRUMENT

CATEGORIES TO BE USED FOR OBSERVATION

A. INDIVIDUAL PURSUITS

1. Reading
2. Listening to radio/phono
3. Watching television alone
4. Piecing a puzzle
5. Handwork
6. Writing
7. Smoking tobacco
8. Talking, singing to self
9. Appears to be exploring room contents (describe)
10. Appears to be arranging, rearranging room contents
11. Appears to be caring for, maintaining or acting upon room contents
12. Housekeeping
 - a. Actually making a bed, dusting, fixing something
 - b. Phantom housekeeping, appearing to dust, pick lint, fix, etc.
13. Watching other people (w/o them being involved in being watched, see D9)
14. Looking out window
15. Smelling, sniffing food
16. Sleeping
17. Wandering (clarify)
 - a. Pacing, i.e., moving back and forth, continuous rate
 - b. Traversing circumscribed area slowly
 - c. Meandering, moving from one point to another without apparent goal
 - d. Trying to get out
 Wandering w/partner, see D8
18. Other

B. INDIVIDUAL PHYSICAL EXERTION

1. Moving furniture
2. Rocking
3. Moving wheelchair
4. Moving geriatric wheelchair (describe how)
5. Adjusting tethers or tray
6. Self-touching, rubbing skin, bunching up and clutching clothing
7. Other

C. IDIOSYNCRATIC BEHAVIOR RITUALS

1. Exhibiting stylized, "ritual" behavior, describe

D. INTERPERSONAL OR GROUP ORIENTED SOCIAL CONTACTS

1. Conversing w/resident or staff
2. Visiting w/visitor
3. Joking
4. Playing table games: bingo, cards
5. Singing
6. Working on puzzle w/another person
7. Looking out window w/another person
8. Wandering w/partner (see preceding wandering category A17; describe pattern for each)
9. Watching as when involved w/another person (see A13)

OBSERVATION CATEGORY SYSTEM

- E. GROUP ORIENTED THERAPY
 - 1. Working on art/craft or project
 - 2. Practice walking
 - 3. Reality orientation group
 - 4. Other motor practice, exercise
 - 5. Speech practice
 - 6. Other, clinically based group

- F. SERVICE OF RESIDENT TO RESIDENT
 - 1. Assist another resident
 - 2. Transport another person
 - 3. Control or adjust room feature (name)
 - 4. Request or demand assistance
 - 5. Fulfill own need (get magazine, etc.)
 - 6. Other

- G. MISCELLANEOUS
 - 1. Threaten
 - 2. Verbalize aggression
 - 3. Strike
 - 4. Embrace (what)
 - 5. Defecate, urinate
 - 6. Cry
 - 7. Call out (Code as C1 if ritualized)
 - 8. Talk to self (Code as C1 if ritualized)
 - 9. Other

- H. STAFF SERVICE
 - 1. Transfer, transport
 - 2. Deliver or retrieve
 - 3. Change patient's position
 - 4. Serve food or snack
 - 5. Control/adjust room features (name)
 - 6. Clean, dust, vacuum, sweep
 - 7. Confer informally re: patient(s)
 - 8. Meet re: patients
 - 9. Other: name

- I. STAFF OTHER
 - 1. Speak together
 - 2. Coffee break
 - 3. Read
 - 4. Other

SITE VISIT INSTRUMENT

FAMILY MEMBERS' AND CAREGIVERS INSIGHTS ON DISORIENTATION AND WANDERING

Note: The following information on names will be kept anonymous in reporting. It is included here only for the purpose of matching information with the correct patient.

Family Member
Name of Caregiver _____
Close Friend

Name of Patient _____

FAMILY MEMBERS' AND CAREGIVERS INSIGHTS ON DISORIENTATION AND WANDERING

Patient code _____
 Family Code(s) _____

1. What is your relationship to this person? (If several persons from one family respond, check all that apply. Fill in numbers if more than one.)

- a. spouse
- b. sister or brother
- c. child
- d. son-in-law/daughter-in-law
- e. other _____
- f. friend
- g. caregiver (private duty nurse)

2. How long have you known this older person?

- | | | | |
|-------|-------|-------|---|
| 1 | 2 | 3 | |
| _____ | _____ | _____ | a. Have known him/her all though his/her life |
| _____ | _____ | _____ | b. Have known him/her through his/her adulthood |
| _____ | _____ | _____ | c. Have known through the last 10 years or more |
| _____ | _____ | _____ | d. Have known through the last 5-9 years |
| _____ | _____ | _____ | e. Have known through the last 2-4 years |
| _____ | _____ | _____ | f. Have known through the last year |
| _____ | _____ | _____ | g. Other _____ |

3. How well do you feel you know this person's lifestyle and habits?

- | | | | |
|-------|-------|-------|------------------|
| 1 | 2 | 3 | |
| _____ | _____ | _____ | a. Very well |
| _____ | _____ | _____ | b. Pretty well |
| _____ | _____ | _____ | c. Not very well |

4. What types of contacts had you maintained with this person before he/she came to the institution? (Check all that apply)

- a. We lived together.
 _____ -For how long prior to institutionalization?
- a. We got together
 _____ -How often?
 _____ -Did (any of) you see him/her in his/her home?
 _____ yes _____ no
- c. We spoke on the phone
 _____ -How often?
- d. We corresponded
- d. Other _____

5. How OFTEN are you able to see him/her now (in the past three months)?

Person 1	Person 2	Person 3
_____	_____	_____

6. What do you do when you visit (check all that apply?)

- a. Sit together; be together
- b. Talk
- c. Go for a walk or wheel (Where: _____)
- d. Go for a drive (Where: _____)
- e. Eat together
- f. Other (i.e., attend church, read, participate in festivities, etc.): _____

7. On the average, about how long are the visits able to last?

8. Do you know whether this person has difficulties in being oriented to his or her present place of residence?

_____ a. No, he/she does not have such difficulties;

_____ b. Yes: Check those that apply.

_____ (1) He/she forgets where he/she is staying

_____ About how long after he/she came did this happen?

_____ (2) He/she seems to be lost in the building

_____ About how long after he/she came did this happen?

_____ (3) He/she seems to forget where places like the bathroom, dining room, chapel or nurses station are located

_____ About how long after he/she came did this happen?

_____ (4) He/she is worried that YOU won't be able to find him/her or is surprised that you could find him/her

_____ About how long after he/she came did this happen?

_____ c. Not sure

9. Do you know this person to wander around, move about a lot or seem unusually restless since he/she has been here?

_____ a. No

_____ b. Yes

_____ (1) He/she has been wandering around

_____ (2) He/she has been moving about a lot

_____ (3) He/she seems unusually restless

_____ c. Don't know

10. As far as you know, did this person ever become lost or seem disoriented prior to being institutionalized?

_____ a. Never did

_____ b. Yes,

_____ About how often? _____

_____ About how long ago did this start? _____

_____ c. Don't know

11. As far as you know, did this person ever wander prior to being institutionalized?

_____ a. Never did

_____ b. Yes,

_____ About how often? _____

_____ About how long ago did this start? _____

_____ c. Don't know

12. Have you received any information, counseling or peer support on....
- a. Memory impairment in elderly people
 - b. Orientation/disorientation
 - c. Wandering

13. Do you currently attend any family group meetings or have special expertise on the care of older people?

- a. No
- b. Yes
 - 1. The institution has family meetings
 - 2. I/we have special training _____
 - 3. I/we have special experience _____
 - 4. I/we belong to an Alzheimer's and Related Disorders Association
 - 5. Other

14. If the individual has a tendency toward wandering or disorientation, turn to the DEMOGRAPHIC PROFILE, starred items.

- a. Not a wanderer, not completed
- b. Not completed because _____
- c. See Demographic Profile/by Caregiver/Family _____

15. If the family member has observed the individual in a wandering episode, complete items I-III Individual Wandering Episodes.

- a. Not a wanderer, not completed
- b. Not completed because _____
- c. See Individual Wandering Episode/by Caregiver/Family _____

FAMILY
8-21

APPENDIX B: SURVEY ADDENDA, SUPPLEMENTAL TABLES AND BACKGROUND DATA

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Table B-1

Computational Basis for Sampling: Initial Estimates

Census HHS Region	State	Number Homes	% for HHS Region	Raw Number To Sample		For Profit		Non Profit		Public	
						Lg	Sm	Lg	Sm	Lg	Sm
North East	Maine	167	25%	21		8	8	2	2	1	0
	New York	507	75%	63		24	24	6	6	2	1
Subtotal		674	100%	84	21%						
South	Virginia	183	48%	50		50	19	5	4	2	1
	Alabama	202	52%	54		54	21	5	5	1	1
Subtotal		385	100%	104	26%						
No. Central	Wisconsin	449	48%	60		23	23	5	5	2	2
	Missouri	479	52%	64		25	25	6	6	1	1
Subtotal		928	100%	124	31%						
West	Colorado	253	59%	52		20	20	5	5	1	1
	Oregon	177	41%	36		14	14	3	3	1	1
Subtotal		430	100%	88	22%						

Table B-2

Responses By State: Frequency and Percent

STATE	SENT		RECEIVED	
	No.	%	No.	%
Maine	37	5.2	15	8.9
New York	111	15.7	23	13.7
Virginia	88	12.4	24	14.3
Alabama	96	13.6	14	8.3
Wisconsin	106	15.0	36	21.4
Missouri	114	16.1	18	10.7
Colorado	92	13.0	23	13.7
Oregon	64	9.0	14	8.9
TOTAL	708	100.0	170	99.9

 $t=8.15; df=7, p=.20$

Table B-3

Frequency and Percentage Distribution of Selected Characteristics of Facilities in the Survey and Their Patients

Characteristic	n	No.	%	Mean	SD	Range
<u>Size</u>						
Nursing Home ^a	170			106.6	86.3	13-800
<u>All Levels of Care</u> 170						
Skilled Nurs'g (SNF)	170	111	65.3			
Intermediate (ICF)	170	140	82.3			
Both SNF + ICF	163	82	50.3			
Hospital (Acute or Psychiatric)	163	5	2.9			
Apartments	163	6	3.7			
Other: Day care, Respite	163	3	1.8			
<u>Facility Location</u>						
	n=170					
City/Urban		54	31.8			
Suburban		34	20.0			
Small Town		58	34.1			
Rural		24	14.1			
<u>Residents' Origins</u>						
	n=170					
City/Urban		66	51.6			
Suburb		39	50.5			
Small Town		76	59.4			
Rural, Country		90	70.3			

Note. Analysis of variance yielded no significant results between states on the basis of size.

Table B-4

Frequency and Percentage Distribution of States and Numbers of Surveys Included in the Sample By Level of Care

STATE	ICF ONLY		SNF+ICF		SNF ONLY		ALL TYPES	
	No.	%	No.	%	No.	%	No.	%
Maine	1	84.6	2	15.4	0		13	100.0
New York	0		11	50.0	11	50.0	22	100.0
Virginia	15	62.5	9	37.5	0		24	100.0
Alabama	1	7.1	13	92.8	0		14	100.0
Wisconsin	10	29.4	21	61.8	3	8.8	34	100.0
Missouri	11	61.1	3	16.7	4	22.2	18	100.0
Colorado	1	4.3	15	65.2	7	30.4	23	99.9
Oregon	5	33.3	8	53.3	2	13.3	15	99.9
TOTAL	54	33.1	82	50.3	27	16.6	163	100.0

Note. Seven missing cases included three hospitals and four non-licensed nursing or boarding homes. Differences were statistically significant using analysis of variance ($F=11.467$; $df=7$; $p=.000$.)

^aIntermediate Care Facilities; fewer hours of staffing.

^bSkilled Care Facilities; more hours of nursing.

Table B-5

APPENDIX TABLES: RATES OF MOVEMENT, DISORIENTATION

Summary Statistics for Rates of Movement and Disorientation
Reported in Percentages (Rate/Institution Size)
Zeros Dropped^c

STATISTIC	TRIED to PACE more ROAM, On			DISORIENTED			
	Leave n	than ave. 153	Move a lot 158	SUBTOTAL 163	Nonwanderer 146	RUNAWAY 128	CONFINE 144 ^a
	All Numbers Represent Percent s ^b						
MEAN	5.5	5.6	8.2	18.5	26.5	3.2	27.8
S.D.	4.4	4.1	7.7	12.5	20.5	2.9	14.6
VARIANCE	0.2	.2	.6	1.6	4.2	0.1	2.1
RANGE	.3-23.1	.7-27.8	.7-61.9	2.0-76.5	.8-85.2	.2-15.4	2.6-50.0
MEDIAN	4.2	4.4	6.2	15.0	23.1	2.2	24.7

Table B-6:

Summary Statistics for Rates of Movement and Disorientation
Reported in Percentages (Rate/Institution Size)
Zeros Dropped, Exceptionally Large Institutions Dropped^d

STATISTIC	TRIED to PACE more ROAM, On			DISORIENTED			
	Leave n	than ave. 152	Move a lot 157	SUBTOTAL 162	Nonwanderer 145	RUNAWAY 127	CONFINE 143 ^a
	All Figures Represent Percent s ^b						
MEAN	5.5	5.6	8.3	18.6	26.7	3.2	27.8
S.D.	4.4	4.1	7.7	12.5	20.5	2.9	14.6
VARIANCE	0.2	.2	.6	1.6	4.2	0.1	2.1
RANGE	.3-23.1	.6-27.8	.7-61.9	2.0-76.5	.8-85.2	.4-15.4	2.6-50.0
MEDIAN	4.2	4.5	6.3	15.1	23.1	2.2	24.7
MISSING CASES	11	16	11	6	23	41	25

^a [(Size of facility) - (Number Runaways)]/Size of Facility. Includes data only for cases that reported at least one person for Tried to Leave and at least one person for Runaway.

^b Raw number supplied by staff members was divided into the present nursing home size (occupancy for skilled + intermediate care).

^c Some respondents had none of a particular type of movement. These figures are reported for all those institutions that had at least one person who exhibited that particular type of movement.

^d Some respondents had none of a particular type of movement. These figures are reported for all those institutions that had at least one person who exhibited that particular type of movement.

Table B-7

Summary Statistics for Rates of Movement and Disorientation
Reported for Raw Numbers All Cases Included

STATISTIC	TRIED to Leave	PACE more than ave.	ROAM, On Move a lot	SUBTOTAL	DISORIENTED Nonwanderer	RUNAWAY	CONFINE
n	170	170	170	170	170	170	144 ^a
MEAN	4.48	4.61	7.49	16.51	22.09	1.97	28.71
S.D.	4.37	4.49	8.59	13.56	22.25	2.79	31.95
VARIANCE	19.08	20.16	73.84	183.93	588.00	7.77	1020.59
RANGE	0-33	0-25	0-60	0-76	0-150	0-30	3.7-331.5
MEDIAN	3.0	3.0	5.0	13.0	15.0	2.0	

Summary Statistics for Rates of Movement and Disorientation
Reported for Raw Numbers Facilities Under 300 Beds, Only

STATISTIC	TRY to Leave	PACE more than ave.	ROAM, Move a lot	SUBTOTAL	DISORIENTED Nonwanderer	RUNAWAY	CONFINE
n	158	153	163	163	146	128	144 ^a
MEAN	4.83	5.12	8.06	17.21	25.70	2.63	28.71
S.D.	4.35	4.45	8.65	13.40	22.3	2.94	31.95
VARIANCE	18.88	19.77	74.87	179.60	591.25	8.61	1020.59
RANGE	1-33	1-25	1-60	2-76	1-150	1-30	3.7-331.5
MEDIAN	4.0	4.0	5.0	13.0	30.0	2.0	20.42

Table B-8

The Consequences of Serious Episodes of Leaving the Facility^a

Question Wording: Has a person's wandering every had serious consequences? (injury, death, dismissal for staff, bad publicity, etc.)

Patient left and he fell-- no injuries
 Serious injury. Once.
 Found wandering on board walk of beach by police. Potential for loss and death by drowning, embarrassing experience. Implication: cannot observe pts. adequately.
 Fell down flight of stairs.
 One lady suffered a fx hip in a fall-- she went to shopping center, fell in parking lot, hip repaired. she expired two years later.
 Fell down stairwell in wheelchair-- injury and sutures to face-- not still here. Expired but not as result of fall. 1 patient transfer to psychiatric hospital; 1 hip fracture due to falling.
 A gentleman wandered into the railroad tracks and was killed. Another wandered into the grounds of the county garage and died of exposure in winter.
 October 1981- Resident wandered outside, was missing, several hours, was admitted to hospital a couple of days for hypothermia. Yes, resident is still here.
 When residents wander some townspeople get a possible negative image of the nursing home. I would say this is moderately serious but rare. The person is still here.
 Wandered into the woods, fell into a ditch, suffered a heart attack and died.
 Patient fell on highway, required stitches in head-- tried to run away.
 Patient left the building and passer-by wheeled her across town. Patient caught cold and recovered. Patient died several years later.
 Fell from wheelchair and was injured. Person still here--no Person lost in cornfield for 24 hours. Publicity not the best. Person still here.
 Severed finger, fractured hips, fractured pelvis, exposure to weather
 1976- man went to local bar, became intoxicated, went into brush with bottle of liquor and died before found.
 Injury
 A new buzzer system had been installed. Patient apparently waited til nurse had made her rounds in early morning and walked out of the door into an ice storm before daylight. Buzzer system malfunctioned. Her absence was discovered within ten minutes, but discovery of the body took several hours due to darkness and weather. This woman had Huntington's disease and was 37 years old. We felt this was a suicide. Previous job. Patient wandered off, found dead two days later from exposure.
 It is always serious if one should wander far enough to be out of view. We are only two blocks from a major highway.
 Pt. wandered away to interstate highway close by--killed by car.
 1. A fall on uneven ground, with bruises and contusions
 2. Lost and couldn't find way back, fearful and anxious
 Wandering, falling, fractures. Person not still here
 Male resident wandered from building. Later found dead of exposure.
 We've had a few falls as a result of wandering
 Fell and received severe laceration. Taken to hospital. Pushed wheelchair down steps.
 Patient was hit by a car and did die. This was approx. six years ago. Also falls out of silo of building.
 Minor injury and death resulted a few weeks later of respiratory distress.
 Injury from falls.
 Falls, family concern
 Several residents have gotten out of building, fallen and required stitches. They are still here.
 One resident was lost for 2 days. Found hiding in woods. Transferred to locked facility and then returned here.
 Other unable to keep because of repeated bus trips downtown.
 Now in adult foster care with unknown results.

Note: A total of 33 replies, all typed out here, was received.

Table B-9

State Variations in Mean Rates of Movement

STATE	n	TRY TO LEAVE Mean Rates	PACE Mean Rates	ROAM in Percents	RUNAWAY (Rank) ^a	INDEX CONFINE	DISORIENTED NONWANDER
Maine	14	6.1	5.9	15.0 (1)	2.4 (4)	30.5	34.6 (1)
New York	23	3.6	3.7	6.0 (6)	1.2 (6)	37.5	33.1 (2)
Virginia	24	4.8	4.3	6.0 (7)	1.9 (5)	31.7	28.2 (3)
Alabama	14	5.2	6.6	7.7 (5)	3.7 (2)	31.5	16.7 (7)
Wisconsin	34	5.5	5.7	7.8 (4)	3.3 (3)	34.4	17.8 (5)
Missouri	18	4.5	4.0	5.0 (8)	1.0 (7)	31.7	22.9 (5)
Colorado	23	7.5	4.3	9.1 (2)	3.8 (1)	29.3	20.8 (4)
Oregon	15	4.3	4.2	9.0 (3)	1.7 (8)	27.9	14.4 (8)
df		7	7	7	7	7	7
F		1.72	1.44	2.85	3.23	.29	2.58
p ^b		.11		.008	.003		.015

^aRanks are listed for those with significant F.

^bSignificance reported when less than .20.

Table B-10

Sponsorship Variations in Mean Rates of Movement and Disorientation

STATE	n	TRY TO LEAVE	PACE	ROAM	RUNAWAY	INDEX CONFINEMENT	DISORIENTED NONWANDER
Mean Rates in Percents							
For Profits	140	5.2	5.1	8.2	2.6	30.8	23.9
Non-Profit	25	4.9	5.3	6.1	1.9	40.6 ^c	21.2
df		163	163	75.8 ^b	44.9 ^b	29.6 ^b	163
t		.35	-.18	1.97	2.15	-1.55	.57
p ^a				.05	.19	.13	

^aSignificance reported when .20 or greater, two-tailed.

^bWhen F statistic is significant, separate variances are used as a basis for computing significance.

^cHigher confinement index means that more fewer people Runaway as a function of those who Try to Leave.

Table B-11

Comparison of High Rates of Movement By State

STATE	Try to Leave		Pace		Roam		SUBTOTAL		Disori- ented		Wander Away	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Maine	1	71.4	1	66.7	6	42.9	2	64.3	2	71.4	1	90.0
Colorado	2	69.6	2	63.6	3	56.5	1	69.6	6	43.5	2	78.9
Missouri	3	62.5	7	37.5	7	35.3	8	35.3	4	56.3	7	45.5
Alabama	4	50.0	4	57.1	1	75.0	3	57.1	7	41.7	3	69.2
Virginia	5	43.5	6	39.1	5	45.8	6	45.8	1	81.8	6	63.2
Oregon	7	38.5	5	42.9	2	66.7	5	46.7	8	30.8	5	63.6
Wisconsin	6	39.4	3	61.3	4	51.5	4	47.1	5	55.2	4	65.5
New York	8	27.3	8	33.3	8	35.0	7	36.4	3	64.7	8	37.5

Table B-12

Factor Structure for Staff Members' Impressions of Causes of Wandering Including "Causes" and "Most Relevant Causes"

Items	Reaction to Stimulation					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Crowding	.735	.054	.014	.093	.051	.191
Pain	.687	.080	.156	-.021	.079	-.201
Curiosity	.646	.039	.087	.348	.292	-.004
Joy of Movement	.641	.038	-.025	.187	.278	.343
Hunger	.542	.469	.069	-.173	-.092	-.159
Medications	.518	.237	.271	-.006	.051	-.032
Frustration	.118	.769	.058	.138	.136	.037
Unhappiness	.231	.730	.090	.112	-.007	.280
Feel Shut-In	.017	.536	.177	.104	.305	.198
Restlessness	-.003	.379	.335	.328	.372	-.200
Disorientation	.072	.068	.823	.075	.055	.250
Newness to Building	.287	.170	.753	.114	-.040	.120
Noise	.291	.199	.402	-.239	.367	-.099
Weather/Full Moon	.103	.107	.007	.723	.120	-.058
Former Jobs/Hobbies	.270	.173	.060	.578	-.402	.209
Mental Impairment	-.039	.012	.485	.510	.209	-.041
Desire Fresh Air	.010	.152	.173	.479	.103	.470
Boredom	.182	.227	.008	.149	.682	.010
React to Family Visit	.198	.033	.087	.032	.612	.294
Desire for Homelife	-.015	.191	.171	-.061	.089	.766
Variance Extracted	25.9%	8.1%	6.8%	6.1%	6.1%	5.5%

Note. The following items from the original checklist were deleted from the factor analysis because they were selected by less than 10% as relevant: old age, genetic factors, financial difficulties and desire to goad staff. Gender was also omitted due to respondents' difficulties in estimating given the preponderance of women in nursing homes (see text). Total variance accounted for = 58.5%.

Table B-13

Factor Structure for Staff Members' Impressions of Most Likely Causes of Wandering (Rotated)

Items	Desiring	Under	Life-	Spatial	Mental
	Stimula- tion Factor 1	lying Emotional Factor 2	Style Factor 3	Orienta- tion Factor 4	Health Explanations Factor 5
Factor Coefficients					
Boredom	.648	.195	-.004	-.000	.145
Restlessness	.640	-.108	-.095	.049	.003
Curiosity	.610	.165	.366	.143	-.069
Joy of Movement	.580	.142	.097	.107	.026
Unhappiness	.245	.803	.160	-.052	-.112
Feel Shut-in	.113	.577	.137	.113	.192
Desire for Homelife	-.335	.562	.179	.227	-.216
Frustration	.214	.499	-.115	.345	.055
Former Jobs/Hobbies	.063	-.054	.654	.251	-.250
Medications	.259	.160	.637	-.003	.141
Reaction to Family Visits	-.258	.287	.633	.013	.141
Disorientation	.076	.154	.018	.816	.062
Newness to Building	.096	.082	.200	.772	.079
Mental Impairment	.006	.061	-.186	.085	.759
Weather/Full Moon	.125	-.067	.354	.071	.716
Variance Extracted	20.4%	11.1%	8.6%	8.0%	7.1%

Note. The following items from the original checklist were deleted from the factor analysis because they were selected by less than 10% as relevant: Pain, noise, crowding, hunger, fresh air, old age, genetic factors, financial difficulties and desire to goad staff. Gender was also omitted due to respondents' difficulties in estimating given the preponderance of women in nursing homes (see text). Total variance extracted = 55.2%.

Table B-14

Comparison of High Rates of Movement By Building Shape;
Percents and Ranks

Building Shape	No.	Try to Leave		Pace		Roam		SUBTOTAL		Disori- ented		Wander Away		
		%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	
Bar	12	7.9	1	66.7	2	58.3	3.5	50.0	1	66.7	4	60.0	3	71.4
L	18	11.8	2	55.6	7	35.3	8	35.3	6	44.4	3	62.5	4	69.2
Odd	42	27.6	3	54.8	4	51.3	1	60.5	2	58.1	7	53.7	5	61.5
T	30	19.7	4.5	50.0	3	53.3	3.5	50.0	4	48.4	5	57.1	6	60.9
H	22	14.1	8	31.8	6	47.6	7	31.8	8	31.8	2	61.9	2	76.5
+	12	7.9	7	33.3	1	69.2	2	57.1	5	46.7	6	54.5	1	81.8
Square	8	5.3	4.5	50.0	5	50.0	5.5	42.9	3	50.0	8	40.0	7	50.0
U	7	4.6	6	42.9	8	28.0	5.5	42.9	7	42.9	1	71.4	8	33.3

Note. Facilities with rates of movement above the mean were included in this analysis. No statistically significant differences.

Table B-15

Factor Analytic Reduction of All Wandering Interventions and Policies
Using Principle Components Extraction, Varimax Rotation

	Eval & Range Group	Contri. & Cue Fac 2	Spaces Fac 3	Tolerance Fac 4	Re-strict Fac 5	Train Not to Wander Fac 6	Facil. to Mobl-ity Fac 7	Room Dec- orate Fac 8	Con- vntl Hosp Fac 9
	Fac 1	Fac 2	Fac 3	Fac 4	Fac 5	Fac 6	Fac 7	Fac 8	Fac 9
	F A C T O R L O A D I N G S								
1. EVALUATION & GROUP WORK									
R.O., Remot ^a	.759	-.133	-.169	-.107	.006	-.075	-.092	.060	.145
Assign to R.O. Grp	.744	.067	.014	.043	.022	-.053	.149	.066	-.042
Special Evaluatn	.495	-.015	.138	.262	-.110	.198	.082	.020	-.101
2. CONTROL RANGE									
Half Doors ^b	.056	.709	.173	.133	.073	-.105	-.150	-.084	-.006
Confine Range ^b	-.193	.696	-.198	-.026	.025	-.122	.128	.133	-.071
Locked Unit ^b	.033	.655	-.042	-.122	-.155	.208	-.020	.060	-.038
3. SIGNALS & SPECIAL SPACES OR CUES									
Elevator Buzzers ^b	-.169	-.106	.682	-.148	-.170	-.133	.071	-.134	.017
Monitoring Techn. ^b	-.093	-.031	.677	-.025	.288	-.082	-.014	.124	-.176
Special Room	.260	.350	.559	.127	-.089	-.034	-.082	-.058	.297
Color Code Halls	.227	-.052	.519	-.095	-.062	.413	.026	.265	-.020
4. TOLERANCE WITHIN LIMITS									
Let People Wander	-.046	.063	-.029	.736	-.076	.010	.073	-.087	.180
Use Door Buzzers	.114	-.191	-.161	.612	.065	-.077	-.234	.133	-.144
Have No Policy	-.239	-.112	-.023	-.516	-.156	-.384	-.084	.293	.029
Courtyards	-.265	.252	-.010	.330	-.133	.232	.307	.174	-.221
5. MEDICATE TO STOP WANDERING									
Meds to Stop Wndg ^b	.044	-.063	.015	-.143	.769	.233	.019	.133	-.058
Restrict Movement	-.086	.002	-.009	.108	.767	-.075	.135	-.071	.120
6. MODIFY BEHAVIOR, RETRAIN									
Trn. Not to Wand ^d	-.061	-.030	-.148	.081	.106	.773	-.009	-.038	.085
7. FACILITATE MOBILITY									
Use Door Numbers	-.015	.028	.046	-.131	.290	-.201	.657	-.045	.062
Door Name Plates	.261	-.132	-.038	.117	-.004	.143	.620	-.031	-.032
Take for Walks	-.123	.098	.109	-.189	-.309	.308	.367	.202	.037
8. DECORATE BEDROOM DISTINCTIVELY									
Color Code Bdrm	-.028	-.035	.138	.177	.031	.017	-.121	.766	-.036
Spc'l Door Decor'n	.247	.175	-.140	-.045	.013	-.021	.146	.585	.164
9. TRADITIONAL MEDICAL CARE									
Slippers not Shoes	.057	-.004	.027	-.124	.008	.325	-.238	.044	.680
Maps	-.049	-.122	-.070	.178	.071	-.144	.281	.071	.645
<hr/>									
Percent Variance ^a	9.0	8.2	7.5	6.8	6.0	5.7	5.3	5.0	4.7

^a A total of 58.2% of the variance was accounted for by the 9 factors.

^b These items have a low response rate, generally under 15%.

^c Total of 58.2% of variance accounted for.

^d Full wording, "train people not to wander, behavior modification, etc."

Table B-16

Factor Analysis of Interventions: CUES
Using Principle Components Analysis, Varimax Rotation

CUE VARIABLES	DISTINCTIVE FEATURES		
	IDEOGRAPHS	MAPS	
Rotated Factor Loadings			
Nameplates	.775	.166	-.130
Door numbers	.764	-.179	.141
Color coding bedroom doors	-.147	.691	-.156
Door decorations	.117	.668	.148
Maps	.155	.286	.754
Color coding hallways	.170	.345	-.692
Variance Accounted For ^a	21.9	20.5	17.4

^aTotal variance accounted for = 59.8 for all three factors extracted which had Eigen values greater than 1.0

Table B-17

Factor Analysis of Interventions: RESTRAINTS AND CONTROLS
Using Principle Components Analysis and Varimax Rotation

RESTRAINT/CONFINEMENT VARIABLES	SIGNALS	POSITIONERS	RANGE CONFINE- MENT	RANGE CONTROLS
	Rotated Factor Loadings			
Elevator buzzers	.798	-.098	-.002	-.055
Signal systems, Kno-Go	.759	.007	-.105	.110
Geriatric Wheelchair	-.003	.754	-.256	-.021
Body holders	-.078	.727	.125	-.096
Locked wards	-.116	-.143	.829	.003
Slippers not shoes	-.166	.177	-.080	-.658
Buzzers	-.383	-.052	-.373	-.596
Courtyards	.010	.321	.489	.536
Variance Accounted For ^a	18.5	16.3	13.9	13.0

^aTotal variance accounted for =61.7% for all four extracted factors, each with Eigen values of 1.0 or greater.

Table B-18

Factor Analysis of Interventions: PROGRAMS Including LETTING PEOPLE
WANDER WITH SURVEILLANCE

PROGRAM TYPES	PROGRAM			
	SPECIALIZED Factor 1	DIVERSION Factor 2	BENIGN Factor 3	PRACTICE ORIENTED Factor 4
Rotated Factor Loadings				
Making Special Evaluations	.694	.090	.084	.115
Special Room	.691	-.178	.049	-.053
Self-Developed Methods	.094	.701	.016	-.174
Name bracelets	.157	-.468	-.020	-.173
Train Not to Wander/Beh. Mod.	-.084	.448	.428	.431
Policy of Letting Pp. Wander	.255	.079	.804	.178
Reality Orientn/Remot. Group	.430	.439	-.507	.177
Take People on Walks	.112	-.040	-.107	.861
Variance Accounted For ^a	16.7	14.8%	13.3%	12.7%

^aTotal variance for all four factors= 57.5% each with Eigen values greater than 1.0.

Table B-19

Factor Analysis of Interventions: PROGRAMS
 Excluding LETTING PEOPLE WANDER WITH SURVEILLANCE
 Principle Components Analysis, Varimax Rotation

PROGRAM TYPES	SPECIALIZED	ATTENTION & ACTIVITY	RETRAIN & WALKS
	Factor 1	Factor 2	Factor 3
Rotated Factor Loadings			
Special Room	.745	-.057	-.138
Make Special Evaluation	.686	.172	.201
Self-Developed Methods	-.094	.748	.127
Reality Orientation/Remotv.	.304	.652	-.165
Train Not to Wander/Beh. Mod.	-.150	.236	.738
Take People on Walks	.190	-.245	.693
Variance Accounted For ^a	21.4	18.9%	17.1%

^aTotal variance for all four factors= 54.5% each with Eigen values greater than 1.0.

APPENDIX B: INSTITUTIONAL VARIABLES AND THE USE OF INTERVENTIONS

A number of comparisons were made of nursing home background variables and the use of specific interventions and intervention types (i.e., cues, range controls/restraints, and programs). Many of these findings bordered on statistical significance and therefore may be of interest to researchers planning future institutional surveys and/or follow-up studies of wandering.

Staff Tenure. Staff tenure was not significantly associated with the interventions used. Typically, the director of nursing would have a voice in the use of restraints, so it was possible that those with more experience might have implemented different policies than those newer to the job. There was a trend for staff respondents of three to four years tenure as compared with those who were newer to or longer on the job to be more likely to use restraints and to be significantly more likely to cite body holders as the best method of dealing with wandering ($df=3$; $\chi^2=11.08$; $p=.01$).

Sponsorship. In general, there were no differences between non-profit and for profit facilities with regard to interventions used. This would run counter to the expectations of some critics who perceive for profit facilities as allocating fewer resources to services than the non-profit nursing homes do and therefore more likely to substitute technology for more costly human services. For profit facilities were as likely to use body holders as were the non-profit or church sponsored nursing homes.

However, staff from non-profit sponsorship had distinctive views of geriatric wheelchairs as compared with those from for profit nursing homes. None of the respondents from non-profit homes thought that geriatric wheelchairs were the best method, whereas 22% of the for profit homes favored them ($df=1$, $\chi^2=4.63$; $p=.031$).

Facility Location. Rural respondents were more likely than others to select body holders as the best intervention ($\chi^2=7.55$; $df=3$; $p=.05$).

State Variations. There was a trend toward state differences in policies toward uses of restraint. About two-thirds of the respondents from Oregon and from Missouri report using geriatric wheelchairs as a policy, contrasted with lows of 25% and 30% for nursing homes from Wisconsin and New York, respectively. Proportions of geriatric wheelchair use as a policy for the other states ranged from 36% to 47%. ($df=7$; $\chi^2=10.94$, $p=.141$).

There were different patterns among nursing homes from the eight states studied according to the numbers of cueing devices used. Oregon and Colorado nursing homes responding to the survey reported more cues than the average; New York, Virginia and Missouri nursing homes reported fewer cues ($F=2.07$; $p=.04$; $df=7$). This may reflect differences in local fire ordinances where some institutions are discouraged from using flammable decorations and forego many personal identifiers as a means of compliance. There were no state variations in terms of the numbers of controlling devices or restraints used. There was a trend for Wisconsin nursing homes to report more programs as contrasted with Virginia, Colorado and Missouri nursing homes which reported fewer ($F=1.85$;

$p=.081$; $df=7$). All of these variations were analyzed in terms of covariance with size; size did not have an interaction effect with state on any of these variables.

Patterns for the state differences seem to reflect slight differences in practices, but not in beliefs: there were no differences between the nursing homes of the eight different states according to the cues, controls or programs that were judged to be best.

Levels of Care. Each of the specific interventions was analyzed according to whether the facility was certified as a Skilled Nursing Home (more care), both Skilled and Intermediate Care, or Intermediate Care only (fewer staff). There were no differences in the numbers of cues or programs used in the three types of facilities. There was a trend for Intermediate Care Facilities to use fewer restraints than did the nursing homes certified as mixed level (ICF/SNF) or Skilled Care only.

As for specific interventions, Skilled Care only nursing homes were more likely to have courtyards and use name bracelets ($r=.256$; $p=.001$ and $r=.211$; $p=.008$, respectively). Some of the findings are noteworthy because there were not statistically significant; there were no differences in uses of the restraining devices, reality orientation groups or exit buzzer systems on the basis of licensure.

Admission Policies and Interventions. The use of interventions bore little statistical relationship to admission policies. Institutions with formal policies of admitting wanderers are not more nor less likely to use many cues, restraints or programs.

Relationship Between Policy and Practice. Nearly three-fourths of the institutions that "Let People Wander..." as a policy use geriatric wheelchairs (compared with 48% who do not have such a policy. However, the use of body holders is lower in the facilities that Let People Wander (22.3% vs. 48.3%; differences statistically significant at the .02 level; $df=2$, $\chi^2=8.29$). It is possible that policies of letting people wander and of using restraining devices co-exist. This may indicate that different strategies are adopted according to the individual or situation or that practices are inconsistent across shifts or days (varying with adequacy of supervision).

Having no administrative policy toward wandering correlated with having fewer programs ($r=-.292$; $p=.000$). This may reflect the fact that some administrative policies are restrictive or authorize protective measures to the exclusion of therapeutic activities. (See procedure in Appendix D.)

*Institutions with policies of keeping people medicated were also more likely to have policies of keeping people from moving. In practice, this most often involved the use of body holders; no significant relationship was found between keeping people medicated to deal with wandering and uses of the geriatric wheelchair. The numbers with a policy of keeping people medicated ($n=22$) are small. While that finding may be encouraging, this also may indicate that this survey does not represent the norm for nursing homes which are typified as overmedicating (Green, 1978). But presume the 22 facilities (13%) were representative of the population of nursing homes, 13% of the total population of 18,500 U.S. nursing homes (including those with and

without licenses) would indicate that over 2,000 are characterized by heavy restraint policies.

*The policy of "letting people wander" was not associated with taking people on walks nor with the use of courtyards, suggesting that letting people wander is not a proactive intervention . Taking people for walks may require more staff involvement than letting them wander. These cross-tabulations also suggest that people are perhaps wandering inside rather than outdoors in courtyards. One wonders how mentally stimulating this would be.

A third (39.9%) of the institutions have a policy of confining people who wander using restraints, geriatric wheelchairs, etc. Compare this to the fact that 51.4% of those with a policy of keeping people from moving using a geriatric wheelchair also reported using geriatric wheelchairs in practice. While this represents twice the rate of non-geriatric wheelchair use for those that have a policy of Restricting people's movement, it also points out that there are many methods of restraint. Why would use of restraints be more common than having an administrative policy toward using them? Write-in comments suggest that staff members may have misgivings about restraining. To formalize the approach by making a policy would run counter to the widely disseminated goals of individualized care plans.

Management Philosophies and Use of Interventions

Are specific management approaches associated with the use of different intervention techniques? One idealized concept of management would have a philosophy which translates into practice. There was a

slight but interesting connection which emerged from these data to support such reasoning .

*There is a slight association between the stated objective of keeping people comfortable and using body holders/restraints ($r=.123$; $p=.114$).

*A low but significant correlation exists between the use of medications and the objective of "keeping people comfortable," --the objective previously described as a way of characterizing custodial care.

*Slight correlations, bordering on statistical significance were also found with the objective of "keeping people comfortable" and restricting movement using the geriatric wheelchair and confining movement using locked wards and gates.

It appears that institutions that confine and restrain are operating out of a sense of "best interest" for their clients. We should not assume that such sentiments do not exist among those who emphasize rehabilitation; but it is interesting that as the approach becomes more proactive, the correlations with use of restrictions are consistently lower. There were no differences in the Maintenance nor Rehabilitation factor scores for those institutions which did or did not use restraints (using analysis of variance techniques).

*Specific and Diverse interventions (i.e., reality orientation and the use of door decorations) show a low but positive and significant

relationship with a Rehabilitation orientation toward clients ($r=.170$; $p=.029$).

*In contrast, there is a trend for institutions that are more Custodial/Maintenance Oriented (which includes this philosophy of keeping people comfortable) to be less likely to offer Specific and Diverse interventions ($r=-.121$, $p=.151$).

There other slight differences between Maintenance and Rehabilitation oriented nursing homes; they do not reach statistical significance, but they do suggest that what institutions are doing is not wholly independent of policy. It is interesting to reflect that it is typically management that attends workshops and conferences on issues of care, but the workers on the job are responsible for many interventions. It is possible that gaps in policy and practice reflect some loss of information between policy makers and practitioners.

Implications

Sampling for future studies may specifically address some of the issues raised (such as possible state differences or distinctions in interventions based upon management orientation). Or, stratified sampling might be conducted to minimize the complications possible from some of these topics as moderator variables. Stratified sampling would be particularly appropriate where studies were to be made using small numbers of institutions or where the phenomenon like wandering, is scarce and requires many institution be contacted in order to obtain a meaningful sample size.

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Observations of Wanderers

The following is a synopsis of observations for two wanderers to give a sense of the behavior manifested. Both are described by staff members as "chronic wanderers". Each has been wandering for more than a year. The first has much wider range and is under age 70. The second is in her eighties, has a narrower range and is described as "lost". Both observations help demonstrate staff members' dilemmas over whether wanderers are disoriented or not because each has a sense of presence and a sense of unreality.

Observation of Mr. Bee

It is 8:15 a.m., just after breakfast. Some people are still in the dining room. Some are lined up in front of the nurses' station (apparently awaiting assistance with the toilet or bathing). Staff can be heard speaking with residents in an adjacent toilet facility. It is crowded but not noisy.

Mr. Bee leaves the dining room, walks briskly past residents in wheelchairs and goes right up to the first staff member (uniformed person). It is a man who sweeps the floors. Mr. Bee asks, "what do I do now?" The maintenance man (young) replies, "you can stay here or you can go to the parlor. You can go to your room. You can go back to the dining room-- not everyone is finished."

Mr. Bee thanks him, and walks from the dining room down the hall toward the parlor. He spoke very clearly and walks with great sense of purpose. As he walks toward me, I am aware of several mannerisms (nervous habits?). He shows his teeth, flicks his fingers as though snapping them and missing, right hand only.

Suddenly, turns heels. Goes back to maintenance man. "Are you cleaning the floors?" Maintenance man replies, "yes". Mr. Bee walks past, quickly. Maintenance man stops sweeping and points to the parlor.

8:17

Mr. Bee walks toward the parlor, alone. He goes in, turns on the television without hesitation. (I sit at a table and take out some paper work, partially facing him.) His back is to me.

OBSERVATIONS

8:18

He goes to great effort to move a heavy chair closer to the television. Then suddenly, leaves.

8:19

He has gone down hall to the congested area, stopped part way and turns to the elevator. Waits in front of elevator for seconds (it doesn't open). Turns back toward parlor.

8:20

Mr. Bee enters the parlor, sits. Drums fingers on arm of chair, faces tv. Maintenance man enters parlor (tv is blaring, he turns it down), "it's too loud". No words from Mr. Bee.

Mr. Bee stands and leaves. Sees me. Asks me if I am from Chicago. "No", I reply that my parents are. (Suddenly, I realize that the talk on the television has been about something in Chicago.) He re-enters the room and sits.

8:21

Stands and leaves.

8:30

He returns, sits, crosses legs. Uncrosses legs. Pats lap. Smiles (or shows teeth) at tv. Uncrosses crossed leg. Looks at his hands as if they are new. Stands up. Walks more slowly up hall.

8:32

He asks first person he sees, "taking a walk?" --Very amiably. The resident he passes does not appear to respond. He keeps going, moves at a steady but slower clip.

8:35

Mr. Bee encounters a nurse. "What should I be doing?" She holds his arm gently, turns him toward parlor. "Go watch tv." She accompanies him to the parlor. He asks me, "did you get any work done?" I reply yes. He pauses. Eyes me as though to say something else and then sits again.

8:40

Sits in front of TV, crosses and uncrosses his legs. Smacks lips. Moves eyes. Shifts position by lifting himself up on his arms. More leg crossing. Flips loafers on and off. Bounces leg. Looks at TV. Raises and lowers self.

OBSERVATIONS

8:41

Shifts his pants. Rubs chin. Gets up, walks down hall. Hands now more relaxed and at sides. Stops as he sees single individuals, greets, "good morning", "how do you do today". Ignores anyone sitting. Looks left and right at doors (like they were intersections). Arrives at nurses' station, peers in. Stops there, leans on window.

8:42

Gets a staff member's attention (she was charting, separated by glass, right in front of him). Waves at her, says, "hello"--almost boyish.

8:43

Ambles down far end of hall. Encounters staff member working at a medicine cart but passes by. Now does not look left or right (this part of hall darker).

8:44

Walks, hands in pocket, shifts pants. Again. Stops.

8:45

Still walking and appears to smile or show teeth.

8:46

Comes to cleaning cart, looks at it but keeps going. Slow now. Shakes head. Says hello to staff member in bedroom making bed.

8:47

Back to tv lounge, holds back of chair, stands. Readjusts chair. Sits in front of television.

Note: Mr. Bee was later approached for an interview. When I asked him where the office was, he stared hard at me, as though trying to make up his mind about something or listening for more. Then, smiling, looked up the hall as though discovering for himself. Surprised, he replied, "why, it's right there." He put his arm around my shoulders and guided me directly to it and to a nurse.

APPENDIX
OBSERVATION OF WANDERERObservation of Mrs. Lowe

It is 8:50 a.m. Mrs. Lowe is in front of the nurses' station. It is crowded and she is the center of attention for those who are watching. There are 10 people around, six have heads bowed, two mumble to themselves. All but her are in wheelchairs, most restrained. She is well dressed and groomed, dark lipstick. She goes from person to person, "are you going to the fair?" Woman 1 doesn't answer. Woman 2 looks up, smiles. Woman 3 hits at her, she is indignant, "I just asked" Woman 3 curses, repeats.

8:53

To no one. "I want to go." "You've got to have good working to go." (Sic) Stands still near three women, looks at me. I am standing next to a wall, trying to look as though I'm waiting for someone to arrive on the elevator and writing as I wait.

8:55

She leans forward and speaks to Woman 4. "Where is it." Woman 4, "Winston Salem". She goes to a housekeeper working at a cart. "Will you go?". "No, I have to work here."

8:58

Mrs. Lowe approaches another Mrs. Fife "Do we sit? Shall we sit? I think it is afternoon. I think we should go down there."

8:59

Looks directly at me, points to a nourishment kitchen cupboard. "Get me a cup" (she is short and may not be able to reach; I think it is locked). I am deciding what to do and she turns around and shuffles slowly toward the bathroom (opposite direction).

Very small steps. Much energy and so little distance. She sees a toilet and turns back. "There's someone in there" (there is, in another stall down the line).

Staff member emerges, asks Woman 4 if she wants to be changed for the fair. Helps her up, vacating a chair.

Mrs. Lowe quickly takes the chair. "If it were up to me, I wouldn't go to the fair." Gets up. "Are you going to the fair (to Woman 2)". Suddenly, across from her someone (woman 7?) shouts, "shut up".

9:00

Mrs. Lowe goes to Mrs Fife. Mrs. Fife very graciously extends hands, smiling broadly. They shake hands, bow heads to each other. Mrs. Fife says nothing, but regally smiles.

OBSERVATIONS

Mrs. Lowe moves vacant chair to Mrs. Fife Mrs. Fife seems frozen with smile, then slowly drops head to lap as if to sleep.

9:01

Mrs. Lowe whispers to herself, still about fair.

Staff member comes, takes her by the hand. She beams. They walk to bathroom. They are in bathroom behind a curtain. I can hear conversation. They discuss dolls, (the kinds they have at fairs).

The sounds echo. Suddenly, someone (Woman 7) seems to think there are dogs. She yells to quiet the dogs.

9:02 END

APPENDIX
OBSERVATIONSObservation of Residents on a Unit Where Wanderers Live

9:06

Fourteen women were seated or standing at the nurses' station. Seven were in wheelchairs (none in geriatric wheelchairs). Most were restrained. It is following breakfast, housekeeping staff members are changing sheets and straightening rooms. Nursing assistants and nurses are helping people to toilets (across from nursing stations, where it is more efficient than in those in the bedrooms).

Mrs. Flower sits across from the nurses' station, clicking her teeth, nodding, speaking in German.

Mrs. Pan. translates, turns to me, explains that she thinks I look like her daughter.

Mrs. Holly scream-groans, sounds like chicken.

Mrs. L. walks, holds a travel pamphlet.

Mrs. I. sleeps, slumped in chair.

Mrs. L. walks, look on face is angry. Breaks into smile when she encounters floor sweeper who asks her about her pamphlet. "What have you got there?" She shows him. He studies it. "Nice. I could go for it." She nods.

Staff A-1 walks by, returns with a coverlet for one woman's legs.

Two sleep in chairs.

Mrs. Pan. wheels up to one sleeping woman, shouts, "come on, you just like it. Visit. Visit." (very agitated and angry toward the woman) The woman was sleeping, looks up rather dazed.

Mrs. Spring comes out of bathroom shouting, "Which one of these is it?" She wheels herself. To self "well it's the oldest". (She seems to be picking up phrases from some other conversation overheard in the bathroom.) Wheels herself away and into a woman seated in the hall. (We hear a man calling out down the hall.) Mrs. Spring puffs out her cheeks and berates the woman she has run into. The woman tries to move her legs, surprised.

Mrs. Pan. still chiding groggy one.

Mrs. Holly scream groans again.

Staff A-2 whisks away one from the line up.

Mrs. L. stops Staff Two and shows her the travel pamphlet. They speak about it.

9:17

Mrs. Spring still shouting epithets is wheeled away by Staff Two.

Staff Two stops to explain to me that Mrs. L. loves catalogs and pamphlets, especially those that "scratch and smell". Staff collect them for her.

Mrs. Pan. continues to chide groggy one, "come on" "you were always that way" "why, will you tell me". (Staff Two explained later that Mrs. P. did not know this woman, but has conversations from her "own world" at different times during the day, even though she can also be quite alert.)

Mrs. Holly scream groans again.

9:20 END

OBSERVATIONS

Observation on Residents on Unit Where Wandering is Exceptional

8:50 a.m.

Mr. Vine, alleged wanderer, sleeps in clothes on bed.

Mr. Bee walks alone, up and down hall. Stopping staff and asking questions.

Mrs. Spring holds hand of another woman and they walk together up and down hall. Mrs. Spring carries a purse. They go into a room, it may be a wrong one, because they then go into another.

Mrs. Spring now walks alone. Other woman emerges and follows her, at a distance. She stops and waits for companion to catch up. They walk up and down hall slowly, together. Most other residents are in their rooms or in the dining room.

Mr. Bee still up and down hall.

Mrs. Spring takes her companion into the restrooms across from the nurses' station. She attempts to use an occupied stall. Staff member advises her to move to the next one and to shut the curtain (which functions like a door). Her companion waits in the doorway, appearing lost.

She comes out, grabs companion's hand and they go to a nourishment room. Mrs. Spring, loud and angry, "Who the hell locked this door?" She rattles the door, then takes her companion on to another door. She sees an open cupboard door, drops companion who stands a few feet away. Mrs. Spring takes cups from the cupboard, runs herself some water and makes conspiratorial face at companion who just stands. Mrs. Spring starts asking for cookies (there are not visible staff).

Mrs. Spring sees a maintenance man, "Someone locked this door," she reports, "and I haven't got a chair." He looks at his keys and says, "I haven't got that one, ask a nurse." (He winks at me, as though he does have a key.)

He brings a chair.

Mrs. Spring walks up to a woman, Mrs. Camille, who is wheeling out of the dining room, offers her hand in greeting. They smile. Her companion stands in the hall, watching, as though afraid to move. Mrs. Camille says, "you're not so cold" (possibly referring to Mrs. Spring's hands).

Mrs. Spring walks as Mrs. Camille wheels. Former companion still standing and looks after them.

Mrs. Spring comes back, takes companion's arm. Nursing assistant urges them to go to the solarium to watch television. They start walking.

The "wanderers" are the only ones moving. Mr. Bee is still walking back up and down the halls. The others are in rooms, in dining room, just sitting and staring (some at blank tables), in bathroom, and one is at the door, looking out.

Wanderers from Their Family's Views

Family members' may have special knowledge of older people owing to their perspective of the individual's lifestyle and habits over many years. Not as many family interviews as hoped resulted from this portion of the research. This was in part due to the difficulties in contacting families, in part due to the distance some family members had or felt from the older person ("I'd like to help, but I haven't really spent much time with her in the last forty years."), and in part because some of the questions were difficult for families to focus on. In general, families seemed more attuned to the mental status of their elders while staff members (perhaps having no history to go on) were more aware of physical motions and patterns of behavior that might be more immediately observable relative to one's peers.

Synopses of some of the particularly helpful family interviews follow.

Mrs. Ides From Her Son's Point of View

Mr. Ides is a professional in health care himself. He feels that his mother has Alzheimer's disease and commented that her behavior is very frustrating. He recalls her one way and she is just not that way any more. He knows she will only get worse and this troubles him. Even as a professional, he struggles with the question of when her wandering started. She lived in an apartment for nearly ten years prior to coming to the nursing home. She couldn't carry out what she said she would do, and so they felt she needed a more supervised environment. She had lived alone for 20 years and it was difficult to know when things started because no one saw her at home.

When asked, "do you know her to wander around, move about a lot or seem unusually restless since she's been at the Home," he replied, "Yes, she seems restless. She cannot get up and do things when they occur to her. This is frustrating." As far as he knows, she never wandered prior to coming to the nursing home. But, he recants. "She used to walk intentionally with her dog. He knew the way. Perhaps she was having a problem and found a way to solve it."

FAMILY INTERVIEW

Staff members have been very concerned about her rummaging. He doesn't see, know or indicate he is aware of that type of behavior. "She used to collect, everything. She had much bricka-brack." He feels his mother is frustrated because she cannot do as much as she once did. When he visits, they talk. She does not always recognize him. They do still enjoy rides together.

He lives at a distance and used to attend the family support group that meets in the home, but he found it was a long trip and he was not finding help for the very specific questions he had about his mother. He muses that there may be no answers.

FAMILY INTERVIEW

Mrs. Holly As Described by A Long-Time Friend

Mrs. Holly's friend gave this interview. She has known Mrs. Holly for over twenty years and guesses she's as close to kin as Mrs. Holly has any more. The friend never knew her to wander. She engaged in an average amount of activity and was not interested in sports but liked the outside only to fulfill the obligatory gardening. The friend did not believe Mrs. Holly works much with her hands. She has not worked in sixty years and does not communicate nor participate much. Mrs. Holly, says the friend, does not know where she is. She seems content, except she wants a few things from her home that are no longer there. Mrs. Holly is not one to let off steam. During their visits, they usually sit outside in the courtyard garden. The friend doesn't characterize Mrs. Holly as moving much; "I don't see how she could, being in a wheelchair."

FAMILY INTERVIEW

Mr. Bee's wife is in a another retirement community. (This campus has no housing; the one she is at will not accept her husband in health care.) She indicated that her strength is not good. She seems sad as she characterized her husband. "He does not speak or express anger. He doesn't talk much any more." In his former work and home life he was not one to walk much and she never knew him to pace when making up his mind. She does not believe him to be a wandering type person nor one who paces now. "I like to see him walk. What else is there for him to do?" It's true, she said, that he does not know where he's going. "He used to get lost at the Home, but the last few weeks, it's been better. He's not getting up at night as much. He can sleep better." She never knew him to have problems with directions.

She described conversations with him where he told her of trying to read the newspaper. "In the last few weeks, he says he's been able to read longer." She is very pleased about this. She does believe he has a problem with paying attention and following through.

"I have no idea when this started. He did get lost for two weeks before his 'episode'." The episode is apparently a lapse in memory which resulted in the sponsor of the retirement community referring him to a hospital. She either doesn't know more, or preferred not to speak of it. "In the hospital he was walking a lot, they talked about it there. But, it started out to be the other way. He was sleeping all the time. When we saw him walking, it was a good thing. But, he either slept or paced. Neither choice made staff too happy."

Mrs. Bee is pleased that he "seems to try to deal with his attention problem now by watching television."

She cannot visit him much any more. She is dependent on a daughter to get them together. When the daughter comes, "we all walk a lot" or they take him out for a milkshake. She does not like the support group, "I don't want to sit for two hours in a meeting. What can you learn from a meeting?" She prefers to speak on the phone with a friend facing some "troublesome times" with her own spouse.

FAMILY INTERVIEW

A Pacing Wanderer, From the Point of View of a Spouse.

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Mrs. Bee is pleased that he "seems to try to deal with his attention problem now by watching television."

She cannot visit him much any more. She is dependent on a daughter to get transportation to see her husband. Consequently, her husband sees them together. When the daughter comes, "we all walk a lot" or they take him out for a milkshake. She does not like the support group, "I don't want to sit for two hours in a meeting. What can you learn from a meeting?" She prefers to speak on the phone with a friend facing some "troublesome times" with her own spouse.

Daughter's View of Her Mother's Wandering

Mrs. Grand's daughter (Mrs. Good) keeps up on the latest research and wants the best available for her mother. She feels that a cure is at hand for Alzheimer's disease and spends much time, energy and money to contact those written up in newspapers who show promise. She is trying to get her mother into any type of experimental program for drugs or a brain pump that would alleviate her present memory losses.

Mrs. Grand's daughter can date the onset of the memory losses but is unsure about the wandering. The memory onset was marked by symptoms of fear, anxiety, sleep disturbances and an obsession with orderliness. Mrs.'s Grand's husband (a recent, second husband) raised questions about these changes in phone conversations with Mrs. Good.

When the incidents turned into a "pattern lasting a month straight", Mrs. Good traveled to the distant city where her mother was and brought her home to live with her. For two years a psychotherapist treated the anxiety. Mrs. Good found her mother to be so much improved that the mother could fly home alone. For one year, Mrs. Grand was back to herself. She shopped alone, played table games in groups, and slept well.

Then, Mrs. Grand developed a sudden fear of being kidnapped. She couldn't sleep, could sit for only seconds at a time, and could not maintain anything about the house. She entered the nursing home as a restless woman. They brought in their own chiropractor to give vitamin treatments because they seemed to help comfort Mrs. Grand.

Mrs. Grand had always expressed herself clearly and well. She had been a worrier, had had a hard life, and that worrying persists.

During their visits now, Mrs. Good says they do a lot that involves touching because her talking is so garbled. "To try and stimulate her thinking is almost useless unless she initiates a conversation. I go with her thoughts rather than bringing her around to mine but she cannot complete something that she herself has brought up. She used to have a good mind, but where is it now? When we visit, we often talk while she leads the way, walking up and down the hall. Mother tears things, stacks them and 'gathers' things, some of which are not hers. I ask her why. She doesn't need these things. She looks at me, hurt and surprised. I don't think she herself knows why. She even says she doesn't do it while she's in the act." She was an avid card player, played twenty cards of bingo at once, and was a good dancer.

Mrs. Good does not attend any support groups because she does not feel she has a problem. "Support groups are for people who cannot accept what is happening. I do not have a problem dealing with it."

FAMILY INTERVIEW

Family of A Non-Wanderer

"Mother is very old and we may have let her stay home too long," says Mrs. Wood's daughter-in-law. Her husband cared for her for years and lived with her deteriorating memory covering for her. "He read to her, did everything for her, and never said a word. We lived next door and did not know. He had always been strong willed and he was embarrassed by her 'weakness' to this."

She was not described as a wanderer by staff members and was included in the comparison group. The Daughter-in-law knew this when she was interviewed, but asked, "are they sure? Mother doesn't walk, but just look at her hands. They have to be busy all the time. Tirelessly. Isn't this a type of restlessness?"

She indicated that her Mrs. Wood loved children, brightly colored clothing (the entire family has bright outfits or accessories) and textures (they have also complied with textured items they have brought for her or wear).

She has always been very sedentary, liked handcrafts (flower arranging) and would sometimes prefer to arrange than to make dinner. (As we speak, Mrs. Wood is across the room, rolling up her skirt in pleats and pinching them with her fingers.) She has no memory, says the daughter-in-law, but acts sometimes as though we are polite visitors who have done her a favor. Then, she will start to recall us or pick up on something we say. We all attend the family support group, she comments, "it's good to talk to the other families about these things. You get practical ideas."

FAMILY INTERVIEW

Daughter's View of Restless Mother

Mrs. Iris's daughter (Mrs. Rose) notes that her mother dislikes being confined and feels confined in this home. Mrs. Rose regularly visits and knows her mother's habits well. She describes her mother as a competent professional and stately individual.

Her concern is with her Mrs. Iris's attention span and disorientation. She takes control of the conversation and does not respond directly to whatever Mrs. Rose might ask. Mrs. Iris know's where she is and finds her way through the building. Mrs. Iris does not know her to have a wandering problem nor did she have any wandering tendency in the past. "If she paces some, it's because she doesn't like being confined." She describes her mother as loving maps and being an expert driver for perhaps seventy years. Mrs. Iris expresses her anger now though for years, she held her tongue. "Mother is a person who keeps busy. She never sat to do anything she could do standing. She never watched people or television nor did she read. She's a people person. But, she's angry there. She's walking the halls to let everyone know she's angry and to express that anger."

SYNOPSIS OF THE ENERGY OUTLET PROGRAM: An Observation:

The following is a synopsis of the Energy Outlet Program and an Analysis of

what occurred.

3:00 The Arrival and Name Ceremonial

Two staff members stand at door, greeting stream of residents who enter (walking, wheeling). Some are brought by staff members, others seem to be following the momentum. The residents are dressed up (one man wears a hat, several women have freshly applied make-up). As each person enters, staff members call them by name, call out their name "Mrs. X, Mrs. Y is here now" and pin on a large name tag bearing first names. (Construction paper.)

While some are entering, most of the others are directed to or taken to sit in a large circle, partly outlined by a variety of chairs gathered already. Two or three residents stand and walk around the space. A record player plays lively symphonic music in the background.

3:12 Ball Toss

Everyone is holding something pink. Sheet. Slippers. Purse. The record player is turned off. One staff member now "runs" the group. She has a large ball. Calls on someone by name and throws ball. Most catch. Staff One makes big deal before throwing, as if to get attention. Staff Two repeats or reinforces whatever the leader does. There are nine residents seated, two walking (two others come later) and three name tags left up on the wall.

During the group, one resident repeatedly speaks, sometimes clearly asking for attention, other times criticizing or menacing people around her. Most are silent. Some seem alert when the ball is near them and then drop heads or look down when the staff member is directed elsewhere. One woman tells the talker to "shut up". Another smiles broadly, strokes a pink cup, and seems alternately interested in the group and intent on the cup. One woman calls out constantly, but is alert to the situation and responds logically when asked questions.

All during this ball toss, three residents (sometimes joined by a fourth) are not seated, though two approach the group and are warmly greeted and regularly spoken to by Staff Two.

Staff Two also toilets a woman in need and ultimately calls nursing staff to bring fresh clothing for her.

ENERGY OUTLET PROGRAM OBSERVATIONS

Staff One speaks almost non-stop. She goes from person to person in a random order. Tossing the ball, commenting on the catch. Enthusiastic but respectful (not childish).

3:18 [The actions of those who wander during the group]

Mrs. A. roams around the perimeter of circle. Looks down. Seems angry or "puckered". Picks up cup (dropped by one in the circle). Stands, cup dangling from hand. Woman who's cup it is emits sounds (fusses). Staff Two asks Mrs. A for it, she gives it to the woman.

Mrs. P. talking constantly, is seated, restrained. She does move her wheelchair and reposition it slightly to see the direction of the toss.

Mrs. A. walks swiftly toward door. It is locked (we are locked in). She tries door. Slowly returns, expression unchanged.

Mr. J. watches Mrs. A from his chair. Intently.

Mrs. P. still dominating group. Mrs. R. seems to be copying her, repeating parts of what she says.

Mrs. C. seems angry with Mrs. P. She doesn't talk but shakes her cup menacingly. Stops, sees cup. Holds (clutches and caresses) cup.

Mrs. L. holds and pats slippers in her lap. Speaks a word (can't hear). Staff Two returns from bathroom. Hears her. Goes to her. Mrs. P. calls to Staff Two (jealous?).

All staff now quiet. Mrs. L. wanted help up. Staff 2 helps her. She fingers things that are stacked on a table (puzzle boxes).

Mrs. A. watches the ball toss, still standing.

Mrs. L. stacks puzzle boxes and magazines from other side of the table into a neat tower, allining edges.

3:22 [Attention of the group shifts to Staff Two who conducts a formal lesson on today's weather]

About half the group follows the shift in direction and three clearly respond to questions about the weather.

3:25 [Topic shifts again to what was brought that is pink. Some people seem surprised to find they have something, speak out on what they brought.

Mrs. A. moves around the room, looking down.

Mrs. L. shuffles (much effort, little progress, slow speed) to another table filled with toys (old dolls, doll clothing), and touches the doll shoes.

ENERGY OUTLET PROGRAM OBSERVATIONS

Mr. J. splits his attention between Mrs. A.'s movement and the Staff Two who goes to each person and asking them what is pink or shares something pink with the others.

Mrs. L. takes a pink doll dress to Staff One. Staff One admires, realizes it is pink, Mrs. L. smiles broadly, kisses Staff One who hugs back.

3:25 [Door opens, two new residents join the group, freshly dressed resident from earlier returns.]

As soon as door lock sounds, Mr. J. is up (like a flash) and heads for door. Steps are unsteady but he is intent.

One man who enters seems to expect to walk, and to be expected to--- (Staff One moves some chairs to clear a path near some musical instruments.) He starts in a slow but continuous walk (sometimes 6' and stop, sometimes inches, then stop) around the room. Sometimes, stopping and standing still. Then taking a look at whatever is near. He picks up an "Etch a Sketch" and a doll, puts them down. Seems to look at them very hard. Keen expression on face. Seems deaf to the group. But does change his course to keep clear of anyone or the tables. His expression changes. Seems confused about the group and where he should go. "Where is it?", he says almost to himself.

Staff One and Two are busy with the group, bringing the newcomers into the circle, commenting on their pink.

All the time Mrs. P. talks and talks.

3:30 Touch and the Pink lotion

Staff One gets pink lotion (baby). She offers it one by one, helps some people to put it on, asks others to share it or their extra with the person next to them.

Mr. E. moving again, inches at a time, around perimeter.

Mr. J. peering out door, rattling door handle. He's a bit short for the window.

Mrs. A. joins him at the window and they alternately look (she's taller than he and can see). Neither speaks.

Mr. E. to piano. Sits on bench.

Mrs. L. goes to Mrs. A. Leans on Mrs. A., she tries to give Mrs. A. lotion (excess from her hands). Mrs. A. has odd embarrassed look on her face and stalks off. Mrs. L. appears unaffected, smiles after her.

3:31

Mrs. L. sits back down.

Mr. E. is at a dresser, rummaging through some folded nightgowns (silk) and small drawers (filled with mits and scarves).

One resident in group now moaning and Staff One sits next to her, patting her arm.

Mr. J. sits, fiddles with his hat.

Staff One works with one resident. She has two flowers and asks how many she has and how many are pink (one is white). Resident points correctly. From across the room, one who has not previously spoken says quite clearly, "you can't tell".

Mrs. P. asks when they are going out. Staff Two indicates they are not going out now.

Mr. E. now at piano bench, stroking the bench as he bends over it.

Mrs. A. stands back from group, frowns.

3:35 [Another staff member enters]

"Where have you been?" asks Mrs. P.

"On vacation," replies Staff Three, not missing a beat, "I like the way you're dressed in..."

Several group members smile, seem to recognize her. She goes to Mr. J., sits next to him, offers him both her hands. He accepts, smiles.

Mr. E. onto bulletin boards, fingers pieces of paper.

Mrs. A. watches Staff Three

Mrs. L. sits, watching Staff Three

Staff Three stands, goes to Mrs. L who is standing to greet her, holds her hands, introduces her to Mr. J.

Mrs. L. walks away, walks around to tables.

3:40 Music: Personalized Serenades

Staff Three gets autoharp and plays, standing, singing to each person a phrase of the folk song, as if serenading individually. Very well received by each recipient.

Mr. E. still fingers table items again.

Mrs. L. touching a stack of clothing, refolding, patting, restacking.

Mrs. A. looks out door.

Mr. J. smiles widely at music.

Staff Three stands near Mrs. I (who has been angry at the constant speaking of Mrs. P.) and plays:

ENERGY OUTLET PROGRAM OBSERVATION

"What are you doing?"	[It occurs to me as I observe this how good it is to hear completed conversations, up to speed.
"I am playing for you."	Staff 3 seems to take each resident's comments seriously and respond immediately, something which is unusual.]
"Why do you do that?"	
"Because you are a good person"	
"I didn't know that." (smiles)	
(Sings "My Bonnie Lies Over the Ocean") substituting each resident's name for Bonnie	

One resident sleeps, snoring loudly.

3:44

Mrs. A. moving again, in vicinity of the door. --Most of her motions are in the area of the door.

Mrs. P. not talking, enjoying music. Hums. Seems very pleased to hear her name in the song.

Mrs. I. beats her wheelchair with the rhythm.

Mr. E. comes to me, stares at my feet, then speaks, "How are you today." "Fine, thanks, what's new?" (We've never met.) "You're reading". "Yes." He stands, I shift a bag so he can sit next to me if he wants. He stands. He moves on to a table. Runs hands over table.

Staff One watches music, holding hand of one resident. Staff Two; going from person to person, dancing along.

Mrs. L. now gagging loudly.

Mrs. A. sits in group.

3:46

Staff Three starts "He's got the whole world", substituting names. Mr. E. goes to outside of chair circle, stands across from Staff Three and listens.

Mrs. R plays instrument (sort of), Staff 3 sings.

Mrs. I beating intently.

Mrs. A. up and back to door.

Mrs. P. claps (not talking)

Staff Three sits with harp next to Mr. J. Gives him harp. He tries to play, hands seem fumbling, confused. He smiles, then frowns-- seems to be trying very hard to get the tune. Staff Three hums softly, helps guide his hands after he's tried several times unsuccessfully.

Mrs. A. goes into women's room.

Mr. E. looks out back door.

ENERGY OUTLET PROGRAM OBSERVATION

Mrs. L. sits.

3:50 Music and Exercise

Staff One announces it's time to move to the organ and to exercise. Some stand, some helped. Group starts to move. over to another part of the room.

Mr. E. walks opposite direction of that the group is moving.	[Moving along with changing the group focus seemed an effective technique for satisfying the desire to move and marking a change. Also seemed to help bring the group to a central focus.]
Mrs. A. walks again nearer group.	
Mrs. L. rattles door handles on janitor's closet. She doesn't get the knob open. She tries the women's room, and it does. She goes in.	
Staff One and Two see her, they do not stop her or call out. She emerges.	

Mrs. A. walks faster.

Mrs. L. opposite group, checking out dresser. Holds up slip. Looks at herself in mirror with slip in front. Folds meticulously.

Mr. E. now sits in the circle (empty except for Staff 3 and Mr. J. still working at autoharp). Mr. E. has an electric razor from one of the tables in his hand. Staff 3 comes to him, asks him to join the group for music. Sits down and coaxes him. He mumbles.

Mrs. A. walks.

Mrs. L. goes to her, smiles. Fixes her sweater, pats her gesturing that she looks nice. Mrs. A. looks both lost and grateful.

3:52 Old Time Singing at the Organ

Most of the group is now clustered tightly around an organ. The music changes to hearty singing. Many voices join.

Mrs. L. walks around table with toys.

Mrs. P. talking over the singing.

Mr. J. puts down autoharp and goes to door. Rattles the door handle gently first, then more vigorously.

Mr. E. (had been sitting looking on to singing and occasionally humming) now up, walking in slow spurts again.

Mrs. A. sits looks at organ. Then quickly up again and walking away.

Mrs. P. speaks to Mrs. L. asking her to dance for them. Mrs. L. starts dancing (bouncing in place and tapping feet).

ENERGY OUTLET PROGRAM OBSERVATION

Mrs. R. claps (Staff Three playing very old time melodramatic music, like a player piano tune.)

Mr. E. now at piano (near organ) and fingers the keys. It does not match the organ in notes nor rhythm, but is not loud.

Mr. J. goes over to singing group, stands as though he might join, then promptly returns to peer out the door and rattle the hardware.

Mr. E. up, to doll table. Fingers games.

Mrs. L. takes a towel she's been holding draped over her arm and gives it to one of the members of the group-- gives it as if it were a special gift. The resident receives it with same gracious mannerism, thanking her, patting it. Nodding. They smile, Mrs. L. leaves.

3:57 Group Exercise

From old time music, the tunes now shift to vigorous marches and Staff Two calls out exercise steps from the chair. Staff One and two demonstrate and help members in the circle follow along. Some move very vigorously.

Mrs. L. tries the door. She and Mr. J. alternate at trying the handle. Mr. J. says something to her.

Mrs. A. joins them at the door. We hear someone calling out from a nearby beauty parlor (a cackling scream). All three of them try the door and Mrs. A. looks out. (Others rather shorter.)

Mr. E. moves slowly around perimeter of room.

Mrs. A. returns to sit where she had before.

Mr. E. goes to doll table, mumbles at a doll. Picks it up.

Mrs. L. leaves door, slowly goes over to Staff Two and they exercise in unison. Staff Two then dances with Mrs. L. which Mrs. L. seems to delight in.

Mrs. I. beats along on wheelchair side to the dancing.

Mr. J. still looks out the door.

4:01

Mr. E. walks, Mrs. A. walks again, Mr. J. looks out door. Mrs. L. joins him at the door, they look out together up on toes.

Music "She'll be coming around the mountain." Staff One and Two help people lift and circle their legs.

ENERGY OUTLET PROGRAM OBSERVATION

Mr. E. stops at back door, tries to open it. Looks out. Does not seem upset that he cannot get out.

Mrs. L. up, meets Mrs. A. who's walking. Mrs. L. reaches up and kisses Mrs. A. who seems to appreciate kiss. Mrs. A. touches the spot where she was kissed on the cheek.

Staff Three stands, excuses herself to attend a meeting. She goes to each person, shakes hand and says goodbye by name.

Mr. J. alone at door. Mr. E. at opposite door, running hands over the ridges on the window casement. Mrs. L. joins Mr. J. and rattles the door handle.

4:05 Group snacks

The group members now change position again, to sit at long tables. Fruit juice, fruit and cookies are passed. Mr. J. tries to play the autoharp (which was left on the table where cookies are).

Some people are now taken to bathroom. Phone call is made for some dry clothing by Staff One. Mr. J. points something out to Mrs. A. who is standing near him as he gets sounds out of the autoharp. Mrs. A. sits, begins to eat then chokes hard, drawing attention of Staff One and Two. Staff One goes to her, strokes her back, asks her to swallow.

--Group continues until 4:30 when nursing assistants arrive (like parents at a school) and "reclaim" their individual patients. Big fuss is made, "what did you do" "I'm glad to see you again"...

APPENDIX D: FORMAT FOR WORKSHOPS AND SAMPLE PROCEDURE.....401

Format for Workshop.....402

Sample Wandering Procedure (Provided by Survey Respondent).....

A PROTOTYPE FOR INSERVICE

The following outline suggests topics to be covered in an inservice program on wandering.

1. Definitions
2. Options: What do you want as an outcome? (Control, freedom, monitoring, etc.)
3. Policy development: how to, what to include
4. Techniques for assessment
5. A tool kit of interventions:
 - a. Programs
 - b. Issues in restraint and alternatives
 - c. Vigilance and Teamwork
 - d. Identification
 - e. Technology, environment, security systems
6. Shared risk and risk management (include families)
7. Closing gaps between what is done and what you think is best
8. Pros and cons of special wards
9. Special risks of runaways and our inability to predict their timing
10. Programs for dealing with spatial disorientation and complex buildings
11. Examples of model programs
12. Techniques for managing particular types of wandering

SAMPLE POLICY AND PROCEDURE FOR DEALING WITH WANDERING
(Submitted by a Survey Respondent)

BENEDICTINE NURSING CENTER
PROCEDURE MANUAL

PROCEDURE: Procedure to carry out when pt/res is missing from facility

PURPOSE: To find pt/res as quickly as possible and maintain their dignity and privacy.

STAFF PERSON(S) INVOLVED: All facility staff

EQUIPMENT:

1. Incident report

POINTS TO REMEMBER:

1. Nurse in charge of pt/res directs search or consults with DNS, SNF RN or administrator

PROCEDURE:

1. Inform the nurse in charge of pt/res when discovered missing.
2. Nurse's responsibilities:
 - a. Alert staff in building in the following way:
 - using overhead page say: Will _____ (Missing pt/resident's name) please return to _____ (their) unit.
 - Nurse on unit call receptionist and give description of person. Receptionist calls other units with description of person. If no receptionist on duty, staff from the unit calls other units to give description.
 - after person is found the nurse on the unit uses overhead page and says " _____ (resident) has returned to _____ (their unit)
 - b. Staff on all units immediately look for pt/res (make certain that all areas within building are searched).
 - c. Direct search to facility grounds if it is determined that pt/res is not in building; remain in building and coordinate search (spend only a few minutes searching grounds).
 - d. If pt/res is not found immediately, call the administrator, assistant administrator or DNS (in that order), or if unavailable, consult with RN on SNF unit, to decide when to call fire department or police and when to call family.
 - e. Call fire department or police if pt/res is missing for more than half an hour.
 - f. When pt/res is found and returned to Center, examine for any possible injuries and treat accordingly.
 - g. Complete Incident Report if any injuries or if missing for an extended period of time.
 - h. Record/report incident

SAMPLE POLICY AND PROCEDURE, continued

BENEDICTINE NURSING CENTER
PROCEDURE MANUAL

PROCEDURE: Procedure to carry out when patient/resident wanders.

PURPOSE: To allow as much physical freedom as possible and maintain patient safety.

STAFF PERSON(S) INVOLVED: All facility staff.

EQUIPMENT:

1. Camera and film
2. Wandering I.D. bracelets
3. Soft restraints
4. Red tag with unit number on it

POINTS TO REMEMBER:

Our goal is to keep patient functioning at their maximum level of independence and safety.

PROCEDURE:

1. Add wandering to problems/needs list.
2. Place wandering I.D. bracelet on patient's wrist. These will be on the unit. Check daily for placement and chart on flow sheet. Ask unit secretary for extra bracelets to have available if patient removes them. If removal continues to be a problem, investigate obtaining Med-Alert bracelet.

I.D. bracelet should say: Patient's name - Memory Impaired
If found, please call Benedictine
Nursing Center, 845-6841, as soon
as possible.
3. Obtain order for soft restraint prn on admission. Use sparingly as restraining often increases agitation and behavior problems. Walk patient frequently every one to two hours when restrained.
4. Take picture of patient (close-up head and neck). Tape to progress note and place on top of problem/needs list.
5. Each day for one week, 7-3 and 3-11 aide take patient for walk around building and introduce patient to all units and staff (kitchen, office, housekeeping). Make sure they are aware that he/she wanders and requires supervision.
6. Place red tag with unit number on patient's back between shoulder blades and keep in place at all times to identify for rest of house that this person wanders. Continue this for two weeks until all staff is familiar with patient.
7. Check patient's whereabouts every 15 minutes.
8. Be alert for buzzer on door going off between 6:00 p.m. - 6:00 a.m. and investigate.
9. If wandering continues to be problem, notify DNS and MHN.
10. If unable to locate person in-house, follow BNC procedure manual for missing patient/resident (Sec. 7, P. 27).

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AUTOBIOGRAPHICAL STATEMENT

Lorraine G. Hiatt has specialized in environmental design and issues of aging since her graduation from Cornell University with a Master's degree (1972, Design and Environmental Analysis). In 1978 she enrolled in the Ph.D. program at the Graduate Center, CUNY, in Environmental Psychology while continuing nearly full-time work. Since 1980, she has worked as an environmental gerontologist in private practice (with a Washington DC based partner and friend, Joan A. Pease). Her primary professional activities have included teaching, writing, nationwide consultation and research. Examples of these include:

- Functioning as a "live-in" researcher/observer studying vision care, wandering and memory impairment.

- Directing one of the earlier programs for mentally impaired persons (including a substudy of wandering, Snyder et al., 1978; Hiatt, 1980b), funded as a research and demonstration project, at a large midwestern geriatric center, the Ebenezer Society in Minneapolis, MN (1974-7).

- Conducting a national survey of visually impaired older people in 1,660 institutions for the American Foundation for the Blind in New York (Berkowitz et al., 1979).

- Extending self-help techniques to older people, through an Administration on Aging grant, to convey information on senses, memory and environment as a means of maximizing their independence (Hiatt, Brief, Horwitz & McQueen, 1982).

- Writing on design (Hiatt, 1978; 1980a, 1980c, 1980d, 1980e, 1981c, 1982a), disability and aging (Hiatt, 1981a), social psychological issues in care of the aging (1982b, 1983), and orientation and wayfinding (Blasch & Hiatt, 1982).

-Teaching a graduate course in social psychology of aging at New York University (1979-1980).

-Providing some 30-40 workshops and lectures a year to professionals in long-term care, designers and boards or directors.

-Assisting some 30 clients a year in planning and evaluating environments for older people.

Interest in pursuing the topic of wandering for a dissertation was most directly stimulated by the request of an attorney for information on accepted procedures for caring for people who wander and the realization that such information was not available. Other current research interests include technology and aging, new models and forms of housing and how innovation occurs in health care institutions.