PROFESSIONAL AND PREPROFESSIONAL HEALTH CARE TEAMS: AN EVALUATION OF AN INTERPROFESSIONAL TRAINING PROGRAM IN THE FIELD OF SOCIAL WORK AND THE HEALTH PROFESSIONS

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Abstract

Professional and Preprofessional
Health Care Teams:

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Training Program in the Field of Social
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The training of future health care professionals requires a collaborative educational process which will insure adequate teamwork and comprehensive health care management of consumers.

To test the feasibility of interprofessional-team training, a course was developed at the University of Connecticut for students in preprofessional programs in the Schools of Allied Health, Nursing, Pharmacy, Social Work, and Medicine-Dentistry. Through a cooperative effort of all the schools involved, 200 preprofessionals who took the course evaluated it, and then were compared with experienced professionals on their health knowledge and positive attitudes.

Although there was some dissatisfaction with one component of the course, the lecture, the course met its objectives successfully in its first experimental year.

Small group process and the small group projects were the most successful educational method and component of these coordinated

training activities.

The comparison showed that students had underlying positive attitudes toward health care teams which compared favorably with the attitudes of active professionals in spite of their greater experience with teams. Students compared favorably with professionals in knowledge gained. However, each discipline involved learned a different amount. The comparison also showed that there was an inconsistent pattern of students' perceptions of the usefulness of their own and other health professions.

In order to achieve higher levels of cooperative performance among the physicians, social workers, nurses, and allied health professions, there must be an effort to establish consistent, positive and informed attitudes towards other teammates and attempts to guide attitude formation toward more consistency while building a common health knowledge base. Future successful training of preprofessionals at early career stages and the faculties who teach them must depend upon a greater awareness of mutual knowledge needed. The crucial influence of background factors among the different disciplines, and the attitudinal differences among the disciplines should be considered in planning courses for interprofessional education. From this increased awareness will come a new framework for teaching basic health courses across discplines.

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PREFACE

There has been a pressing need to train future health care professionals in a collaborative process. This need has been heightened by the demand for an improved health-care management system staffed by professionals trained to work together.

No single profession or institution has been charged with the responsibility for developing effective undergraduate training for health care teamwork. Instead, if teamwork training is received at all, it is after professional training has been completed and is usually provided on-the-job haphazardly by a variety of professionals who work independently.

As a step toward coordinating the training of undergraduate students who might become members of health care teams, an Interdepartmental Project (abbreviated to Project) was organized at the University of Connecticut. The Project focused on developing a course for health care students who had been admitted to professional programs in five schools of the University. The Project included: the course, the formation of administrative committees and teaching teams, and an evaluation of the course and of its effect on the attitudes.

It was hoped that new efforts would define further the problems encountered. A great deal of confusion and controversy has existed over the status of health care teams in the reorganization of health facilities and educational institutions. Conflicts have arisen between professionals over changes in goals and values.

The purpose of designing and planning an undergraduate, preprofessional inter-departmental course at the University of Connecticut was to uncover the potential for new knowledge about professional interrelationships and to expand a planning base for interprofessional clinical and educational cooperation.

As Friedson has written:

> A useful way to look at (interprofessional) planning was to consider it as an activity centrally concerned with the linkage between knowledge and organized action. As a professional activity and as a social process, planning (and completion) was therefore located precisely at the interface between knowledge and action.[1]

Interprofessional planning involved faculty in social learning and in adaptations to the many shifting environments of several health professional schools. The ultimate goal of the project was to achieve a telesis between the development of practice principles in training, action, and joint education. This goal had to be accomplished without sacrificing individuality or suppressing unique institutional differences.

The project was designed in integrated phases combining planning and social learning. These phases were: 1) forming an interdisciplinary committee, 2) developing the course, 3) working with the schools involved, 4) assessing the institutional impact on a large university, the University of Connecticut, and 5) evaluating the outcome.

Several prototypes of interprofessional education have been tried; but this project concentrated on an undergraduate orientation, health teams, and small group projects. The traditional type, the common-interest type, and the case-presentation type of interprofessional courses, all involved health students learning together. Yet none of these has dealt consistently with: 1) status, 2) attitudinal develop-

ment, or 3) the fusion of team teaching and learning in undergraduate programs.

The reason that it is important to consider status is that the health care professions are very stratified. This stratification may hinder effective team work. Most previous educational attempts to foster team work have not fully considered the impact of status. Status also interacts with the differing perceptions one profession has of another.

The reason it is important to consider differing attitudes is that inconsistent perceptions can be altered early in the professionalization process in the undergraduate years before attitudes become fixed. The model of team teaching, also, reinforces the student's positive attitudinal exposure to teams. The combination of attitudinal exposure and team teaching produces a synergistic learning effect.

An evaluation compared preprofessionals trained in the project to experienced professionals to see what effect the integration of the above concepts had on the training program. This evaluation determined how the trained preprofessional students were similar to professionals and how the project influenced their interest in working on teams.

Specific summative evaluations were used in the final course Project to determine: 1) satisfaction with the faculty team, 2) success of the small group process and project, and 3) success in meeting course objectives.

Since little was known about the characteristics of students and professionals who daily interact with each other, another aim was to increase this knowledge.

The Project's criteria for success were: acceptance by the

University into the curriculum structure (assignment of course number), establishment of a viable curriculum committee, and acceptance by three out of five participating schools.

The faculties of all schools accepted the course as a part of their regular curriculum. In fact, two schools also made the course a requirement. The requirement of the course as a part of the regular curriculum was seen as an important criterion of success.

The scope of this Project was truly interprofessional and intentionally large. The political process of establishing a single course upon which curriculum and clinical models could be enacted demanded compromise. Educational experiments are often shortlived without the built-in evaluation and modifications necessary for survival. Generalization to other universities requires careful consideration of feasibility. However, this Project could provide general guidelines to others interested in such training.

It is difficult to generalize because of the constraints that are particular to each setting. Some of the difficulties encountered in this Project were organizational constraints: 1) distance; 2) administrative problems; and 3) limited resources. Some were philosophical differences: 1) strongly held beliefs about separation of the professions; 2) lack of committment to collaboration; and 3) doubts about the efficiency and efficacy of interprofessional learning in an undergraduate setting. Language and terminology differences required time as well as the coordination of faculty.

However, the advantage in a course that taught team concepts, health care concepts, policy, and financing to such diverse groups far outweighed

the disadvantages. It would be expected that eventually the cost of such a course would diminish and would result in a better deployment of resources. The course would train and set an example of interprofessional training which would eventually change the nature of practice.

Although the Project provided general guidelines, the implications of professional education at the undergraduate level were not conclusively dealt with nor did the Project attempt to deal with the crucial impact of the general trend of enlarging baccalaureate programs to include knowledge formerly the preserve of graduate professional education. Both these issues remain.

However, the course has continued at the University of Connecticut and has become a part of the established curriculum. As necessary, components of the Project have changed and developed further, and Interdepartmental 200 has become an accepted course. It is no longer an experimental educational effort, but the culmination of a major, successful collective thrust in interdisciplinary education at the undergraduate level.

PREFACE

1. John Friedman and Barclay Hudson, "Knowledge and Action: A Guide to Planning Theory", American Institute of Planners Journal, Jan. 1974, p.15.

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DESCRIPTION OF INTERPROFESSIONAL PROJECT

INTRODUCTION

A. General Background of the Project

Adequate future-oriented interprofessional teamwork requires the collaborative efforts of many people from diverse disciplines. There is, therefore, a need to change the exclusivity of professional domains in order to anticipate these future health trends.

Education and planned socialization of future health care students in groups may provide the basis for interprofessional skills and team development. The University of Connecticut's recognition of this led to the development of the Interprofessional Project. The Project stressed the need for training preprofessional students in team management, making them aware of the different approaches to health care among health professions, and aware of the different education levels of team members.

The team concept refers to a group of individual professionals working together and assigning tasks to accomplish the overall objectives of the group.[1] In the Project this function was referred to as team development. The faculty teaching team was developed in consideration of the needs of the undergraduate population, the goals and tasks of the particular educational settings, and the availability of professionals.

The Interprofessional Project's educational priorities for preprofessional, baccalaureate students were: 1) to develop positive attitudes towards themselves as professionals and toward teams; 2) to acknowledge inconsistencies; and 3) to identify discrete health-professional differences and attitudinal styles.

To reshape future health roles, three educational aspects of undergraduate learning were crucial: 1) the establishment of collaborative faculty team teaching; 2) the introduction of professional roles at the baccalaureate level; and 3) the development of group skills for students of widely different backgrounds and professional goals.[2]

As Friedson, Coe, and Mechanic have suggested, the lack of shared educational training and status background has created a structure of training isolation. This isolation further reinforced: arbitrary limits on careers, homegeneity of each health profession's cognitive patterns, and stereotypic views developed within professional training.[3] As the Carnegie Commission Study on Higher Education concluded: "Isolation during training implicitly teaches some of the behavior that goes with the hierarchical, castelike structure of the medical work system."[4] The weaknesses of the traditional modes of training result in later professional isolation and difficulties in team cooperation.

During the late 1970's, there has been a recognition of a growing field of interprofessional team practice at the graduate level. However, it is at the undergraduate level that preprofessional health students form most attitudes and shape their attitude patterns.[5] At this level, an attempt to bridge the institutional gap between the graduate and

undergraduate programs was urgently needed.

Specific activities and strategies were designed in the Interprofessional Project to bridge this gap. Five health professional schools were coordinated to produce a joint educational effort. The Project's long-term goals were:

(1) To develop undergraduate, educational methodologies for training in social work, pharmacy, nursing, medicine, dentistry, and allied health.

(2) To assist faculty in development and implementation of curriculum methodologies and interprofessional education within their respective schools.

(3) To establish this approach with a team of faculty from different health professions at the preprofessional level.

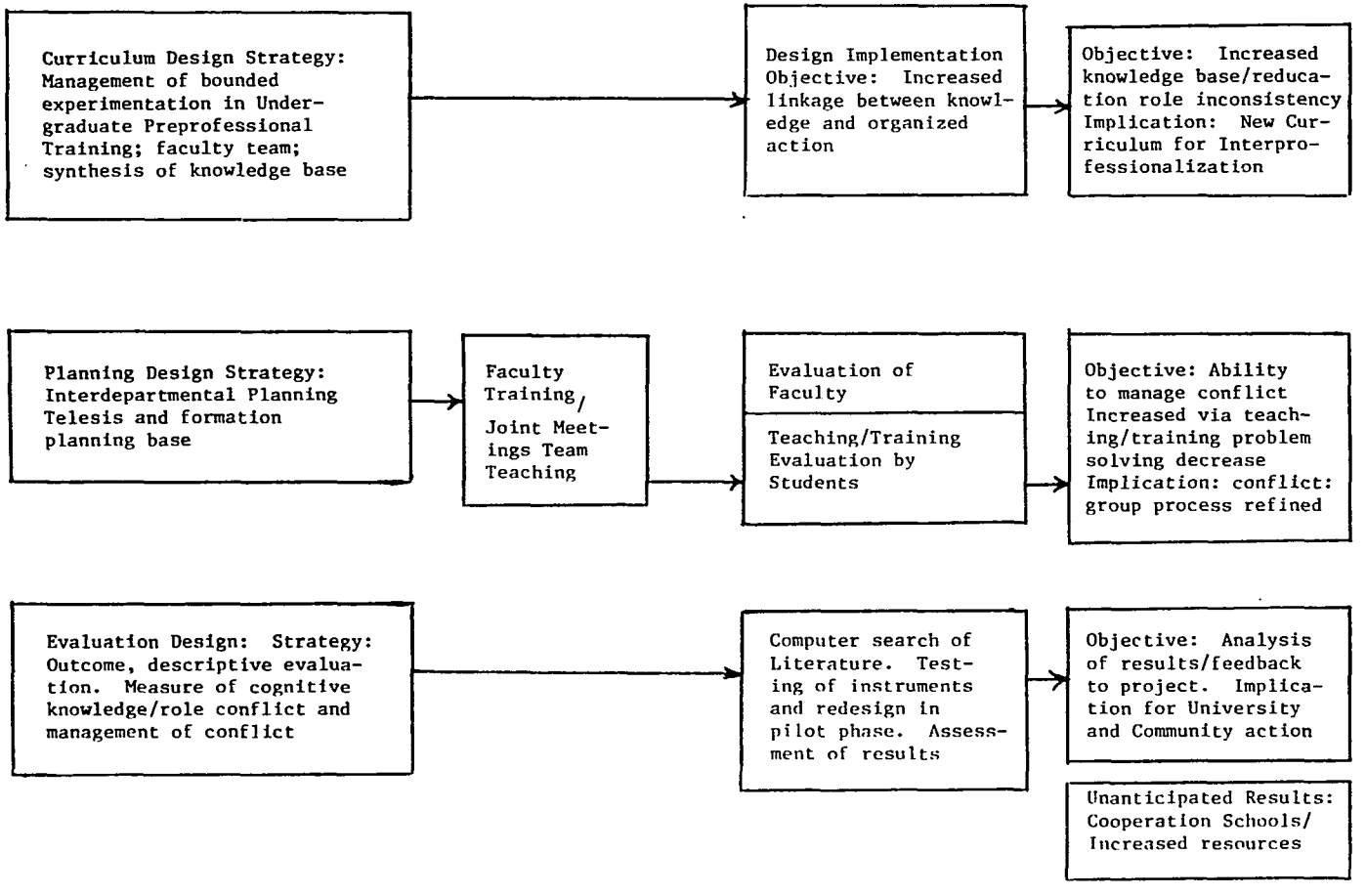
B. Organization of the Project Report

Chapter II amplifies the theoretical background of the problem of interprofessional education. Chapter III traces the emergence of interprofessional issues (how they evolved historically and organizationally). Chapter IV details the Project design. Chapter V examines the actual experience of the Project, and describes the participants. Chapter VI examines data and the nature of the Project's total impact, faculty assessment of the project, and subsequent institutionalization of the project. Chapter VII explores the impact and implications of the Project's major findings for the University, the professional, and the interprofessional health care team education.

The Project was divided into three, timed, sequential phases as shown in Figure 1 on page 4. Phase I concentrated on planning; Phase II included pilot implementation and specific modification incorporated into the planning process; Phase III included the reorganization and follow-up

INTERPROFESSIONAL PROJECT DESIGN

FIGURE I



evaluation. Phases were used to devise a measure for sequential goal-setting and to coordinate an informed planning strategy.

Chapter I

1. It has been important to delineate the difference between collaboration and teamwork. One of the tasks of every professional has been to work willingly with another in a process or to collaborate. A team process implied a more formal organized framework or, as Rosaline Kane pointed out, an authority and rationality around which a group of individuals organized a work task.

   Rosaline Kane, "The Interprofessional Team as a Small Group," Social Work Health Care, vol. 1, #1, (Fall, 1975).

2. _____, Annual Report: Institute for Health Team Development, Washington and New York: Institute for Health Team Development, (June, 1974), p. 15.

3. Eliot Friedson, Professional Dominance: The Social Structure, Chicago: (Aldine Company, 1970),p. 124; Rodney M. Coe, Sociology of Medicine, New York: (McGraw-Hill Company, 1970), p. 186-187; David Mechanic, Medical Sociology: A Selective View, (New York: The Free Press), p. 365.

4. Rashi Fein and Gerald I. Weber, Financing Medical Education: A General Report Prepared for the Carnegie Commission on Higher Education and the Commonwealth Fund, (New York: McGraw-Hill Company, 1971), p. 210.

5. Cramer D. Reed, "Integrated Teaching for Medicine and Allied Health," Journal of Allied Health,(Fall, 1973),p. 160. See, also, Valencia Prock, "A Joint Approach to Education for the Health Professions," Nursing Outlook, 9, (August, 1976), p. 473.

CHAPTER II

INTERPROFESSIONAL EDUCATION:

REVIEW OF THE LITERATURE

A. Problems in the Health System

Interprofessional education of health care professionals can contribute to the efficiency and efficacy of systematizing health care by insuring more adequate cooperative work and by insuring stable, comprehensive management of consumers' medical and social problems. If interprofessional education is taught within a team framework, it can be an effective way of educating students and professionals to provide comprehensive care. The Interprofessional Project was built on this conceptual base of providing team education with an interprofessional faculty using interdisciplinary knowledge.

The status of health care in the United States has been impacted by inadequately trained staff and poor utilization of manpower, poor team training, and an insufficiency of funds to help health care workers to innovate or to change the accessibility or rationality of the present system. This system or "non-system" has been characterized by health professionals as crisis-oriented, medical care which results in the consumers "doing better and feeling worse".[1]

The Project is a practical, partial solution to helping preprofes-

sionals learn to become contributing team members. Health care teams, properly trained, can solve part of the dilemma caused by the "non-system" only if team members are aware and well trained, not only in performing in their individual professions, but in understanding the attitudes, capabilities and limitations of the other professionals with whom they interact. It was hoped that the Project would provide an interprofessional foundation for this mutual understanding and alleviate some of the strains that have been observed when members of various professions come together to work on teams.

The major knowledge problems dealt with in the Project are: 1) lack of access to preventive and primary services, 2) rising costs, 3) lack of cost-effective educational programs, 4) loss of public trust due to scandals and the uneven quality of professional expertise, and 5) lack of effective institutional and financial mechanisms to deal with continuity and fragmentation.

These problems and their intimate relationship to all the professions have drawn attention to the issue of balancing educational effort and effect in health team education within all the health disciplines. Increased investment in individual disciplines has not resulted in better or more efficient education to solve the major problems. Not surprisingly, consumers are beginning to complain and to demand to take part in health care education deliberations.[2] The fact that the educational system and the health delivery system required change in their institutional organization has been obscured by the emphasis on cost cutting.[3] This Project presented one clear institutional and curricular alternative to the present isolated knowledge and training efforts.

B. Educational Change in the Health Professions

Setting priorities for change has become important as attention has shifted to the reality that resources are limited. Two limited resources are faculty and manpower. Better manpower deployment of faculty and professionals could result in positive educational changes which should make team education more feasible and could result in lower costs and more consumer-oriented services. Scarce educational resources are being deployed ineffectively due to the lack of knowledge needed to train professionals to work together, and this Project dealt with building an evaluated, educational experiment which tests assumptions about interprofessional education.

Interprofessional training might prevent some common problems encountered in medicine today; for example, the inability of the solo practitioner to evaluate the emotional effects of illness; or excessive specialization and emphasis on medicalization of problems which isolates the professional and confuses the consumer.[4] The search for rational care and for caring physicians and personnel has intensified, despite increases in the number of trained health workers.

The answer is partly contained in a more effective division of labor in teams.

Attempts to document major health care problems in team-based settings illustrates poor care results from: the lack of attention to the individual's problems and responsibility; the lack of health education; and an unequal allocation of benefits to the whole population. Professionals trained in teams to educate the populace could alleviate these problems by humanizing care and focusing on the social aspects of

illness by educating the consumer. As the Interprofessional Project demonstrates, an emphasis on these humanizing, attitudinal qualities can be promoted by interprofessional education.

Thus, the concept of the quality of medical care should be expanded beyond medical care to a concept of quality, comprehensive, humanizing health care -- health care which depends not only on how well the physicians and other health workers perform their tasks together, but also on the human services which teams provide and the reliability of the teams which make technologies available for diagnosis, therapy, prognosis, and prevention.[5]

As Friedson has stated, there is a "crisis of public confidence" which could result in the restructuring of health care and the encouragement of new educational programs, particularly for physicians. This could, also, result in institutional change and a different distribution of the most expensive personnel, the physicians.[6]

1. Role of the Physician

One reason there has been little educational change is the association of medical services with the physician. This association has stabilized and influenced the educational and delivery systems profoundly.[7] As Millis stated, "By law, custom, practice, and education, the physician is the central figure in any collaborative effort on behalf of the patient."[8]

This rigid conception of professional authority has been explicated by Friedson as "professional dominance". His point is that services are organized around professional authority. This basic structure of medical dominance holds one of the analytical keys to the present inadequate structure of services and the lack of team education.[9]

As Coe and Mechanic have reported, the structure of the medical profession affects delivery and cost of care.[10] Many organizational problems of coordinated services stem from the lack of cooperation among professional groups. As Friedson stated: "Given this orientation toward the profession, the formulation of social policy certainly requires preoccupation with recruiting and training {socially aware medical} practitioners...".[11] Changing the authority structure and the tone of hierarchical practice within the educational curricular structure could lead to better, more precise teamwork and a diminution of professional dominance.

What is needed is a structural solution generated by changing the health educational system and the values that support professional dominance. The Interprofessional Project attempted to provide a structural, educational change which promoted new values in professional education - a cooperative, egalitarian stance.

The reality is that "in the world of health care, the physician very frequently is in the position of having to share responsibility, decision, and action with others as associates, that is, as peers and sometimes as superiors."[12] Education in shared decision-making is sadly lacking in most medical schools and in most other professional schools; it is innovative to attempt to involve all the health care professions in re-educating the physician and others at an early, preprofessional stage of development to their respective roles on a team.

C. Reformist Movement

The following facts are influencing this reality of sharing responsibility, decision, and actions with the public and associates. These factors are challenging the professional's traditional authority,

particularly the physician's:

1) Use of Ancillary Personnel: Greater use of ancillary personnel to deliver traditional physician services leads to a need to share the responsibility of care with numerous personnel with different levels of training.

2) An Increase in Malpractice Suits: The disruption of the doctor-patient relationship and the resulting lack of trust has surfaced in the courts. Shared decision-making makes it important to untangle the legal responsibilities of a team, individual professional, and institution.

3) The Creation of a "natural team setting": The creation of new institutions has created a need for defining the tasks that may be delegated in newly altered settings, such as Health Maintenance Organizations.

4) Professional Problems: Unnecessary surgery, excessive prescription of certain drugs, impersonality, and lack of continuity and the lack of accessibility (especially in rural areas and in urban areas on weekends and evenings) have created an environment ripe for professional educational change. There is a need for professional rededication.

5) Professional Re-evaluation: Growing professional concern over isolation of the medical professions and impending legislative changes in Congress has led to more open concern about change.

6) Adoption of any of the National Health Insurance Proposals now before Congress: The lack of agreement over national health insurance reflects a deep division over the direction legislative

and institutional reform should take.

In sum, the principal elements of a reformist movement are currently taking shape which will profoundly influence education and the structure of the many professions associated with health care. Although it is impossible to know how these changes will affect interprofessional education, it is important to recognize the elements of reform as well as their possible resolutions discussed below.

1. National Health Insurance Legislation and Other Solutions

As Dr. Eveline M. Burns has outlined in her article "Social Policy and the Health Services: The Choices Ahead", the elimination of the financial barrier to services by national health insurance will not correct the problems of the fragmentation of delivery, the inequality of distribution of services, the lack of attention to health as an overall preventive concept, and the other notorious deficiencies of our delivery system.[13] But if these deficiencies and weaknesses -- the non-financial obstacles to receipt of high quality health care -- are to be corrected, social policy must of necessity be concerned with the way medical care is given.[14]

There can be little doubt that the effect of a reformist mood will be felt in the restructuring of hospital services and the closing of hospital beds, the establishment of cost commissions, and the implementation of planning procedures under the aegis of the Health Systems Agencies. Most of the ferment generated by these new organizational attempts focuses upon the health services' adequacy, availability, and quality. Hopefully these factors will be considered in national health insurance legislation.[15]

As Uwe E. Reinhardt and others have emphasized, any major national health insurance scheme would be doomed from the outset unless the health

care delivery and educational system were first rationalized.[16] Without a reconsideration of manpower and health policy, educational reform would not be viable.

2. Educational Reform

It is not clear whether our educational institutions can meet the challenges of the current reformist mood. The problem of achieving greater equality, collegiality, and accountability is complicated by the reality that few supportive interprofessional administrative mechanisms exist in present-day universities or service delivery settings. Fox has stated that a number of attempts to "destratify the doctor's relationships...and to make them more egalitarian have developed." [17]

These mechanisms are a result of expansion of patient rights, the development of consumer groups, the emergence of nurse practitioners and physician assistants, and the shift of health regimen responsibility to the consumer, i.e., self-therapy in renal disease, etc.[18] Greater autonomy from physicians in these areas has signaled the need for educational processes which are more egalitarian and more dependent upon sharing health educational efforts with the consumer.

Educational analysts have stated that "a rational public policy... must include a vigorous and universal modification of the present arrangement which historically has placed the education of the several health professionals in separate watertight compartments." [19]

The employment of cooperative strategies could enlarge the capacity of professionals for interdependent action and expand the range of health services to include numerous arrangements of professionals.

D. Framework of Cooperation

Several factors influence the development of a framework of cooperation: (1) the complexity of medical education, (2) the growing curricular responsibility of health professional and medical schools, (3) the dramatic rise in the importance and volume of research, and (4) the rising cost of education.[20] These factors influence the ability of the educational system to produce rapid interprofessional changes in the university.

Sharing resources in an educational venture requires the depoliticization of the decision-making process[21] and an active advocacy of a biopsychosocial model.[22] There is evidence, as Dr. Rehr has demonstrated, that physicians do not agree that collaboration is necessary, do not hold the same value orientation as other professions, and permit themselves only a narrow biomedical view.[23] Without this necessary framework of cooperation, narrow institutional, professional bias remains.

In an atmosphere of cooperation, educational ventures must include all, especially physicians who hold power and vested interests and who must be persuaded of the necessity of going beyond these views: 1) to a biopsychosocial view of disease and 2) to an agreement that comprehensive health care is important.

1. A Biomedical View

The influence of a biomedical view is pervasive, leading Engel to conclude that the dominant model of disease today is biomedical. This view assumes disease to be fully accounted for by deviations from the norm of measurable, biological (somatic) variables.[24]

"It leaves", stated Engel, "no room within its framework for the social, psychological, and behavioral dimensions." [25] Teamwork and

the coordination of various subspecialities require by their very nature a committment to providing an understanding of the determinants of disease. Further, they require arriving at rational treatments based upon a wholistic view of the consumer, the social context within which he lives, and the complementary system devised by society to deal with the disruptive effects of illness.[26]

To both neutralize a belief system (the biomedical view) and to break down the caste-like system governing appropriate procedures and concerns for health care requires de-emphasizing the medical aspects of health care. Professional dominance perpetuates a prevailing biomedical view of disease and insulates the physician from challenges to his practice by the team. It also denies the consumers access to a variety of coordinated health care disciplines' services.

E. Teamwork

1. The Problems of Team Education

Education in teamwork, thus, must deal with the three essential problems: professional dominance, the biomedical model, and the ability to work with others professionally in a comprehensive health care framework. Educators have added to this constellation the following concepts: (a) teamwork may be taught at an early, preprofessional stage; (b) teamwork requires the mastery of certain attitudes and conceptual frameworks; and (c) conflicting perceptions of different professions can be reduced, leading to greater satisfaction with teamwork.

Bracht and Anderson have concluded, "Modern health professional education has embraced the concept of the interdisciplinary health team as necessary to the provision of high quality, comprehensive health

care." [27]

Yet, the general cultures of the professions has been influenced by differing, even hostile, attitudes toward cooperation engendered by the professional-socialization process. Physicians are more committed to an autonomous, biomedical view of practice. This "culture" has been reinforced by limited educational interaction between the professions.[28]

Education in teamwork must deal essentially with the professional and the preprofessional's ability to work within a context of structural change and a cultural framework which includes frames of thought congruent with each other. Thus, as Bracht and others have observed, the numbers of different professionals on today's health team has risen markedly without accompanying educational efforts to meet the problems posed by working together.[29]

"There is", as Coggeshall has written, "every likelihood that the team approach will expand in use in decades ahead and that teams will become larger, more comprehensive in the range of skills included, and more complex in structure." This will further advance the institutionalization of health care, and it has profound implications for the education of all persons entering medicine, other health professions, and related occupations.[30]

3. Functions of Teamwork

There is a challenge and a demand for educational services in teamwork. This expected expansion of the functions of teamwork has made theorists concentrate upon the concepts central to team functioning.[31] Beckhard, Wise, and Silver have documented these concepts in organizational burdens on institutions of higher learning.[32] Kane further

documented that the problems in teams were similar to small group difficulties in communication, organization, efficiency, and role differentiation.[33] Dr. Kong-Ming New recognized that certain central problems resulted in ineffectual functioning. These problems were: lack of equality, lack of availability of time for team meetings, knowledge marginality in some professions, lack of clear task assignment, and lack of a clear domain.[34]

The organizational issue arising out of these problems has been lack of clarity about the expectations of team members. Due to the impact of the organizational, communications, and role problems mentioned, further problems of lack of professional trust, lack of time, lack of shared knowledge, lack of task assignment, and domain consensus compound the issues. For example, nurses and physicians frequently reported conflicts over the issuing of orders that were either contradictory or unsupported. Both groups mentioned the lack of availability of physicians. Social workers frequently complain about domain conflicts with nurses who take over counseling situations. Frequently, all of them complain about the lack of knowledge of physician assistants and other occasional members of the team such as clinical dieticians and occupational therapists. Most of these issues arise from lack of communication about task assignments. An inability to define or accept the status of each team member results in unequal input and lack of attention to the knowledge of each person. These problems contribute to personal unhappiness with teams.

Expectations of team members as to personal and remunerative reward has varied widely. One expectation might be that: the financial rewards of the team relationships would be proportional to the invest-

ment--the greater the investment (i.e. education in team process), the greater the emotional and financial reward.[35] Banta and Fox pointed out that some literature contradicted this assumption (e.g., little satisfaction with teams has been reported).[36] As one theorist suggested, team members learned to avoid unjust or time-consuming exchanges and learned to concentrate on activities that were rewarded with promotions, etc.[37] This Project attempted to change the reward structure by educating students to deal with their differences openly.

3. Professional Status

An increase in status has not commonly resulted from increased team effort. A higher status dimension for team participation could be viewed as a reward received. Frequently on a team, a frozen hierarchy of professional status has existed with discrepant rewards, e.g., status and money.[38] It is clear that the greatest rewards of status and money go to physicians. Status on the health care teams created a dilemma because most health care teams consisted of individuals with varying levels of training and educational expertise, individuals with discrepant monetary rewards, and persons with status differentials which were not changed by participation on a team.

Also, problems of status existed in the faculty teaching team of the Interprofessional Project. Professional status, its uses and difficulties, became a major issue to be examined.

Status difficulties existed when individuals who possessed greater investment (higher education) also possessed fewer rewards (lower occupational status or income). Professionals whose investments (time and education) were higher than their financial or status rewards, consequently

experienced some difficulties in their role satisfaction.[39] For example, an allied health professional may invest a great deal in time and effort in team training and may have a doctorate. However, that individual will never have the financial rewards of a physician or the autonomy, especially if referrals must be physician-generated. An aim of the Project was to make students aware of the difficulties caused by differences in status.

In the development of an educational project for individuals of different professions, there were some inherent constraints. No amount of education can totally reduce conflict and change the professional reward system. Tension can still grow out of the professional's recognition of status discrepancy. Conflict can still develop from the differing stereotypical attitudes held about each profession. The history of the health professions has been replete with examples of situations exacerbated by the lack of recognition of attitudinal differences and status differentials. This Project tried to use these underlying attitudinal conflicts to create a positive configuration of health professionals and health teams. Professional education often ignores the potential educational benefit of using the human relationships in the class to shape attitudes; but in the course developed in this Project, a strong effort was made to take advantage of these relationships.

F. Definition of Terms

It was recognized that the process of socialization into a profession depends upon shaping the professional's cognitive system wholistically. The Project took into account the student's continual striving for consistency, push toward harmony in attitudes, perceptions and objectives in the actual set of training events. Over time, new

information aimed at changing attitudes will have disrupted the organized set of prior learning. The problem, then, is to understand how an adjustment is made between the ongoing structure and the new information (e.g., about health care teams), so that equilibrium can be restored.

1. The Learning Process in the Project

In designing the course, attention was given to the process of professional learning.

The learning process has been defined as the successive steps in a professional's cognition pattern which shaped his image or map of the world. His responses are shaped in part by the way his attitudes looked to him and by his response to educational efforts. Cohen and others have maintained that there is a continual striving for balance, a push toward harmonious fitting relationships between beliefs (beliefs in opportunity, desirability, and efficiency) in the professionalization process and in action.[40] In effect, the learning process over time, due to complex interactions, dictated the amount and possibility of change when attitudes were flexible and open. It also dictated the amount and usefulness of the applied and technical knowledge.

Several theoreticians have dealt with attitude formation and the development of a professional, particularly the restoration of a balance in the learning process. One conceptualization of the dynamic interchange, associated with Osgood, depicted the learning process and attitude formation as parallel developments: when assertions were made by persuasive efforts, these communications produced conflict, and subsequently perceptual change, and, then, attitudinal change.[41]

Perceptions which changed in the direction of increased balance depended upon the significance the individual attached to the ideas,

e.g., favorability or importance of health care teams. The extremity of initial attitudes toward other professions may tend to push individuals toward polarization and sterotyping behavior around the characteristics of each profession tested (e.g., dependent...independent, caring...not caring).[42] Attitudes toward other professionals which became increasingly more cordial were an indication of rapid progress toward acceptance of others' professional expertise and value on the health care team. These perceptual changes were the forerunners of attitudinal change. The Project attempted to measure these perceptual changes by measuring the change in attitudes toward teams and toward other health professionals.

2. Inculcation of Positive Attitudes: Attitude Development

Research has shown that a change in attitude toward others signified that there was less sterotypical feeling about professionals and that the process of attitude formation has been influenced.[43] Rosenburg and Abelson hypothesized that the disruption of an attitude between its emotional and belief components was a basic condition for the occurrence of positive attitude change.[44] Persuasive communication (e.g., learning about health care teams) would have been accepted in conjunction with the resolution of a new balance, i.e., a new attitude--such as "health care teams are more efficient". Awareness of this research helped to determine the structural components of the project, i.e., small group projects, discussion, etc.

Another theoretical conceptualization proposed that a dissonant attitudinal state existed when two elements were in contradiction when they should have been consonant in the learning process. If a professional strongly held that he did not like nurses, but then held the perception that working with health teams was important, the individual

would experience a learning problem. If professionals held a great many dissonant associations with a given attitude, e.g., physicians were recognized as important team members but disliked, the magnitude of the positive or negative agreement with statements about physicians or other professions could be measured. In fact, such measurements were made in the testing and evaluation phase of the Project. The evaluation tools served another purpose as well. They were learning tools for the students in the course, as sharing results showed.

In general, it has been shown that a professional changed his attitude by reducing his inconsistent statements and by decreasing his disagreement with the number and importance, or both, of inconsistent perceptions. By developing a perception of more consistent, positive attitudes towards physicians, etc., he could incrementally change his attitude.[45] Therefore, a preprofessional, due to his inexperience, would have unformed attitudes toward other professionals and could be made more amenable to decreasing his inconsistent perceptions through the learning process.

Historically, health preprofessionals had a stereotyped view of other professions due to their separate, disparate training in isolation.[46] Therefore, they experienced considerable difficulty in adapting perceptions to collaborative efforts.[47] Their different, sometimes conflicting value-orientation, different socialization processes, and subsequent perception of status differentials led to a variety of problems.[48] There were, thus, obstacles to change in their attitudes.

Most health care teams have consisted of: individuals with discrepant rewards, different expectations, different perceptions of status differentials, different perceptions about each other, and different

attitudes.[49] The development of an educational Project for individuals of different professions dealt with these inherent constraints. However, education alone cannot totally alleviate or eliminate all conflict, or alter the reward system. The students were made aware of conflicts and problems among team members in small group discussions and in their projects which made them aware of the tension which could grow out of the professional's lack of awareness and recognition of these issues.

G. Team Interaction

Team interaction created an opportunity to explore resultant problems. Leadership difficulties in the group training contributed to a lack of positive attitudinal framework, intense competition, and role strain which resulted in conflicting, mobilized expectations. Jackson stated in his research on the results of inconsistence: "Inconsistency, then, produces conflicting expectations which resulted in frustration and uncertainty for the individual and thus increased his psychological 'stress or strain'".[51]

The underlying thrust of the Interprofessional Project was to reduce frustration and uncertainty by reducing inconsistency. This was accomplished by acquainting the members of the health team with what they rightfully could expect from others' attitudes and what they, in turn, could rightfully expect from their faculty teaching team; the aim was to reduce the amount of stereotypical rejection of certain health disciplines by reinforcing a consistent choice of partners on teams.

In regard to teams, the Columbia Point Study on Health Care Teams and Dravecky's "Study of the Utilization of Para-professionals in Private Practice" also documented increased frustration.[52] Dravecky pointed

out: "The effective use of paramedical personnel and/or any organizational change required a shift in the 'perceptual set' and implied 'the delegation of tasks which was not easy to resolve due to these perceived sets'".[53]

In the above studies, strain resulted from perceived inconsistencies between what is felt and mixed feelings about teams and adherence to an egalitarian value, particularly as regards team leadership. These feelings could affect the outcome of interprofessional training which attempted to use, not remove, conflict.[54] However, many of the "rights" and "assumed rights of each professional" remained hidden from conscious view in the occupational task assignment within teams. Therefore, many of the tasks the preprofessional had engaged in, according to his status in the professional hierarchy, had to be consistent with others' view of him and determined his performance in that particular role.[55] Tasks were influenced by assumed hidden rights which resulted in inconsistency in views of oneself and others. The Project attempted to reduce this inconsistency.

H. Statement of Major Issues

Stereotyped views between and among health professionals has led to attitudinal problems and strains in developing a team approach to health care services. Issues arose from the different historical development of each health care profession, their specific value base, and their socialization process. "Anticipatory socialization" of preprofessionals might be augmented by the teaching of new team skills and by reduction of stereotyped attitudes at any early stage of training.

The educational aim of the Interprofessional Project was to develop

an increased knowledge base as a by-product of interaction within the training program. In turn, this knowledge could lead to greater tolerance of conflict and lessened professional strain. The process of training could be instrumental in terms of its contribution to (or lack of contribution to) the professional's emerging conflicts and positive attitudes in interprofessional situations. The Project's design was influenced by: the educational methods used, the curriculum design, and the increased availability of resource material. The Project dealt with the issues that arose in planning the course, defining a facilitating learning-social process, while simultaneously providing the fundamental professional knowledge for teamwork and for basic health knowledge. Each of these issues was assessed in the evaluation phase of the Project.

1. Requirements of Team Education

Like all interprofessional action, conjoint teaching and learning as a style of "delivery", emerged slowly. As Dana and Sheps concluded: "The learning of interprofessional behavior did not require that each member of a related profession think alike, but rather be able to act together."[56]

The statements below include some of the basic assumptions influencing team education requirements:

a. Every individual includes within his learning set (professional education) attitudes concerning his status level in the education, occupational, ethnic, and income hierarchies.

b. Every individual possesses attitudes defining education as an ascribed investment, occupation as a social reward, and income as a reward.

c. Every individual possesses (learned) attitudes which define the proper relation that should hold between the professions, his investment in education, and his reward dimensions.[57]

These statements were used in helping design the objectives and the test instruments to see if attitudes and perceptions toward health care teams or other health professionals had been modified in the course.

The use of the concept of attitude alteration in training to reduce conflict in health care professions was suggested by the following:

1. Professional attitudes were a specific unit of analysis with boundaries which could be influenced by training.
2. A changed perception of role or a changed perception of belief in others' role (e.g., health care teams are more efficient) could result in positive modification of attitude.[58]

Within the area of role change and growth, attitude formation became an important requirement of all successful early career development.[59] The inculcation of role obligations and privileges has been one of the primary results of education and socialization into the health professions. An effort could be made to produce consistent opinions and more positive attitudes toward health professionals as part of the educational requirements.

The educational process used in the interdepartmental course relied on the inculcation of a revised student concept of himself as a team member including the following:

a. The ability to define his role as it evolved in teams,
b. The acceptance of colleague qualifications and an understanding of task or function which led to disciplined judgment and the capacity to define colleague responsibility,

c. The recognition of diversity of patterns of cognitive style and a core of learned interprofessional behavior.[60]

Attempts to create courses dealing directly with these learning processes could lead to better education, and subsequently, better team care.

Pellegrino, at the Institute of Medicine of the National Academy of Sciences, expertly summed up the need for team education:

> "The concept of the team as a transitory grouping of health professionals of varying degrees of permanence, dedicated to the satisfaction of specifically defined needs of patients or communities, with its composition and captaincy deriving from the nature of those needs is (required). This (has been) the conception we must communicate to every student in the health professions. This (is) the concept our students should see illustrated in their educational institutions. ..."[61]

In summary, there are many political, economic and professional reasons for creating a team orientation in health education. The Project was one demonstration of how professional schools cooperatively might begin to change without seeking additional funds or resources. It was also a demonstration that team education was needed for human reasons. The essential human reason for this interdependent education was the need to take into account both the social and human needs of patients and health care workers. More effective and efficient care can be based upon better communication and coordination of the numerous new and old health personnel within the framework of meeting social and emotional needs in comprehensive health care.

Chapter II

1. Stephen Graubard, ed., Preface "Doing Better and Feeling Worse in the United States", Daedalus, (Winter, 1977), p. 11.

2. John Millis, A Rational Policy for Medical Education and its Financing, (New York: National Fund for Medical Education, 1971), pp. 57-59.

3. Herbert E. Klarman, "The Financing of Health Care" in Daedalus, (Winter, 1977), p. 215.

4. George Engel, "The Health Professions", Science, 196,(April,1977) p.134.

5. Naomi I. Brill, Teamwork: Working Together in the Human Services, (New York: J. B. Lippincott, 1976,) p.7. See, also, Albert A. Wessen "Behavioral Science in a Community Health Clerkship: An Analysis of Problems and Opportunities, "The Behavioral Sciences and Preventive Medicine: Opportunities and Dilemmas", Robert L. Kane ed., A Conference Sponsored by the John E. Fogerty International Center and the National Institute of Health, Washington, D.C.: DHEW publication No. (NIH)76-878, pp. 179-191.

6. Elliot Friedson, Professional Dominance,(New York: Atherton, 1970), p. 10. See, also, Elliot Friedson, "Professionalism. The Doctor's Dilemma", Social Policy, (Jan.-Feb., 1971), p. 82.

7. Engel, op. cit., p. 135.

8. Millis, op. cit., p. 42.

9. Friedson, op. cit., p. vii.

10. Rodney Coe, Sociology of Medicine, (New York: McGraw-Hill, 1970), pp. 189-195. David Mechanic, Medical Sociology: A Selective View, (New York: Free Press), pp. 325-365.

11. Friedson, op. cit., p. 55.

12. Millis, op. cit., p. 25.

13. Eveline Burns, "Social Policy and the Health Services: The Choices Ahead", American Journal of Public Health, 17, No. 2, (Feb.1967),p.201.

14. C. R. Aradine and M. F. Hansen, "Interdisciplinary Teamwork in Family Health Care" in Nursing Clinicians of North America, 5:211, (1970), p. 108.

15. Uwe E. Reinhardt, "Proposed Changes in the Organization of Health Care Delivery: A Overview and Critique", Milbank Memorial Fund Quarterly, 51: (Spring, 1973), pp. 169-170.

16. Ibid.

17. Renee Fox, "The Medicalization and Demedicalization of American Society" in Daedalus, (Winter, 1977), p. 19.

18. Alfred J. Kahn, "Institutional Constraints to Interprofessional Practice", Medicine and Social Work: A Exploration in Interprofessionalism, (Sept. 1973), p. 106.

19. Millis, op. cit., p. 92.

20. Robert H. Ebert, "Medical Education in the United States" in Graubard, Daedalus, (Winter, 1977), pp. 182-183.

21. Robert Merton, et al. The Student Physician, (Cambridge: Harvard University Press, 1957), pp. 106-117.

22. Engel, op. cit., p. 132.

23. Helen Rehr, "Comparison of Health Care Professions in Predicted Outlook on Patient Compliance and in General Attitude Regarding Collaboration and Health Care", unpublished dissertation, Columbia University, (1970), p. 81.

24. Engel, op. cit., p. 129.

25. Ibid, p. 130.

26. Ibid, p. 132.

27. Neil Bracht and Inge Anderson, "Community Fieldwork Collaboration Between Medical and Social Work Students", Social Work in Health Care, 1, (Fall, 1975), p. 7.

28. Alvin Zander, "Influencing People in the Face to Face Setting. Research Findings and Their Applications", Health Education Monographs, 13, (Rye, New York: Society of Public Health Educators, Inc., 1962), p. 315.

29. Brach, op. cit., p. 7.

30. Coggeshall, op. cit., p. 44.

31. Peter King-Ming New, "An Analysis of the Concept of Teamwork", Community Mental Health Journal 4, (September, 1968), p. 327.

32, Richard Beckhard, "Organizational Issues in the Team Delivery of Comprehensive Health Care," Milbank Memorial Fund Quarterly, (1972), see pp. 317-35.

33. Rosalie A. Kane, "The Interprofessional Team as a Small Group," Social Work in Health Care, 1, (Fall, 1975), p. 19.

34. King-Ming New, op. cit., p. 329.

35. George Homans, Social Behavior: Its Elementary Forms, (New York: Harcourt and Brace, 1961), pp. 332-333.

36. David Banta and Renee C. Fox, "Role Strains of a Health Care Team in a Poverty Community," Social Science and Medicine, 6, (1972), p. 697.

37. Homans, op. cit., p. 132.

38. James A. Geschwender, "Status Inconsistency, Social Isolation, and Individual Unrest," Social Forces, 36, (June, 1968), p. 478. See, also, James Geschwender, "Continuities in Theories of Status Consistency and Cognitive Dissonance," Social Forces, 36, (September, 1967), pp. 160-171.

39. Leon Festinger, A Theory of Cognitive Dissonance, (Stanford, California, Stanford University Press, 1957); J. W. Brehn and A. R. Cohen, Exploration in Cognitive Dissonance, (New York: Wiley, 1962).

40. Arthur B. Cohen, Attitude Change and Social Influence, (New York: Basic Books, 1964), p. 65.

41. Ibid, p. 68.

42. Ibid.

43. Charles E. Osgood, "Cognitive Dynamics in the Conduct of Human Affairs," Public Opinion Quarterly, (1960), 24, pp. 341-365.

44. M. J. Rosenberg and R. P. Abelson, "An Analysis of Cognitive Balancing" in C. I. Hovland and M. J. Rosenberg, eds. Attitude, Organization, and Change, (New Haven, Connecticut: Yale University Press, 1969), pp. 112-163.

45. Festinger, op. cit., p. 3.

46. Cohen, op. cit., p. 139.

47. Muzafer Sherif, A Study of Some Social Factors in Perception, (September, 1935), 27, p. 187; S. E. Asch "Effects of Group Pressure Upon the Modification and Distortion of Judgments" in Harold Guelzlson, ed., Groups, Leadership and Men, (Pittsburgh: Carnegie Press), pp. 177-190.

48. Robert Trotter, "Evolution of Language: A Hatful of Theories," APA Moniter; (January, 1976), no. 1, 7, p. 12.

49. Ibid, p. 13.

50. Detailed evidence of the great increase in the number and types of materials related to cognitive development have recently been published as shown in J. B. Carroll and R. O. Freedle's Language Comprehension and the Acquisition of Knowledge, (New York: Halsted Press, 1972), pp. 1-589;

A. W. Melton and E. Melton, eds., Coding Processes in Human Memory (New York: Halsted Press, 1972), pp. 1-470;

E. Tulving and W. Donaldson, Organization of Memory, (Boston: Academic Press, 1972), pp. 1-650.

51. Elton Jackson, "Status Inconsistency and Symptoms of Stress," American Sociological Review (August, 1962) 27, p. 470.

52. Banta, op. cit., p. 721.

53. Evelyn Dravecky, "Utilization of Paraprofessions in Private Practice," Paper presented at APHA, (Fall, 1974), mimeographed, p. 15.

54. Ibid, p. 19.

55. James . Beck and John C. Cassel, "Role Inconsistency and Health Status," Social Science and Medicine, (1972), 6, p. 740.

56. Bess Dana and Cecil G. Sheps, "Trends and Issues in Interprofessional Education: Pride, Prejudice and Progress," Journal of Education for Social Work, (Fall, 19-8), p. 37.

57. Beck and Cassel, op. cit., p. 739.

58. Wise et al, op. cit., p. 79.

59. Beck and Cassel, op. cit., p. 740.

60. Rehr, Helen, op. cit., p. 170

61. Edmund Pellegrino, "What's Wrong With Nurse Physician Relationships in Today's Hospitals", Hospitals, 40, (December, 1966), p. 170.

CHAPTER III

THE HISTORY AND GROWTH OF INTERPROFESSIONAL TEAM TRAINING

A. Lack of Formal Training

An essential aspect of formal professional health education, team preparation, has been missing from health care curricula, especially medical school curricula. Resistance to change has been augmented by a rigid conceptualization of traditional science, adherence to the medical model of disease, and the separatism of professional schools. This separatism was encouraged by the way faculties and universities managed to structure programs without regard to duplication of efforts in similar course work and without consideration of the long term effects on students.

One salient characteristic of these different educational programs until recently was their almost pervasive acceptance of the superiority of medical education as the normative model for all.

The effect on these disparate programs was that each faculty and program had little knowledge of the curriculum, purpose, or skills of the other while trying to achieve parity with medicine in terms of scientific base, funding, and length of preparation time. Consequently, the possibility of conjoint training and funding with shared coursework has been a recent development in most universities. Most professional schools

operated in splendid isolation and in competition with each other.

As a consequence of this isolation, little momentum was observed in interprofessional education until the late nineteen-sixties.

Since 1969, there has been an explosion of interest in team work which has enriched the training and research literature.[1] Numerous historical factors contributed to this development. Historically, the actual word "team" was not used to describe interprofessional activities. As early as 1905, "collaborative association" appeared as a definition of limited cooperation.[2] Dr. Richard C. Cabot introduced the term "collaborative association" at the Massachusetts Hospital.[3] Mary Richmond further defined this term in 1917 by stating, "It (has been) evident that both groups of public servants--the social and the medical--will serve the public best when they have thoroughly mastered in all its details the technique of working together."[4]

Due to these early pioneers in social work, a very close collaboration developed between social workers, nurses, ministers and physicians, etc. Consequently, the forerunners of public and community health centers initially developed a collaborative ideal. However, most of the collaborative work and the pressure for teamwork developed outside of traditional health settings.

B. The Development of Teamwork in Health Settings.

Early social reformers forged an alliance between medicine and social work. As Cabot wrote, "People are poor because they are sick . . . hence, the social workers must be in closest touch with physicians, and must in my opinion know a good deal of medicine."[5] In his book, Social Service and the Art of Healing and Social Work: Doctor and Social Workers, (the

first treatise on interprofessional relations), Cabot used the word "social assistant" and "agent of the physician" reflecting the dominance of the physician in any collaborative effort.[6] The social worker's information gathering on the team was emphasized while the physician's function of bringing about therapeutic change was stressed. This working conception essentially was very limited; but the growing professional ideal of collaboration led to an effort to train professionals experientially and "on the job."

Although role definition seemed clear, the need for an educated collaborative professional created an issue. Dr. Davis at the Boston Dispensary in 1908 declared:

> Every profession has its own way of looking at the world. We see what we are interested in and overlook what we are not looking for. This is true of social workers and of doctors; of social institutions; and of medical institutions. We need to have the eye that sees people as well as disease, and therefore, the physician, the specialist . . . needs to have by his side the specialist in people, the social worker.[7]

The issue continued since social workers accepted the fact that physicians would refer clients to them, giving the physician the main authority over case finding. Therefore, control of the "eye that sees people" remained firmly in the hands of medicine.

In 1909 Cabot, and other pioneers of medical social service, considered teamwork to be of such importance that, "it (was) clearly because people can't or won't pull together that the work (moved) on no faster than it (did)."[8] Although recognition was given to the problem, there were no educational programs nor significant in-service training, nor any enlargement of the social workers' role beyond the one of recipient of referrals.

C. The Development of Child Guidance Team and the Mental Hygiene Movement

During the period that Cabot, Richmond, and others were integrating medical social service departments into hospitals, a similar ferment was taking place in psychiatry. Leaders who importuned a doctrine of social responsibility introduced a dynamic interpretation of human behavior compatible with social work practice. The mental hygiene movement produced leaders who were the forefathers of collaborative efforts.[9] These leaders advocated collaborative efforts between social workers, psychologists, psychiatrists, and judges, etc., interested in the prevention of delinquency. This movement coincided with the early beginnings of child guidance clinics. Two reformers, Julia Lathrop and Allen Burns, established the Juvenile Psychopathic Institute in 1909.[10] In 1917, when the Judge Baker Foundation was established under the guidance of Dr. William Healy, it provided "a model of interprofessional teamwork" which was to characterize the child guidance clinics established by the Commonwealth Fund in the 1920's.[11]

The Mental Hygiene movement was founded in 1909 by Clifford Beers. He organized a National Committee for Mental Hygiene, a joint lay-professional organization dedicated to the improvement of institutional care.[12] This organization sponsored a series of studies on the care and treatment of the mentally ill. An invaluable contribution of the movement was the establishment of a common body of knowledge. This knowledge helped to eliminate some of the barriers to interprofessional knowledge.

In 1920, the Commonwealth Fund provided funds for the prevention and control of delinquency by developing child guidance clinics. Teams were experimentally used (1922 to 1927) in the development of child

guidance clinics. As Powers pointed out in his study of child guidance teams, most training around teamwork was practical and on the job. "All these newly formed clinics," as Powers recognized, had "with varying degrees of success (experimented with) an interprofessional team approach."[13] As a result of the demonstration projects, no one development was more widely accepted than the interprofessional team. The professions had "arrived at a point . . . where each had a substantial contribution to make . . . and at the same time was sufficiently appreciative of the (others') contribution . . . toward a common goal."[14] As Stevenson and Smith pointed out, gradual changes in "on the job training", cross-fertilization, and adjustment resulted in the enlargement of team scope and responsibility.[15]

Not until the emergency of cooperative training projects in allied health, and the resurgence of the interest in combining the first two years of medicine and dentistry, was serious consideration given to educating professionals for collaborative teamwork. Teams in rehabilitation developed after World War II around the injured veteran; it was within this context that many health professionals first learned about the necessity of joint coordinated efforts.

D. The Emergence of Interprofessional Educational Efforts

Some of the earliest programs in teamwork were instituted in an inter-disciplinary mode.[16] Two kinds of teamwork emerged: hierarchical and democratic. Concepts about the authority, the size of the team, and the status differences were related to: "strong common values, confidence in each professional's ability and certainty in each other's interest to contribute to a common . . . goal." [17] The concept of team underwent

revision due to the proliferation of para-professionals and professions, in addition to the mounting complexity of health care. In the 1950's, the concept of primary health care team was aligned with preventive medicine.[18] At this time, the concept of team was defined as a group of individual professionals who worked and who assigned tasks in order to accomplish the tasks of the group.

Public Health professionals initiated usage of the term "primary health care" and "primary health care team".[19] Connelly mentioned in his treatise on teams eight different types of health teams. He determined that the only common element in health teams was that composition usually followed function. This element was usually dependent upon the needs of the client population, the goals and tasks of the delivery setting and the availability of the professions.[20] Parker, in the 1970's, introduced the concept of the nuclear primary care team.[21] In this concept, the members provided most of the primary care functions to a family who became the recipient of a joint treatment plan.

By the 1970's, each profession had staked its claim to a specialized expertise.[22] Tanner and Carmichael affirmed that an uneasy truce between social work and medicine had been established particularly where the involved professionals had not been clearly aware of their differing roles and their individual and interlocking contributions.[23] Generally, training was either post-graduate, on-the-job training, or voluntary. Throughout the 50's and 60's, there was much talk of training teams, but actually there was very little training and minimal delivery of actual team services. The major exception to this was the movement to establish neighborhood health centers, such as the Martin Luther King Health Center, and some

briefly funded OEO projects.

In the late 1960's, research into professional socialization, into the need for specialization, and into the need for coordinated care produced many joint efforts.[24] The format for these concerted efforts was usually a course taught to one professional group by an expert who had training in another field. Most schools of social work either offered courses by sociologist or psychiatrist,or offered coordinated courses in social work and law.[25] These specialty courses were important precursors of interprofessional education.[26] The functional qualities of these efforts and other programs were grouped in four prototypes for these educational approaches: the above traditional type, the common interest type, the case presentation type, and the health team type as shown in Figure 2 on page and as discussed below.[27]

1. Types of Interprofessional Programs.

The most common type of educational program was the common interest course, as illustrated in Figure 2. In this program, courses were taught several professions and a joint degree major might or might not result. In a second form, some BSW and MSW programs allowed students to take a core of courses in areas such as social welfare and health problems. However, the faculty and students in each program tended to be heterogeneousin regard to different backgrounds, varying career goals, and alternating career commitment levels. The third type of educational program -- case presentation has had a varied history (nursing and social work, medicine and social work). In this instance, the collaboration process was centered around case presentation. Although Connelly in a review of such programs, described them as a generally "passive activity", usually the effort resulted in some attitude change.[28]

FIGURE 2: TYPE OF INTERPROFESSIONAL PROGRAMS

Types	Distinguishing Characteristics	Content	Students	Format	Common Topics
TRADITIONAL	Primarily Inter-professional from a teaching stand-point	Two or more professions	One Profes-sion	Lecture, dis-cussion, etc.	1. Law and Social Work 2. Health Care Policy and Issues
COMMON INTEREST	Topics related to common science re-quirements or "non-technical" aspects of health/social behavior	Content oriented (relative to health pro-fessions) Topical	Multi-Profes-sional	Lecture dis-cussion, seminar	1. Problems of Health Care Delivery 2. Financing Health Care 3. Moral and Ethical Problems
CASE PRESENTATION	Client center-ed activity-relation of academic study to actual client	Interesting cases demon-strating com-prehensive care	Uni-or Multi-Profes-sion	Clinical Case Conference	1. Diagnostically Oriented 2. Social History Oriented 3. Rehabilitation Oriented
HEALTH TEAM 1. Research Team	Several disci-plines share joint respon-sibility for some task which requires	Study a par-ticular pro-blem through research meth-odology	Inter-profes-sional	Independent or guided study through survey or other methods	1. Community Attitude Survey-particularly of University Health Centers 2. "State of the Art" Studies
2. Patient Care Team		Responsibility for provided comprehensive care jointly	Inter-profes-sional	Community Lab: Clinical work on-off campus with clinical conference	1. Role Definition 2. Group Process 3. Integrated Care/Peer Review 4. Non-Institutional Care, Community Based

Adapted from a (mimeographed) paper presented by Richard B. Fox, and Tom Connelly, Director, Office of Special Programs, College of Health Professionals. AAMC Institute on Health Care Teams. University of Kentucky, School of Allied Health, 1977.

The fourth type of program is the more recent health team approach as utilized in this project. The health team program had been presented in two different approaches; the research team and the client-focused team. The ultimate objective of both types of teams is to jointly provide better, more coordinated care.

By 1970, the growth of health team projects had culminated in a far-reaching governmental policy statement. The federal policy urged that health professionals be members of the primary family health teams or fully utilized in the delivery of comprehensive care. This statement was a part of the public policy outlined in a 1970 White Paper which defined the individual's right to health care and the individual's right to an economical and beneficial solution to the crisis in our health care system.[29]

2. Changes in Health Care Practice and Settings

Changes in health care practice, huge cost increases, and the introduction of governmental control through medicaid and medicare made policymakers aware that organizational changes needed to be made in the educational system.[30] Some of these organizational changes included changes in the way the professions were structured.[31] Medical educators were aware of these changes.[32] As Darley, Coggeshall, and Millis have stated, there had been a growing awareness of the necessity of changing preparation for teamwork.[33]

One major impetus for educational change has been the proliferation of health care professions. Federal support of allied health personnel has clearly led to new task assignments which affect teams. Millis has stated in his position paper in 1973, that acute shortages and demand created

new kinds of roles for health personnel.[34] The alliance between the public and private health care sectors in education, as well as an expanded delivery set-up, has meant that a framework of innovations has been evolving to meet future needs.

The changes which have occurred in each of the health professions have not taken place in a vacuum. Each change on the part of one profession has necessitated adjustment on the part of the others. To a greater or lesser extent, the modification of role expectations occurred continuously within every professional group. The extent to which training could shorten the amount of individual adjustment time and could make the members of a professional team aware of these changes has been an important consideration. The potential inconsistencies in individual professionals may, in large part, account for the ultimate effectiveness of the team.

This evaluation tried to explore and to weigh several factors which may have contributed to a better understanding of the effect and role of experience. The following section reviews some of the educational research literature related to this endeavor.

There were several levels on which to approach a review of educational literature concerning interprofessional teamwork. While there have been a number of published reports concerning the various forms, tactics, and techniques of interprofessional process itself, very little systematic analysis or empirical testing has been done. The following discussion, thus, limits itself to the published, experimental reports of interprofessional teams.

E. Survey of Educational Research Literature

Although there has been a limited amount of educational research, some educational studies have focused on teamwork and training. Beloff, in an evaluative review of a team teaching in clinical areas at Yale, selected medical students as his focus.[35] Several factors leading to medical student attitudinal change were measured pertinent to team conferences and interaction. Student attitudinal change was measured in four areas: interest in the client as an individual; consideration of social impact on health care; understanding of the importance of teamwork; and agreement with the concepts of family health care.[36] Students' attitudes changed positively after a clinical team experience.

Younger students in this project showed more change. The length of student experience was important. For example, students were less pleased with the teaching methods during the first year. However, this could be attributed more to faculty-staff inexperience than to an inherent problem. A team approach was perceived as more relevant when the faculty-staff teams functioned more smoothly as role models.

In a much more time-limited framework, Carlaw and Callan conducted a three-day training program for faculty with three days of follow-up. They evaluated the experience by pursuing open-ended questions interspersed with attitudinal statements. They concluded that curriculum components could be integrated by role play. One major drawback to this program was the lack of follow-up after a period of time.[37]

One field experiment showing less positive results about attitudinal change was done by Lewis and Resnick in 1964. They studied nursing and medical students in a joint comprehensive care clinic. The authors concluded that medical cynicism and early professional socialization were factors in limiting successful training. They recommended that any

interprofessional experience begin early in preprofessional training.[38]

Duncan and Kempe's clinical results were based on an interprofessional experience of graduate students in a controlled setting. They found that exposure to other professions increased skill as well as increased the knowledge and utilization of social workers, public health nurses, and physicians. Interprofessional teams had greater awareness of the social aspects of the clients than did the controls. It should be noted that this project was conducted on a graduate level.[39] The only other similar study was a pilot project by Tanner, Linn, and Carmichael in which ten student teams of medical, nursing, and social work students were each assigned a family following the case presentation model. In addition to subjective favorable evaluations, some significant positive difference in the concepts of nurse, social worker, and family medicine were recorded for those students.[40]

F. Current Interprofessional Projects

There are several projects underway which related to this project's design. A similar project at the University of Minnesota included: a seminar for students at seven schools; a format of four general sessions on teamwork followed by three, small-group experiences ; and the building of smaller groups into simulated teams to carry out a community health project. In another program, Royer and Van de Creek worked intensively with a single student team in the Student Health Service at the University of Indiana. They concluded from subjective data that basic professional identity had to precede clinical interprofessional education. They felt that it was essential for each student to have his or her own professional model and to have experiential learning within group process.[41]

A three year, lecture/discussion, elective course in social medicine at the University of California was successful in fostering contact among the various professions in the area of seminar discussions. Lecture content, however, proved to be less successful. At the University of Wisconsin, student teams were asked to evaluate and to formulate a treatment plan for a theoretical family problem. Their conclusions indicated that successful training was brought about by: a mid-level knowledge of task expertise; knowledge of the principles of small-group interaction; and demonstration of skills basic to client evaluation.[42]

Since 1970 at the University of Nevada, students in the fields of medicine, nursing, and social work have taken basic courses together. In these courses there are introductions to the various professional roles, as well as some group-dynamics teaching. At the Medical College of Georgia, another basic experimental core group consists of 20 freshmen medical students, 20 junior nursing students, and 24 beginning physician's assistant students. These students all take basic sciences together. When final results of the effect and cost of this program become available, it should prove helpful in establishing some general principles of interprofessional education.[43]

The Institute for Health Team Development will have a major evaluation completed soon. This evaluation will concentrate on the optimum of clinical experience in six universities. The project will identify the specific elements which contributed to effective faculty training and effective learning in interprofessional education. The Institute has, also, established a private-practice Model Delivery Team which will serve as a research and training center on team delivery.[44]

From the above historical development and the research literature presented below, it seemed reasonable to conclude that experimentation should proceed before definitive guidelines are developed for undergraduate programs. In this project, carefully designed lectures, seminars, and discussion groups were appropriately used in order to simulate problems in skills management.

Few of the authors dealt with the status and attitudinal problems except indirectly. Siller, in an article on the boundaries of professional practice in rehabilitation, suggested that there may be a solution for interprofessional conflict.[45] With the exception of Eichorn, few authors noted that students must cope with the conflict generated by confrontation in order to be successful.[46]

G. Summary

In summary, this chapter presented a review of the empirical educational studies and other related projects. This chapter focused on studies specifically related to the concept of attitude change, various lengths of professional training, and general methods used in team training. Preclinical years have generated very little information which would make clear what training has to be done in order to make a future professional who would collaborate easily. It seemed reasonable to conclude that an interprofessional program, at the baccalaureate level, might be helpful.

The efficacy of an undergraduate preprofessional program has been at issue. Historically, since 1960, there has been a shift in professional education toward earlier specialization, more control with licensure, and a resultant shift of educational institutions toward professional baccalaureate preparation. The studies reviewed suggested preprofessional

preparation created an opportunity for a more favorable attitudinal outcome toward teamwork.

A central question in the project is whether or not early career training in team practice and exposure to positive attitude development results ultimately in better professional performance. This question could not be fully explored because it requires follow-up over a period of years. The controversy over whether such training should be presented on an undergraduate level should be more fully explored before a definitive conclusion is reached. However, this Project attempted to delineate the basic issues in the controversy over early preprofessional training by comparing preprofessionals in the course with professionals. This provided immediate feedback on the achievement of course objectives.

Chapter III

1. Monique K. Tichy, Health Care Teams: An Annotated Bibliography, (New York: Praeger Publishers), 1974, p. 4-177.

2. R.C. Cabot, Social Work: Essays on the Meeting Ground of Doctor and Social Worker (Boston and New York: Houghton Mifflin Company, 1919), pp. XXi, XXii.

3. R.C. Cabot, Social Service and the Art of Healing (ed. rev.; New York: Dodd, Mead and Company, 1928), p. 96.

4. Mary Richmond, Social Diagnosis (New York: Russell Sage Foundation, 1917), p. 209.

5. Cabot, op. cit, p. 102.

6. Cabot, Social Work: Essays on the Meeting Ground of Doctor and Social Worker, pp. 3, 7.

7. Michael Davis, "Social Aspects of a Medical Institution", Annual Proceedings National Charities Board (New York: 1916), p. 363.

8. Cabot, Social Service and the Art of Healing, p. 116.

9. R. Lubove, The Professional Altruist (Cambridge, Mass.: Harvard University Press, 1965), p. 56-60.

10. C.S. Stevenson, "Child Guidance and the National Committee for Mental Health", Orthopsychiatry, 19231-948, (eds.) Lourey and Sloan, pp. 27, 63.

11. William Healy and A.F. Bronner, "The Child Guidance Clinic: Birth and Growth of an Id", Ibid, p. 27.

12. Clifford Beers, A Mind that Found Itself (rev. ed., New York: Doubleday, Doran and Company, 1948).

13. Gerald T. Powers, "Role Conflict and Its Relationship to the Social Worker's Satisfaction with his Role on the Interprofessional Child Guidance Team," unpublished DSW dissertation (University of Pittsburgh, 1973), p. 37.

14. G.S. Stevenson and G. Smith, Child Guidance Clinics: A Quarter Century of Development. (New York: The Commonwealth Fund, 1934), p. 47.

15. Ibid.

16. Wayne Eaton, "Social Processes of Professional Teamwork" American Sociological Review, XVI (1951) p. 709.

17. Ibid, p. 710.

18. Alberta Parker, "The Team Approach to Primary Health Care", University Extension, Berkely, California, 1972 pp. 153.

19. Libby Tanner and Lynn Carmichael, "An Interdisciplinary Student Health Team Project in Comprehensive Family Health Care", Journal of Medical Education, (August, 1972) 47, pp. 656-658.

20. John Connelly, "Use of Ancillary Personnel in Children's Outpatient Departments", Clinical Pediatrics (April, 1965) 4, p. 234.

21. Parker, op. cit, p. 111.

22. Jerome Beloff and Richard Weinerman, "Yale Studies in Family Health Care - Park 1 - Planning and Pilot Test of a New Program", Journal of American Medical Association (February, 1967) 199, pp. 133-139.

23. R.W. Carlaw and L.B. Callan, "Team Training", Health Services Report, (April, 1973) ii, pp. 328-336.

24. Charles E. Lewis and Barbara Resnik, "Relative Orientations of Students of Medicine and Nursing to Ambulatory Patient Care", Journal of Medical Education (February, 1966), pp. 162-166.

25. Burris Duncan and Henry Kempe, "Joint Education of Medical Students and Allied Health Personnel", American Journal of Diseases of Children (November, 1968) 116, pp. 499-504.

26. Tanner et. al, op. cit, p. 859.

27. David Kindig, "Primary Health Care Teams: Issues for Team Delivery and Inter-disciplinary Education", AAMC Institute on Primary Care, (October, 1974) unpublish MSS, p. 16.

28. Ibid, p. 17.

29. Ibid.

30. J. Boufford and D. Kindig, "The Institute for Health Team Development - The Next Two Years" in H. Wise et. al., op. cit, p. 149.

31. Jerome Siller, "A Summary: On the Delineation of Boundaries of Professional Practice in Rehabilitation", Archives of Physical Medicine and Rehabilitation (September, 1971), pp. 410-412.

32. Suzanne Eichhorn, Becomming: The Evolution of Five Student Health Teams (New York: Ballinger Press, 1975), p. 301.

33. L. T. Coggeshall, "Planning for Medical Progress Through Education", report submitted to the executive council of the Association of American Medical Colleges, (Cambridge, Mass.: Harvard University Press, April, 1956); J. S. Millis, A Rational Public Policy for Medical Education and its Financing, (New York: The National Fund for Medical Education, 1971).

34. Millis, op. cit., p. 48.

35. Jerome Beloff and Mieko Korper, "The Health Team Model and Medical Care Utilization", J.A.M.A., (Jan. 17, 1942) 219, pp. 360-361.

36. Ibid.

37. Carlaw, op. cit., p. 329.

38. Charles Lewis and Barbara Resnik, "Relative Orientations of Students of Medicine and Nursing to Ambulatory Patient Care, Journal of Medical Education, (Feb. 1966), 41, pp. 162-166.

39. Burris Duncan and Henry Kempe, "Joint Education of Medical Students and Allied Health Personnel", American Journal of Diseases of Children, (Nov. 1968), 116, pp. 499-504.

40. Tanner, op. cit., p. 657.

41. Kindig, op. cit., p. 37.

42. Robert Atwell, "Interdependence of Medical and Allied Health Education", J.A.M.A., (July, 1970), 213, pp. 276-277.

43. Ibid.

44. Kindig, op. cit., pp. 48-50.

45. Siller, op. cit., p. 411.

46. Eichorn, op. cit., pp. 1-10.

CHAPTER IV

DESCRIPTION OF THE PROJECT: BACKGROUND, PLANNING, IMPLEMENTATION

The background and planning for the project are presented in this Chapter. In the first section a description of each school is provided to aid the reader in understanding the nature of the environment in which this project was undertaken. The second section deals with the plans for assessing the outcome of the project. A third section deals with the way in which the course was conducted with a focus on its three components (lecture-team teaching, group project, and group discussion). Student and faculty assessments of each of these three components are also presented.

A. Background and Planning

The project was conducted at the University of Connecticut, which has grown from a twelve-student agricultural school founded in 1881 to a large and complex state university with a total enrollment of 24,666. Some 6,261 students are enrolled as health professional students in the five professional schools described below. From a few structures in 1881, the university has grown to more than a hundred buildings on a 2,800 acre site, housing two colleges, nine schools, ten institutes and centers.

There were five health professional schools involved in this project. Two of the five schools were coordinated under the Vice President for Health Affairs and one was a separate graduate school. Two of these

schools were 60 miles from the main campus and three of the schools were located on the main campus. Two of the schools, the School of Allied Health Planning and the School of Medicine-Dentistry, were in the process of consolidating relatively new curricula which already involved joint training in several disciplines. The Interprofessional Project required cooperation in preprofessional, baccalaureate education and travel across administrative, distance, curricula, and student academic barriers.[1] The need for cooperation occurred just as the university began retrenchment in new programming.

1. The School of Nursing

The School of Nursing is the largest professional school with an enrollment equal to 11.2% of all graduate and professional students on the main campus. Established in 1946, the school has provided an opportunity to combine a general education with professional preparation beginning in the third year. Overall educational objectives are to prepare nursing students to assume general, clinical roles in a variety of settings.

The School strongly supported the development of Interdepartmental 200 in the initial and in later stages and developed a new, accredited curriculum which included the course. The course is now required by the School for Nursing students in their senior year. Thirty percent of the total faculty in nursing participated in the project.[2]

2. The School of Pharmacy

The School of Pharmacy is the second largest health professional school with 10% of all graduate and professional students. The School recently began offering a five-year program leading to a Bachelor of

Science degree. The three year pharmacy curriculum, largely biophysiologically oriented, has been undergoing modification.

Generally, it has been expected that pharmacy students will take Interdepartment 200 on an elective basis. The School of Pharmacy has actively supported the development in Interdepartment 200 with 20% of its total faculty.

3. The School of Allied Health Professions

The School of Allied Health Professions, located on the main campus, is the third largest health professional school to have participated in the Interprofessional Project with 6.3% of all graduates and professionals.

It was established as the newest professional school in 1972 to provide a source of approved education in the allied health fields. The School combined specialized education with a general college education leading to a Bachelor's degree. It offers programs in clinical dietetics, medical technology, and physical therapy.

The School has had a strong interprofessional philosophy since its founding and contributed 15% of its faculty resources to the project. The course has been required of upper division students in their first semester of training.

4. The School of Medicine and Dentistry

The School of Medicine and Dentistry, established in 1968, is the fourth largest health professional school. It has had the most rapid growth of the new schools. This school offers a full, four-year program leading to an M.D. or D.D.S. degree.

After a two-year preparation in the basic sciences, medical and

dental students enter professional courses on a block basis, taking only one or two courses at a time. Because of a strong biophysiological philosophy and a commitment to building internal structure, the School contributed a moderate amount during the initial committee development of Interdepartmental 200. About 5% of the medical faculty contributed to the Project.

5. The School of Social Work

The School of Social Work, located in a branch of the University with the School of Law, is the smallest health professional school with 4.1% of the total graduate health professional student enrollment.

Its basic educational program for the professional social worker is a two-year graduate curriculum leading to the Master of Social Work degree. There is no undergraduate sequence in social welfare; thus, students were recruited from sociology and other related liberal arts majors. Interdepartmental 200 was offered on an elective basis to undergraduates and selected health professional graduate students.

The curriculum at the School of Social Work has been in the process of modification, and a new curriculum has been planned. There are no plans to offer Interdepartmental 200 other than on an elective basis.

The School of Social Work contributed to the initial committee in the development of Interdepartmental 200 and supported it with 35% of the School of Social Work's faculty resources and time.

B. Planning of Interdepartmental 200

During the fall semester of 1976, Interdepartmental 200 (Ind. 200), an interdisciplinary approach to health care, was offered on a largely experimental basis. It was taught by a core team of faculty

members from the School of Allied Health Planning, Social Work, Nursing and Pharmacy. Curriculum materials focused on the role of the health team in the health care delivery system.

Course content included: examination of the meaning of health; overview of the health care delivery system; study of the preparation and roles of the health team members (independent and interdependent); consideration of the communication modes and forms of collaboration among team members; exploration of consumer roles; and examination of the ethical-legal responsibilities of health professionals.

Appendix A provides an outline and samples of the curriculum. An undergirding philosophy of the project was that learning together was essential to achieving together.

1. Development of Course

In the early 1970's, interprofessional education for health professionals received renewed attention, as outlined in Chapter II and Chapter III. Faculties were made aware of the need to find more efficient ways to provide quality education.

While there had been some precedent for interprofessional cooperation, the "interprofessional concept" was not a vital and integral part of health curriculum planning at the baccalaureate level.[3] These ideas and possibilities were discussed with representatives and deans of each of the health professional schools and/or departments within the University of Connecticut.

A meeting was held with representatives from the schools of Social Work, Pharmacy, Allied Health, and Nursing, in 1974 to form the Interdisciplinary Committee. Later, membership in this initial group was

expanded to include Medicine and Dentistry. Even though the designated representative changed from time to time during the planning period, the five schools were consistently represented.

During the early phases of planning, monthly meetings were held to plan a curriculum. Communications were sometimes difficult; however, relationships improved over time and communication became more effective and productive. It was recognized that a team effort in teaching aspects of health care could encourage joint efforts in the preparation of health professionals.

It was also apparent that certain similar core content was included in the curriculum of each School and/or department. Each School stressed the importance of a collaborative approach to health care, but each School was doing this in isolation. Each School was, also, aware of the paucity of interprofessional endeavors and had questioned whether isolation in teaching was actually at the roof of isolation in later professional interaction. The Schools ultimately agreed that a joint teaching endeavor could be both effective and efficient. The merit of this decision was, however, to be examined as to feasibility, cost, and practicality.

2. Planning of the Course in 1974

During 1974, the planning committee sought approval for this course from the Vice President of Health Affairs and the Deans of health-related schools. Their response to this project was positive and the faculties of the Schools of Nursing, Pharmacy, and Allied Health approved the course, with the Medicine and Social Work Schools offering it on an elective

basis in 1974 to a small number of health professionals. This offering prepared the way for the formal demonstration of the Project's utility and purpose in 1975. After 1975, the course became a regular offering in all the participating schools.

After the experimental offering, the course outline was formally and cooperatively developed and revised during the Summer of 1975 by faculty from all the schools represented. Weekly meetings were held during the Summer of 1975 at which objectives were agreed upon. Material was developed cooperatively and then discussed by the faculty planning team. A formal curriculum outline was made and agreed upon, and individual members of the planning team were asked to develop outlines and bibliographies for each section. The curriculum outline is in Appendix A. Teaching commitments from the faculty members were secured. The core team faculty remained the same throughout the planning phase in 1974 and 1975. However, it still was not clear whether the teaching responsibility for the course would be considered part of the regular teaching assignment. The Deans had to be approached for their final approval of faculty who would be away from regular classroom assignments.

Final faculty designations were made on the basis of regular assignment. A core team faculty was decided upon prior to the opening of school in 1975. The final selection of the core faculty team was made in the Deans' offices from a pool of volunteers from each of the health professional schools. The person selected was recommended by the faculty planning team who had become acquainted with faculty members'

interest, time, and activity in the Interdisciplinary Health Committee. The planning process included clarification of lines of responsibility, course planning and revision, and coordination of administration communication by the Interdisciplinary Health Committee.

The course reported on as the Project was, then, formally run from the Fall of 1975 to January of 1976, when the evaluation was completed.

C. Types of Students Taking Course

Students were solicited from the Schools of Nursing, Pharmacy, and Allied Health, and from the Departments of Pathobiology, Nutritional Science, Sociology,and Biology. The Departments of Sociology and Biology were to be the source of pre-social work and pre-medical students, respectively.

At each School or department, students were informed or advised of the course by their respective academic advisors. However, it was recognized that the course was inadequately publicized in 1974 in some departments. This inadequate publicity and the geographical separation of the schools presented problems. The majority of graduate students, for example, would not be on campus where the course was given. This situation was corrected in 1975 by better publicity and better scheduling.

A total of 65 students enrolled and completed the course in the Spring of 1974. In 1975 when the Project was conducted in its demonstration phase, 200 students were enrolled. The increase in enrollment was due to several factors: better advisor communication, student word of mouth, and greater general publicity. Enrollment for the course came primarily from students majoring in the specific programs of nursing, pharmacy, physical therapy, medical technology, clinical dietetics, and rehabilitation. There were few pre-medical students and few graduate

students.

For purposes of analysis, graduate students from different fields were grouped together, since there were so few. Pre-medical and other biology students were grouped with students from pre-social work areas since both groups planned on graduate studies as opposed to students in the other health disciplines mentioned above.

D. Method of Conducting the Course: Implementation in 1975

The course involved a series of lectures (Interdepartmental 200) offered two days per week for fifteen weeks and two weekly small discussion groups led by faculty teams which met following the lectures. The purpose of the small groups were to: 1) discuss lecture material and 2) complete a group project. The course advisory group from the University as a whole reviewed the overall progress of the course and recommended changes to the University. In addition, there were weekly administrative meetings which dealt with the mechanics of the course and faculty problems.

Overall, the course comprised three components:

1. Lecture component, large class

The objective of the lecture was to give students knowledge of the health care system, the educational preparation of various health care professionals, an overview of issues, and essential information about the legal and social responsibilities of health professionals.

Lectures focused on issues in contemporary care, e.g., the geriatric home health care team; health organizational conflicts and financing mechanisms, e.g., insurance plans and national health insurance; and the behavioral aspects of the provider and consumers in care-

giving settings.

The course was divided into units. In the unit defining the meaning of health, emphasis was given to degrees of wellness, ethnic and social difference, and the varieties of forces impinging upon the psychological definitions of one's wellbeing. Some case materials were used to supplement the recommended books and journal articles from the various health professions represented. The units were built upon concepts which were sequentially presented, and the complete course planning format, presented in its entirety, is located in Appendix A. The format was divided into learning objectives, rationale for the learning of students, coordinated learning activities, the specific resource or text source, the time designated and the specific evaluative instruments used.

For example, Unit I was as follows:

COURSE OBJECTIVE	RATIONALE	ACTIVITIES	TIME
Knows a definition of health and wellness	Understands the delicate balance to be maintained in health	Case exercise Small group process	2 hours
EVALUATION			
Health Knowledge Text/ Informal process in group discussion			

The design of the format was used to integrate concepts sequentially, provide tools for the adequate measurements of progress, assist in the decisions about time committed to activities, and assure uniform or highlighted coverage of material.

a. Team Teaching

Team teaching by representatives of different health disciplines was the method utilized as fully as possible by 20 participating faculty members, including the core team of five teachers described below.

1. The Core Team

The core team of faculty was responsible for the lecture delivery, the administrative planning meetings, and overall course coordination. The core team acted as a role model for team interaction both as lecturers and as examiners of their own interprofessional interaction with other faculty. The reason for a core team was twofold:
1) to locate responsibility for the course mechanics and content; and
2) to enhance the opportunity for collaboration by communicating in a small group.

Core team members organized the schedule and gave assistance to participating faculty by planning participation and arranging for teamwork in small group discussions. Two members of the core team alternated primary responsibility for the development of specialized lecture content and delivery. Other core team members were responsible for comments during lectures. Particular attention was given to highlighting the different contributions of each discipline and to pinpointing different approaches. The core team reviewed the content, delivery and lecture material after each large lecture. The author was a member of the core team and was considered the Project Coordinator.

Within this organizational framework, the core faculty led administrative meetings, participated in planning meetings held after

each lecture session, and gave direction to publicity and other efforts. Due to the course size, the course success depended upon the smoothness of the organizational planning of the core faculty.

a. Other Faculty Contributions

Twenty other faculty members were used in the course in teams of two to lead student discussion groups. They also were responsible for directing the group projects in which students participated.

The objective of the involvement of a large group of faculty was to introduce as large a portion of the faculty as possible to the philosophy of interprofessional education; to optimize faculty learning; and to enhance socialization within the different health professional schools. For example, panel presentation in the lectures by the diverse faculty involved were followed by open discussions which examined the unique services offered by each group. Guest speakers or faculty members used a panel presentation format to examine their own profession's educational preparation and the need for collaboration.

The value of each profession's contribution was presented and yet the problems of teamwork were not dismissed. To achieve a balance between diverse lectures and panel discussions, the number of such presentations was limited.

The core faculty emphasized the need for cohesiveness within and between lectures to students. This was accomplished by having meetings with representative student groups and by posting special office hours to discuss needed changes or to discuss student response. Also, the Deans were apprised of student responses and were asked to reinforce the integration aims by emphasizing team behavior

in other course work or in field experience. Consideration was given to how the course could be integrated into clinical experience and discussions were held with clinical supervisors to acquaint them with the goals and purposes of the course.

b. Administrative Meetings

Administrative meetings were held monthly by the core faculty for the individual faculty teams to clarify immediate issues and to discuss the resolution of problems such as room assignments. The objective of these administrative meetings was, also, to have an informal forum where the new ideas being espoused in the course could be presented informally. Of particular interest was the informal discussion of the differences in training focus, time, and goals in clinical experience of each of the professions and the resultant effect on practice. In these administrative meetings, conflicts could be resolved; discussion guidelines were developed; tests were formulated; and a sub-group was established to plan and react to the next year's course planning format.

c. Resource Individuals in Health

A number of valuable resource people contributed to the course curriculum by participating in the larger, policy-setting committee and by participating in panel discussions. Most of these individuals were from the University, and it was important from the point of view of garnering support that they be involved. Others were private practitioners or practicing health administrators who contributed to the panels in the course. Each of these resource individuals represented a major group important to the delivery of good health care, including the attorneys who handle malpractice suits. Such outside contributors enriched the course by adding specialized content and gave it a sense of

immediate relevance to health care issues.

2. Discussion Group Component

All enrolled students were divided into smaller groups of mixed disciplines to develop a group project within the group discussion time. Each group of approximately 20 to 25 students was supervised by at least two faculty members.

The objective of the small groups was to provide a medium whereby students could focus on a problem-solving process and accomplish a series of tasks, including discussion, selection of a group research project, and analysis of the group's process. Aspects of meeting the task included peer review, simulation, and an opportunity for collaboration and resolution of conflicts around the accomplishment of a task.

a. Group Tasks

The examination of group process was an important part of the discussion group. Individual behavior leading to a greater sense of participation was encouraged by faculty teams. A full report of responsibilities of the small groups was enunciated and handed to students at the first meeting. For example, group members were expected to define how they viewed themselves as professionals. Specific types of individual behavior were encouraged to increase the student's contribution by: 1) communicating his knowledge of his particular profession; 2) listening and comprehending various viewpoints; and 3) helping to synthesize the various perspectives in the project.

b. Peer Review

Within the context of these encouraged behaviors, students were expected to work independently outside the classroom. A

unique aspect to the discussion group was the opportunity for students to engage in a peer review of each other's contribution to the tasks. An evaluatory instrument was prepared and is contained in Appendix B; this instrument helped each student rate the other members of his group as to their performance.

The objective of the peer review mechanism was to underline the individual responsibility of each team member to accomplish the tasks set and to sensitize future professionals to the responsibilities and feedback possibilities of peer review.

Within the context of group responsibility and peer review, each small group investigated a research topic, prepared a summary of the problem-solving process, and presented findings to their team leaders for approval.

3. Group Project Component

The group project was the final research report or demonstration which was undertaken by three to six students from different disciplines. The objectives for the group project were to provide students with the opportunity to collaborate in a research task with other disciplines and to participate as hypothetical team members.

The project evolved out of the group discussion and was designed to: 1) help in the appropriate problem selection by having a written, definitive statement of the research problem; 2) provide a solution; and 3) provide a consideration of alternative potential solutions within the context of a complete literature search. An examination of conclusions and an appropriate format with a bibliography were included. Guidelines for grading the group project along with criteria for judgment were given to each student (See Appendix B for a

sample). The following considerations were weighed and rated: 1) Is the description of the problem and its causes accurate, convincing and meaningful? 2) Does the paper focus on a single topic and avoid irrelevant digressions? 3) Does the solution follow logically from previous sections? and 4) Are established knowledge and dominant attitudes of various professions and of the social and biological sciences taken into consideration?

The project represented the culmination of the work in the group discussions sections and provided a teamwork opportunity. The group discussion, peer review and tasks which culminated in the selection and execution of a project were a part of the learning process which enhanced the lectures. These valuable aspects were essential to the implementation of the teamwork rationale and the blend of these components produced a cohesiveness and integration in the course structure.

E. Integration of Project Components

1. Integration of Three Basic Components

The three basic components were integrated in the following ways:

1) by administrative meetings where learning process was examined;

2) by a core team whose members who assumed responsibility for the continuity between lectures and discussion groups and who met with students issues that the course aroused;

3) by the university interprofessional health committee who provided support and linkages to a wider audience.

Project components were continually assessed in administrative team meetings with feedback to all faculty via memoranda and progress notes so the structuring of lecture procedures and testing was a continu-

ous process. One major factor in the success of the course was the commitment of all faculty to the completion of the curriculum as designed. Detailed planning helped to minimize administrative problems. Integration was also fostered by the continuous effort to communicate to faculty, schools, and students. A third aid to integration took the form of evaluation instruments which provided formal assessment. The Project also provided students with an opportunity to exhibit their integrated knowledge of the health care field, including new knowledge gained from students in other disciplines.

2. Evaluation of Student Progress: Integration of Student Testing With Evaluation

Student achievement in the course was based on the evaluation of a midterm and final examination, and the evaluation of written reports from group projects. Students knew from the beginning of the course how they would be judged and what criteria would be used. Equity and a process of judgment were emphasized as objectives in the grading. Criteria for evaluation were jointly developed by core faculty committee members and utilized by all faculty.

The evaluation of student progress was designed to be an integral part of the course by being a learning mechanism. Peer review was added as a learning device to emphasize the need for judgment of one's peers of performance. Formal grading procedures, such as midterm exam, were used to signal students' progress and to reduce anxiety over final grades. The formal process of a midterm and final gave students an opportunity to demonstrate their content knowledge.

F. Student Assessment of the Project

During the last sessions, an evaluation survey by questionnaire

was given to the student.[3]

Later, as a part of the course, the evaluation material was given back to the students and their responses were elicited. A committee was formed, consisting of students and faculty, to consider revisions.

The analysis and data of all student material will be fully discussed and presented in Chapter VI.

G. Faculty Assessment

The faculty evaluated the course in two ways; first, they examined and verbally classified the organizational environment of each of the schools. The following Table is a brief synopsis of their report. Secondly, they evaluated the course by submitting individual written reports, and these reports are summarized later in this section.

TABLE 1

ORGANIZATION AND ORIENTATION TO THE COURSE BY HEALTH SCHOOL

Health School	Orientation Toward Knowledge	Length of Training	Formality
Medicine	Biomedical	Long	High
Nursing	Bio-psychosocial	Medium	High
Pharmacy	Biomedical/Technical	Long	Medium
Social Work	Social	Long	Low
Allied Health	Biomedical/Technical	Short	Low

As this Table shows, there are wide variations in the time orientations of each school, three schools have a lengthy time to train. Two of the schools have a high degree of formality which contrasts with the other three schools. The faculty noted that while there was no exact measure of the organizational impact of the environment of the different health schools on the course, knowledge orientation differences were very important factors to consider. Where training was long, it was felt that there would be time to impact students later on in terms of team education; where time was short, there was a feeling of pressure.

The faculty concluded that the predominant orientation outside the course toward knowledge was biomedical. The lack of other curricular supports was a major issue for the faculty to consider in later course work and team education; this will be considered in the concluding chapter.

1. Assessment of Components by Faculty

The faculty was asked to write comments and to express their concerns about the course components both in a written form and to the faculty team at planning sessions. The following is a synopsis of their reactions to each of the course components, beginning with the lecture and team teaching; the full report may be seen in Appendix B.

a. Presentation: Although the theory of team teaching was considered useful and valuable, there was a consensus that there needed to be more evidence of collaboration among the teaching teams. Mention was made of inconsistency in presentation method, lack of coordination, continuity, and adherence to unitized presentations which demonstrated the need for more team preparation. Appendix B presents a synopsis of the faculty's opinions in full about the presentation of course material.

b. Scope of Content and Suggestions: There was consensus that the content and issues were appropriately stated. It was suggested that capturing student audience was related more than expected to manner, voice, word choice, and attitude. The content could have been strengthened by improving these techniques and by greater reliance on the case method of teaching.

c. Reorganization of Material: Reducing the amount of material to be covered and better sequencing were mentioned by faculty as ways to improve the lectures. The problem of finding an appropriate text was mentioned by all faculty.

Although the faculty may have been excessively critical of a first attempt, they also considered the course stimulating and worthwhile. The course was endorsed enthusiastically, but not uncritically. The general consensus among faculty was that while not fully achieved, the objectives were fully endorsed.

2. The Group Discussion Component

a. Group Discussion: The consensus of those faculty reporting was that team leadership was desirable. However, there was a feeling that cooperation would have been enhanced by faculty training and by

earlier planning contact. Most felt the group discussion size (23 to 26) was maximally effective.

In general, there was a greater need to create bridges between lecture material and discussions, a move which would require better faculty preparation. In general, too, student attendance was mentioned as a problem since it was not consistently good.

b. Group Project: There was a consensus that the project best tested group skills and that the project should carry the weight of grading. The criteria used to evaluate the project were appropriately composed, but the faculty felt the need for greater clarification. The need for a better definition of faculty responsibility, more specific topics, and better guidelines were generally cited as important steps toward improving the group projects.

3. Faculty Overview[4]

The overall course reactions by the faculty indicated a need for more communication, better circulation of materials, greater clarification of roles, and more consistent assignment of responsibility. Revision and limitation of objectives were considered appropriate goals for restructuring the course.

All of the above reactions seemed appropriate for a new venture which was dealing with a new program that established new procedures across professional lines so that a "strong common value base" could be established.[5]

In summary, this Chapter presented a sequential review of the development and mechanics of the course from the early phases of planning to the actual course delivery. The Chapter focused on the

faculty's reactions to the course and on their opinions. The next Chapter focuses upon a detailed factual description of the students who took the course and the professionals to whom they were compared.

Chapter IV

1. For examples of the curriculum see Appendix A for a course outline.

2. The percentage figure of participation was arrived at for each school by taking the total faculty available to teach in the course (total resources) over the number participating; thus, a percentage was arrived at for each school involved in the Project. Figures for the percentage of all graduate and preprofessional students were supplied by the University of Connecticut, Bureau of Institutional Research and were based on Fall, 1975 figures.

3. Appendix C supplied copies of the questionnaire inventory used to evaluate the Project.

4. For a fuller description of the findings with the faculty see Appendix B for the written reports, and Chapter V for description of respondents.

5. W. F. Bowers quoted in Eileen Bughman, "The Lecture Method of Instruction" (Geneva: WHO, 1972), 157, p.4.

CHAPTER V

DESCRIPTIONS OF PROFESSIONALS AND PREPROFESSIONALS

A key factor in the design of any educational program is the accurate assessment and description of the participants in training. Equally important to this Project was the systematic measurement of professional and preprofessional expectations and the effect of these expectations on the knowledge obtained in Interdepartmental 200. To assess the teaching of effective team functioning, a standard of interprofessional practice was established by using 33 health professionals who were working on teams in a variety of settings. The 200 students were then compared to this standard group with regard to attitudes, skills, and knowledge.

This Chapter presents a description of the recipients of the training and the professionals to which they were compared. The chapter has been divided into two sections. The first deals with a description of the preprofessional and the second deals with the practicing professional.

A. Preprofessional Health Students Involved in Project

Since differentials in background and experience might affect the response to training, student characteristics were carefully assessed.

Consideration was given to students' aspiration levels, career goals, socioeconomic level, and personal characteristics, including maturity. Since there is controversy over whether such training should be presented on an undergraduate level, it is important to understand whether or not such characteristics make a difference.

As mentioned before, at the baccalaureate level, students had been separated into geographically separate schools. These schools had, prior to the project, offered no educational orientation toward the roles of other health professionals. The involvement of 200 students in the project was a major achievement.

Among the students involved in this project, 55% were nursing students, 35% were from allied health field, 8.3% were in social work areas and 1.7% were pre-medical students and others from various areas.

In view of the major differences between students and the lack of orientation of the professional schools to this type of course, the integration of team concepts into the student curriculum has been a complex undertaking for students and staff. One of the factors contributing to the success of the project, however, was the attention paid by the faculty to the differential characteristics described below.

1. Types of Clinical Concentrations

An overwhelming number of the preprofessional students, 64.6% of those in Interdepartmental 200, planned to concentrate in the future on the clinical practice of nursing, pharmacy, etc. This group was followed by those interested in teaching, 15.4%; administration 11.7%; and other activities such as research, 1.5%. In view of this, it is reasonable to conclude that many of these students will be involved in future

clinical team activities in diverse health settings. In fact, this high interest in clinical activities suggests that a heavier emphasis on clinical roles and expectations would be appropriate in future courses.

2. Future Plans

With the exception of medical students, the majority of the pre-professional students didn't have a field or degree that they were pursuing other than a bachelor's degree (91.77%). A few, 8.3%, were seeking a master's degree, mainly in social work or pharmacy. Most students would have described themselves as generalists to whom the baccalaureate degree was the endpoint in their educational process. Of those students seeking a bachelor's degree, 45% of the nurses, 28.3% of the allied health, and 6.7% of the social work students intended to seek certification in their major field. Only 1.7% of these students had professional certification prior to entering their educational experience at the University.

Less than half of the students expected to pursue certification or licensing, a low figure. One reason for this low aspiration level could be the fact that most of the students were unaware of the need for certification or licensing.

In terms of long range career planning, a large number, 30%, did not ever want to specialize. Specialization may be a relatively late decision in a student's career life pattern. This factor was a reason for emphasizing primary health care teams at the early stages of career development.

Patterns of attitude development and the formation of sterotypic patterns of interaction developed at an early stage.[1] An early emphasis

on primary health care teams, which emphasized clinical skills would have enhanced a positive development in terms of the overall administration of health facilities. Further, clarification of licensing and certification issues would also be indicated in future courses.

3. Demographic Characteristics of Preprofessionals

In this project, the students' characteristics were described, knowledge measured, and expectations systematically measured.

a. Age: The average was 22 in a range from 21 to 43 years. There were significant differences in age among the preprofessionals. The social work students were, on the average, eight years older than the other groups, while the allied health students were on the average one year older than the nurses. The nursing group was the youngest. The fact that there were different age and maturity levels contributed to the difficulty of combining students in an educational project.

b. Sex: Students were predominantly female and had had no experience as working professionals or with the health care system. The fact that the students were mostly female has been consistent with the overall manpower picture. Females comprised 89.2% of all employees in health facilities (excluding physicians and dentists) in Connecticut.[2] Since the University predominantly served to provide preprofessionals for a Connecticut population, the predominant pattern of employment in the future will be linked to career choice, with females predominant in the fields of nursing, allied health and social work.

The single-sex factor in certain fields may also have had a profound effect on the aspiration level of students since female students may not have perceived subsequent career mobility within and between

professions.[3] This might be a fruitful area for further study as a factor influencing interprofessional and intraprofessional relationships.

c. Grade Point Average

The grade point average for the entire group was 2.9 on a 4 point scale which was slightly higher than might be expected considering the fact that most of these students did not aspire to advanced degrees. The grade point average as a whole was 2.89, with men having an average of 2.78 and women an average of 3.07. The social work students and other students who aspired to graduate education, had a grade point average of 3.2. The allied health students' average ranged from 2.2 to 2.8, and the nursing students averaged 2.8. Within the entire student group the grade point average ranged from 2.2 to 3.9, with the modal grade being 2.7.

4. Socioeconomic Class of Preprofessionals

Socioeconomic class was ascertained by the classification of student's family of origin using the rating scale developed by Hollingshead and Redlich.[4] This was supplemented by information on occupation, income level, and self-identified class selection. The main objective of the socioeconomic indicators was to see if students had substantially different backgrounds from their parents or from current practicing professionals.

Slightly more than half, or 53.4% of the preprofessional students, came from middle class homes, with 23.3% of these from upper-middle class homes, and 3.3% from lower-upper class homes. Some 20% came from lower-middle class homes. These two groups made up the bulk of the student population.

Slightly more than half of the preprofessional students seemed to have come from homes where models of professionalism would have been available to them.

a. Father's occupation

Some 31% of the preprofessionals had fathers who were employed in occupations that could be considered as major professions and 25% had parents who were from the lesser professional groups.

Only 11.5% were from homes where the father was employed in semi-skilled or unskilled occupations. However, 6.7% came from homes with fathers who were unemployed or retired.

b. Mother's occupation

Since the overwhelming number of preprofessionals were female, it was interesting to note that 33% of their mothers were unemployed or housewives, while 16.7% were lesser professionals, and 25% were employed in semi-skilled or skilled jobs.

Female preprofessionals tended to have low degree aspirations. Their mothers provided few occupational role models and for the most part were employed in the less well-paid clerical positions. Thus, these female students were advancing in social status by acquiring a degree. However, it is unclear from the data whether this professional degree represented a compromise in career choice; female students may have seen their education as a practical, secure insurance against possible limited choices.

5. Summary of Socioeconomic Class

Generally, these preprofessional students came from conventional homes which stressed the need for skills, not just a liberal arts education. As Gartner has reiterated, and as this project has tended to illustrate, "the values, code of etiquette and outlook" (of physicians and pharmacists) has been "rooted in the middle and upper class, dominated by white males".[5] The latent culture of social work, nurses, and the allied health professionals tended to be rooted in the conventional lower-

middle, middle-class and female-oriented cultures.

B. Description of the Professional Involved in the Project

Descriptions of the practicing professionals actively working on health care teams have not been generally available. There is little information on what proportion of the active health professionals work daily on teams. Although the competency level of practice was not assessed, an attempt was made to obtain clinicians with whom students could be compared in terms of knowledge and experience.

Of the health professionals involved in this project, 19% were physicians in the medical field, 28% were in the nursing fields, 26% were in allied health fields, and 27% were in social work.

The 33 participating professionals were selected from the following settings: a large university hospital, a community mental health center, and two small general hospitals.

1. Aspirations and Future Career Plans of Professionals

One characteristic of professionals was their long-term interest in their careers and their commitment to clinical practice, administration, teaching and research. There was a greater diversity and interest in plans for research and administration among professionals than among preprofessionals. Although the majority, 51.6%, planned to concentrate in clinical areas, 17.6% wanted to spend their time in administrative tasks, 15.6% wanted to pursue teaching, 4.1% wanted to pursue research, and 11.1% were interested in other endeavors. The results tended to illustrate that career concentrations do change over time; but that the major commitment remains in clinical areas.

2. Demographic Characteristics of Professionals

a. Age: Among the professionals the average age was 45. There did not seem to be an age difference across discipline lines. However, there were two distinct sub-groups of professionals: the group, 30 years old and above, which accounted for 32% of the group; and the group 29 or younger, which accounted for the majority of professionals, or 68%. For the most part, the professionals practicing on teams were young, mid-career individuals whose training was relatively recent.

b. Sex and Marital Status: Among the professionals, the majority were female (83.3%). Only 16.7% were male. Over half of the professionals, 56.7% were married; 6.7% were divorced or separated; and 36.7% were single. Of those who were married, over 96.79% had spouses who worked as professionals. Only 3.3% had unemployed spouses. Thus, most professionals could be said to be members of dual-career families.

3. Socioeconomic Class of Professionals

Based on education and self-selection of class structure, using the Hollingshead and Redlich indicators of class, one third of the professionals came from lower-class homes, one third came from middle-class homes, and slightly more than one third came from upper-middle-class homes.[6]

There was a larger group from lower income families among the professionals than among the preprofessionals. Certainly, this group represented an "upwardly" mobile faction. There was no significant difference in parental class between disciplines among the professionals. However, a large number of nurses (RN) graduated from diploma schools in the professional group. This group came from lower-middle-class homes.

Diploma schools had a more open entrance into their programs, allowing for more study programs.

Most professionals came from middle income groups whose financial earnings were between $10,000 and $21,000; only 10% came from families with incomes over $30,000. The discrepancy between self-identified class above an income level was drawn by professionals who considered themselves to belong to the middle class despite the fact that their parents' income due to retirement or death of one parent would be below what would be considered middle income. Also, the results may reflect lack of knowledge about parental income. Other research on class has shown that there is a bias toward the selection of middle class.[7]

4. Parental Occupational Structure

a. Father's occupation: Thirteen percent of professionals came from homes where the major breadwinner was semi-skilled or unskilled. Almost 7% came from homes where the father was retired, and 3.3% had fathers who were deceased. A total of 53% of the professionals had fathers who were employed in the major and minor professional group of occupations; 23.3% were in major professionals, and 30.0% in minor professional occupations.

b. Mother's occupation: Nearly 7% of the mothers of professionals were employed in the major professions and 16.7% in the lesser professions for a total of 23.4% in the professional group. Almost 17% were employed in the minor and clerical occupations with the remaining 6.6% in the skilled and unskilled occupations.

5. Education and Certification

a. Education: Twenty-four percent of the professionals had Master's degrees; 10.3% had Doctorates. But the allied health profes-

sionals had significantly fewer degrees; 16.7% were seeking Bachelor's degrees; and 20% Master's.

b. Certification: Most professionals were certified to practice in their respective fields. Among the largest group seeking certification were physicians, followed by social workers (6.9% and 3.4%, respectively). Twenty-three percent of the health professionals had no professional certification; 11% were currently seeking certification, and 55.2% had no current area of specialization. Therefore, they could be considered generalists in the area of primary care teamwork.

C. Comparison Between Participating Preprofessionals and Professionals

The method of assessing what the standard of practice was in the project was to determine the current baseline of interprofessionalism by examining professionals as a baseline, then testing to see how far training could move preprofessionals toward meeting the current intellectual (health knowledge) and attitudinal demands of interprofessional practice. This could create an initial positive direction for the modification of training procedures.

The design of the final project evaluation included an assessment of the differences between trained preprofessionals and professionals in terms of experience, knowledge, types of clinical concentration, future plans, and selected demographic characteristics. This comparison has been designed to specify the important differences between the two groups to see if trained preprofessionals were more like professionals after training.

The comparison is important in that it gives an accurate data base

about those who are currently practicing interprofessionally, and how they compare to students. As has been pointed out, the schools of medicine, nursing, social work, and allied health have not moved in any significant way to address the limitation in preparation for interprofessional practice. This project begins to fill in needed data for consideration.

1. Methods of Assessment

A current assessment of experience was made by asking professionals and preprofessionals to indicate on a scale from 1 (no experience at all) to 7 (substantial experience), their experience in working with the physician, the osteopathic physician, the clinical dietician, the social worker, the nurse practitioner, the public health worker, the nurse, the physician assistant, the pharmacist, and the physical therapist.

Respondents were also asked to rate from 1 (no knowledge) to 7 (a great deal of knowledge) how much they knew about the function of each of the health professions mentioned above.

2. Experience

Experience was defined as having contact with or having worked with a specific health professional.

TABLE 2

YEARS OF EXPERIENCE OF PROFESSIONALS AND PREPROFESSIONALS BY HEALTH DISCIPLINE (a)

	Total		Allied Health		Nursing		Other Health Disciplines	
	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$
Experience and Knowledge of Professional by years N=30	30	3.6	6	3.4	16	4.1	8	3.5
Experience and Knowledge of Preprofessionals by years N=60	57(b)	2.4	20	1.8	31	3.0	6	2.3

(a) Years of experience is defined as actual working years of contact with other health professionals.
(b) Three respondents were dropped from the analysis due to missing data.

In Table 2, the preprofessionals and professionals had the most experience with nurses, followed in descending order by the other health disciplines composed of physicians, social workers, physical therapists, public health workers, pharmacists, and clinical dieticians. Limited experience would, also, seem to be related to access and to the place in which training or work occurred.

Professionals also had almost three times as much experience with social workers as with clinical dieticians.

This factor of little or no experience, or limited access to certain professions, could account for a lack of knowledge of function and for the isolation which many health professionals feel. Most con-

tact, among and between professions, has been generated in the work place after training has been completed.

2. Knowledge of Function of Health Profession

a. Professionals: A description of the practicing professional and the preprofessional who had been actively working on health care teams would not be complete without an account of the knowledge of each other's function, as is shown in Table 3.

Since the professionals selected had all been active in their careers for an average of almost four years, it seemed likely that a comparison in terms of knowledge of others' function would help determine a type of experience related to the following factors: exposure to different professions, interest in others' functions, and a type of "savvy" related to competence.

As is shown in Table 3, the typical knowledge about other health disciplines among the professionals was 4.0 on a scale from 1 to 7, with 1 being no experience, and 7 being a great deal of experience. These ratings were self-estimates of each professional group's assessment of their knowledge of other health discipline functions. The nurses estimated slightly higher levels of knowledge of others' functions, followed by the allied health group, and then by other health disciplines. The actual mean number of years of experience was 3.6 years, with nurses having the most functional knowledge, followed by allied health and other health disciplines.

TABLE 3

EXPERIENCE OF PROFESSIONALS BY HEALTH DISCIPLINE AND FUNCTIONAL KNOWLEDGE

	Total		Allied Health		Nursing		Other Health Disciplines	
N=30	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$
Professionals Number of Years of Experience	30	3.6	6	3.4	16	4.1	8	3.5
Functional Knowledge of Other Health Discipline	26[a]	4.0	5	3.9	15	4.4	6	3.7

(a) Four respondents were dropped from the analysis due to missing data on this item.

The accuracy of this estimate of knowledge correlated closely with their performance on the Interdisciplinary Health Knowledge Test that will be discussed in Chapter VI. This gives credence to their self-evaluated estimate of knowledge of other professions.

b. Preprofessionals: As illustrated in the following Table 4, the preprofessional had an average of 2.4 years of practical experience. This development has influenced the upgrading of curricula: many students are practicing, experienced health workers before beginning their professional education. Career choice in health care seemed to be followed by early work experience in a health field.

An interesting finding is that after training, the preprofessional

rated his knowledge of the function of other professions at almost the same level as practicing professionals. The estimate for preprofessionals was 3.8 and the estimate for professionals was 4.0 for their functional knowledge.

TABLE 4

EXPERIENCE OF PREPROFESSIONALS BY HEALTH DISCIPLINE AND FUNCTIONAL KNOWLEDGE

	Total		Allied Health		Nursing		Other Health Disciplines	
N=60	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$
Preprofessionals $\bar{X}$ Number of Years Experience	57[b]	2.4	20	1.8	31	3.0	6	2.3
$\bar{X}$ Estimate of Functional Knowledge[a]	58[c]	3.8	17	3.8	30	4.6	11	3.0

(a) An estimate of knowledge of the function of health professionals was an additional measure used to augment the use of experience. The estimate of knowledge used was a self-assessment of information.
(b) Three respondents were dropped from the analysis due to missing data on this item.
(c) Two respondents were dropped from the analysis due to missing data on this item.

As shown in Table 4, the nursing preprofessionals rated their knowledge of other professional's functions at a higher average than the practicing professional, although the differences were not large enough to be statistically significant.

At the baccalaureate level, there did seem to be emerging the "new nurse" whose confidence and level of knowledge had made her a relatively

new phenomenon. If the above preprofessionals entered the job market, their own estimated knowledge of other disciplines combined with their work experience would make them enter at advanced career entry levels. These students had confidence in their estimated knowledge base. One possible conclusion is that this is due to their exposure to the educational techniques in the Interprofessional Project.

3. Number of Years of Experience: Preprofessionals and Professionals

When professionals were compared with preprofessionals, there was a significant difference between the two groups (χ^2=44.37, 3df,p<.001). As explained in the prior section the professionals had a mean of 3.6 years experience (see Tables 1, 2, 3) compared to a mean of 2.4 years for the preprofessionals. Both groups had had substantial prior experience.

The allied health group of professionals was the least experienced group and therefore had the lowest income available. This group would account for some of the income differentials discussed. In both the comparison and student group, the nurses had the most experience in terms of length of time at work.

Both the preprofessionals and the professionals estimated that they had some knowledge of each others' functions. When the differences were compared using an analysis of variance technique with experience accounted for as a co-variate, the results were not significant (Preprof X Prof, sum of squares 1.0, 2df, mean square .52, t test .59, p=<.05).

It cannot be definitively concluded that the project produced a greater knowledge of function of other professionals when experience is taken into account.

4. Types of Clinical Concentration

One typical difference between the professionals and the preprofessionals in clinical concentration selection was the professionals' somewhat greater desire to pursue research and administration. Both groups preferred the general clinical concentration (64.6% of the preprofessionals vs. 52.6% of the professionals). However, there were no statistically significant differences in choice of clinical concentration. From the above results, the preferred but not statistically significant approach for both preprofessionals and professionals would be clinical training, i.e., case material.

5. Future Plans

a. Advanced Degrees: A larger number of professionals were currently seeking or planning to seek advanced degrees (20% of the professionals as opposed to 8.3% of the students). In consideration of normal career advancement, this would seem to be a high figure for professionals and a low figure for students.

In the future, preprofessionals might follow the path of the professional and might seek additional degrees with the marginally committed preprofessional failing to practice. The education experience itself acts as a filtration process and as time goes on those who are less committed would be less likely to pursue advanced degrees.

b. Certification: As would be expected, more professionals were certified to practice. When compared with the preprofessionals, more professionals were currently planning to seek certification than preprofessionals ($\chi^2=38.5$, 10df, $p<.001$). This could have been due to the fact that certification is needed for practice.

The fact that the future plans of both groups were different could be an outgrowth of normal career patterns and growth. The findings on seeking certification may reflect some uncertainty on the part of preprofessionals which would seem reasonable at their career point.

6. Selected Demographic Characteristics (age, sex and socioeconomic structure of professional and preprofessionals)

A comparison of demographic characteristics of professionals and preprofessionals is shown in Table 5.

As may be seen, the professionals were significantly older than the preprofessionals (χ^2 7.53,18df,p=<.001). This expected difference accounted for one of the major differences between the two respondent groups.

Both groups are significantly alike except for two variables, experience and age. When compared in Chapter VI on variables such as attitudes, interdisciplinary health knowledge and favorability toward health care teams, the major differences between the two groups are experience and age.

Both groups were predominantly female (χ^2 2.26,4df,p=<.5). There were no significant sex differences when the various disciplines were compared.

As shown in Table 5, only a few male participants were involved. The sex-biasing of selected health professions has been noted in the literature, and both groups reflected this biasing.

The impact of cultural, female-caring role expectancies was noted in this evaluation. While the impact cannot be assessed by the present study, the female bias of certain professions would continue if present educational trends were extrapolated from the data in Table 5.

TABLE 5

SELECTED DEMOGRAPHIC CHARACTERISTICS OF PREPROFESSIONALS AND PROFESSIONALS BY HEALTH DISCIPLINE

Selected Characteristics	PREPROFESSIONALS								PROFESSIONALS							
	Total		Allied Health		Nursing		Other Health Disciplines(a)		Total		Allied Health		Nursing		Other Health Disciplines(a)	
	N	%							N	%						
	60	100	21	35.0	33	55	6	10	30	100	6	20	16	53.4	8	26.6
Age:																
17-24	52	8	21		30		1		6	20	2		3		1	
25-32	7	12	0		3		4		13	43.3	2		10		1	
33-40	1	2	0		0		1		4	13.3	1		1		2	
41 & over	0	0	0		0		0		7	23.4	1		2		4	
Sex:																
Male	7	11.7	1	14.3	2	28.6	4	57.1	5	16.7	1	20	0	0	4	80
Female	53	88.3	20	37.7	31	58.5	2	3.8	25	83.3	5	20	16	64	4	16
Socio-Economic Structure:(b)																
Lower Class to Lower Middle Class	13	21.7	4	25.0	9	66.7	1	8.3	9	30.0	3	50	3	18.8	3	37.5
Middle Class to Upper Middle Class	31	51.7	11	35.5	16	51.6	4	12.9	9	30.0	1	16.7	6	37.5	2	25.0
Lower Upper Class to Lower Upper Class	16	26.6	6	42.9	7	50.0	1	7.1	10	33.3	2	33.3	5	31.3	3	37.5
Missing Data									2	6.7	0	0	2	12.5	0	0

(a) The category, other health disciplines, represented all medical, social work and graduate students.

The analysis of socioeconomic class structure illustrated in Table 5 shows a plurality of both groups was in the middle class.[8] Although the differences between the groups in terms of class structure were not significant ($\chi^2$2.26, 4df,p=<.5), there were some minor differences between the groups discussed previously.

D. Summary and Discussion of Difference Between Professionals and Preprofessionals

In summary, there were no important differences between the two groups as to sex, class, and occupation. The two groups also shared the same commitment to clinical practice.

The major differences between the two groups were in age, experience, and number of degrees received, as might be expected. There were anticipated and statistically significant differences associated with experience which were controlled for in the statistical analysis.

Minor differences in prior education and specialization were observed, but these were not significant. Another difference was the tendency among professionals to be more interested than the preprofessionals in administration and research.

The following Chapter will examine the favorability of the two groups toward health care teams, their scores on the health knowledge test and the effect of experience on these scores. An evaluation of the effect of the Project on preprofessionals which controlled for experience supports the conclusion that the Project did meet its objectives.

Chapter V

1. Helen Rehr, "Composition of Health Care Professions in Predicted Outlook on Patient Compliance and in General Attitudes Regarding Collaboration and Health Care", unpublished dissertation, (New York: Columbia University, 1971).

2. For a recent discussion of sex pattern career biasing, see Anne Steinmann, "Cultural Values, Female Role Expectancies and Therapeutic Goals: Research and Interpretation," Violet Franks and Vasanti Burtle (eds.), Women in Therapy, (New York: Brunner/Mazel, 1974), pp. 51-82.

3. Research Report, Bureau of Institutional Research Report, pamphlet, (Storrs, Connecticut: University Press, 1976), pp. 1-2.

4. A complete classification list of occupations was adapted from the Cambridge Child Guidance Data Collection System (1972-1975) and was based originally on work on social class and social status by A. B. Hollingshead and F. C. Redlich, Social Class and Mental Illness: A Community Study, (New York: Wiley and Sons, 1958).

5. Alan Gartner, "Health Systems and New Career", Health Service Reports, (Feb. 1973), v. 88, 2, p. 125.

6. Hollingshead and Redlich, op. cit., p. 200.

7. See Karl E. Bauman, "Status Inconsistency, Satisfactory Social Interaction, and Community Satisfaction in an Area of Rapid Growth", Social Forces, (Feb. 1976), pp. 45-51, and Joseph A. Kahl, The American Class Structure, (New York: Holt, Rinehart, and Winston, 1962), p. 206.

8. Gartner, op. cit., p. 128.

CHAPTER VI

FINDINGS

The main objective in developing a formal evaluation for this Project was to assess the merits of interprofessional education for undergraduate preprofessionals, to determine student satisfaction with the course and its components, and to describe the possible training variables which would influence the educational process.

As Weber and Polansky have stated, evaluative research in education should address itself to two key questions - whether the course is any good and whether or not students make progress according to set objectives or a set standard.[1]

To answer these questions, the major concerns were broken down into these sub-questions:

1. Is the course successful?
2. Are the students satisfied and with which educational method and which component?
3. Was the course adopted institutionally into the University curriculum? Did the course continue?

A second set of questions was addressed to the issue of whether or not the course met its content objectives. They are as follows:

1. Did the course meet the standards described in Chapter I satisfactorily?
2. Did the course meet its objective of increasing health knowledge?

3. Did the course meet its objectives in terms of developing and changing attitudes?

To answer these questions, preprofessionals, students who were admitted to one of the five professional programs and who enrolled in Interdepartmental 200 (ID200) were asked to indicate their satisfaction and to evaluate the effectiveness of the components (large lectures, group discussions, and group project) in the course to pinpoint needed changes. Students were also given a second series of instruments designed to measure their gains in health knowledge, their attitudes toward health care teams and professionals, and their consistency in upholding these attitudes.

The professionals described earlier in Chapter V, who were used as a basis for comparison, were given the same series of instruments. All instruments used in making the evaluation and the comparison are found in Appendix B.

Students completed the course evaluation after the final examination and were then asked to complete and return the second series of instruments one week later. Professionals were asked to complete the instrument at their place of employment within one week.

The Chapter has been divided into three sections. The first section deals with the data concerning the students' course evaluation; the second with the acceptance of the course; and the third deals with the assessment of the impact that course content had on the students' health knowledge and attitudes.

A. Preprofessional Evaluation of the Course Components

Preprofessionals were asked to evaluate the effects of the large lecture class, the discussion groups, and the group project

using a 39-item questionnaire which measured their satisfaction with statements on a seven point scale, ranging from strongly agree to strongly disagree. The return rate was very high for this questionnaire, 98%.

The results of the students' reactions are presented separately for each component of the course.

1. The Large Class: Lecture

Students' reactions to the large class lecture component of the course was assessed by their responses to 22 of the 39 questions included in the questionnaire. They were asked to use a seven-point range to indicate whether they agreed or disagreed with the statements. An example is given below:

1. The class spent so much time trying to figure out what it wanted to do that it didn't have much time to accomplish much of anything.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

A summary of the mean ratings to each question pertaining to the large lecture component of Interdepartment 200 is shown in Table 6. Each mean constituted one indicator of student satisfaction with this component. In this and the following two Tables, the means are ranked from highest to lowest.

An analysis of Table 6 indicates that the lecture component did not generally generate much enthusiasm. The team teaching method was used in this component, but was not separately evaluated.

As may be seen in Table 6, students tended to agree with the

TABLE 6
OVER-ALL COURSE
EVALUATION COMPONENTS:
COURSE EVALUATION OF
LARGE LECTURE

LARGE LECTURE Scale = 1 to 7 pts.; 1 = Strongly Disagree
7 = Strongly Agree

N= 207 *	$\bar{X}$	S.D.	N
1. Despite the instructor's efforts to generate interest and involvement, I was generally bored in this class.	6.3	1.4	206
2. The instructors tended to become so involved in their own ideas that they couldn't translate their knowledge into a clear presentation students could comprehend.	5.3	1.6	203
3. I wish the instructors had spent less time on details and facts and more time on what it was like to be a professional in their own field.	5.2	1.7	200
4. The instructors were so dry, unemotional, and impersonal that it was difficult to imagine how they could be interested in the material they were presenting.	5.0	1.8	205
5. One thing which detracted from the class effectiveness was the teaching team's manner which at times was distant and even unfriendly.	4.9	1.8	207
6. The class spent so much time trying to figure out what it wanted to do that it didn't have time to accomplish much of anything.	4.7	1.8	205
7. The instructors seemed more interested in snowing the students with their brilliance than in making sure students			

(continued)

TABLE 6
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	$\bar{X}$	S.D.	N
were understanding what was being said each step along the way.	4.7	1.9	204
8. The instructors were unable to see that at times students had some good ideas about what to study and how the class should be conducted.	4.5	1.7	200
9. The instructors always seemed to have references and readings at their fingertips regardless of the issue and regardless of their own profession.	3.9	1.6	204
10. The only time students were really involved in this class was when the instructors were excited about what they were presenting.	3.9	1.5	189
11. The instructors set high standards for the class without making them seem arbitrary.	3.7	1.6	181
12. The whole issue of grades, assignments, etc., bothered the instructors so much they simply refused to play their proper role in the classroom.	3.3	1.5	199
13. The instructors were effective because they shared with students some of their own concerns and feelings.	3.3	1.6	186
14. The instructors stressed their power over the students by frequently talking about grades, rules, and regulations, and deadlines for assignments.	3.3	1.7	204
15. The instructors respected the individuality of each student and were willing to try to work out the best learning arrangement for each member of the class.	3.1	1.7	184

TABLE 6
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	$\bar{X}$	S.D.	N
16. The class was more pleasant than productive, more oriented toward everyone becoming friends, than to have students learn the relevant material.	3.0	1.7	203
17. The instructors were effective because they were able to communicate a great deal of accumulated knowledge.	2.8	1.5	205
18. It was very easy to learn, to like, and to trust, the instructors.	2.8	1.5	204
19. The instructors were too easily fooled by hard-luck and sob-stories; some students got away with murder in the class.	2.7	1.6	199
20. The course greatly improved my ability to work as a member of an interdisciplinary health team.	2.4	1.6	184
21. I had the feeling that this class was personally meaningful and rewarding.	1.9	1.4	185
22. Because of their enthusiasm, and energy, the instructors made this a course students could not help but become interested and involved in.	1.8	1.2	185
	$\bar{X}$=3.75		

* Two hundred and twelve students completed the course. However, 207 completed this part of the questionnaire.

statements: 1) "the instructors were dry", 2) "they wanted the instructors to spend less time on details and facts", and 3) they wanted "more time on what it was like to be a professional". These statements cluster around delivery issues and indicate that students were unhappy with part of the way the lecture material was delivered.

Many of the other items cluster in the neither agree nor disagree category. For example, statements such as "the class spent too much time trying to figure out what it wanted to do" and the "teaching team's manner ... at times was distant ..." were in this category. These results tend to indicate that students generally did not have a strong opinion about some of the course details.

The students tended to slightly disagree with the statements: 1) the class was more "pleasant than productive", and 2) the "instructors set too high standards". These results indicate that the class was more positive about two important issues, productivity and the standards set. In a more positive vein, students indicated that grades and assignments had been properly handled. They agreed that instructors seemed to have references and readings at their fingertips.

Students indicated some dissatisfaction with aspects of the course lecture, but not strong dissatisfaction. A general problem with the lecture method as an effective means of training was expressed and indicated from the students' viewpoint that this component had the least potential for prolonged future effect on them.

In view of these responses, one might conclude that the course material to be covered would lend itself better to small group presentation enhanced by case material which includes more of what it is like to be a professional on a team as well as more involvement

on the part of the core faculty team in presenting better lectures with less repetition.

A possible reason for the contradictory and dissatisfied feelings was the generally unsatisfactory lecture hall which was distant and cold, and the large number of students taking the course. The inexperience of the faculty with team teaching may have been another factor. A third factor may have been the administration of the questionnaire itself after the final exam when students' ambivalent feelings were generally higher.

The expectation that the lectures combined with the faculty team presentation in a class of over 200 would foster some intimate contact seemed to have been initially too idealistic. A more realistic approach would have been to expect the presentation of balanced information within a context of limited interaction in a large class or to limit the number of students entering the lectures by giving the lectures to small groups and expect more lively interaction.

2. Discussion Component

Seven statements were included in the 39-item questionnaire to see how students rated their satisfaction with the group discussion components of course, ID200.

As shown in Table 7, the mean of the individual ratings for each of the seven statements in the discussion component shows a relatively high score; this reflects a rather high level of satisfaction with the discussion group procedures included in the course.

TABLE 7
OVER-ALL COURSE
EVALUATION COMPONENTS:
DISCUSSION GROUPS

DISCUSSION COMPONENT Scale=1 to 7	1=Relatively Low Score		7=Relatively High Schore
N=207 *	$\bar{X}$	S.C.	N
1. On the average, how many students came to your discussion group?	not coded		20
2. How clearly do you understand the positive and negative feelings of others in the discussion section?	4.5	1.4	206
3. How clearly have you been able to communicate both your positive and negative feelings in the discussion section?	4.1	1.6	206
4. How completely have you shared your ideas in your discussion group?	3.8	1.6	207
5. Has the discussion section benefited to any extent from the unique contributions of each individual in the discussion section?	3.3	1.5	202
6. How much have you tried to influence what happened in your discussion session?	3.2	1.6	206
7. To what extent were the objectives of your initial discussion section achieved?	3.1	1.5	198
8. How much do you feel that you have learned from your discussion section about interprofessional health teams?	2.6	1.5	203
	$\bar{X}$=3.51		

*Although there were 212 respondents, the highest number rating the discussion component was 207. Five students for various reasons were not enrolled in this component.

An analysis of Table 7 indicates that the discussion component was generally well-received. Ratings were highest in the degree to which they "understood the positive and negative feelings of others in the small group components" ($\bar{X}$ 4.5). Next students rated themselves as most able to communicate "both positive and negative feelings in the relaxed atmosphere of small group discussion ($\bar{X}$ 4.1). The students' reactions indicated that they tried to share a few of their ideas, but not all ($\bar{X}$ 3.8). Most tried to share and influence what happened ($\bar{X}$ 3.2).

As part of the evaluation, students were asked to indicate how many attended discussion groups. While most groups were assigned 25 students, the average attendance reported was 20. Some attendance problems due to illnesses and other necessary absences might be expected. However, faculty felt poor attenders might have had less favorable attitudes toward discussion groups. The impact of less than full group attendance cannot be measured; but it should not be completely dismissed as an indication of some limited dissatisfaction.

It can be concluded that most preprofessionals felt they contributed to or benefited from the small group discussion component of the course. As findings thus far suggest, informally conducted groups of small size may be more helpful in imparting team concepts than large, formal lectures.

3. Project Group Component

Eight questions on the 39-item questionnaire dealt with satisfaction with the group project component of the course.

As may be seen by the figures in Table 8, preprofessionals

TABLE 8
OVER-ALL COURSE
EVALUATION COMPONENTS:
PROJECT GROUPS

PROJECT GROUPS Scale=1 to 7	1=Relatively Low Score		7=Relatively High Score
N=212	$\bar{X}$	S.D.	N
1. How many students were there working on your small group project?		not tabulated	
2. How did you share your ideas in the project group?	6.2	1.1	212
3. To what extent did you feel the objectives of your project group were achieved?	6.0	1.3	212
4. How clearly were you able to communicate both your positive and negative feelings to the project group?	5.9	1.2	212
5. How aware were you about the positive and negative feelings of others on the project group?	5.8	1.1	212
6. How productive was your project group?	5.7	1.3	212
7. How much did you try to influence what happened in your project group?	5.6	1.1	212
8. Did the project group benefit from the unique contribution of each individual in the group?	5.5	1.6	211
	$\bar{X}$=5.8		

felt very positive about their experiences in the project groups, generally expressing high satisfaction. Almost all respondents replied positively to the statements: 1) they "shared ideas in their project group" ($\overline{X}$ 6.1); 2) they felt "they achieved the objective" ($\overline{X}$ 6.0); 3) they were "able to communicate both negative and positive feelings" ($\overline{X}$ 5.9); and 4) they were "productive" ($\overline{X}$ 5.7). They also indicated a high interactional awareness of the feelings of other group members ($\overline{X}$ 5.8).

These general findings of satisfaction seem related to students' positive reaction to the small, focused group research projects and the informality encouraged. These findings strengthened the faculty's observation of a positive reaction to this component.

4. Comparison of Components

In the comparison of the three educational components and their associated educational methods, it is clear that the students considered the group project to be most useful and the most likeable part of the course, (see Table 9).

TABLE 9
INTERPROFESSIONAL STUDENT CHOICE OF EDUCATIONAL METHODS: COMPARISON OF PROJECT, DISCUSSION GROUP, AND LECTURE COMPONENTS

Components:	MEAN		MS	t test
			MEAN SQUARE	
Lecture: a Discussion: b Project: c	$\bar{X}$	$\bar{X}$		
b c Discussion vs Project	b 3.5	c 5.8	10.3	10.12***
c a Project vs. Lecture	c 5.8	a 3.75	26.17	6.80***
b a Discussion vs Lecture	b 3.5	a 3.75	26.63	.7

p=<.05*
p=<.01**
p=<.001***

As illustrated in Table 9, the small group discussion component and the large lecture component, with little difference between their ratings, were considered much less desirable than the project approach to learning. Both the faculty's evaluation and the author's observa-

tions confirm as fact that the small group process was the most satisfactory educational method.

This conclusion that small group process in interprofessional team training is the desired method was also confirmed by Carlaw and Callan who found that an even smaller number of people working together, dyads and triads, was successful in training faculty.[2] Other studies such as those by Eichenberger and Gloor, Belof, Korper, and Winerman at Yale, and Madelon, use the small group process successfully without evaluating its total impact.[3] Others such as Kunze and Lenniger express the belief that small group learning as a teaching methodology is important and desirable.[4] Two studies, one by Lewis, and one by two nursing educators, Elizabeth Mason and John Parascandol, indicate that group process had the "greatest impact on students who had no previous content on health teams."[5] These selected team training studies concur with the findings in this Project. One limitation of these studies and the Project is that there is no comparison between traditional educational methods which stress competition and interprofessional education which stresses the accomplishment of tasks through collaboration.

In terms of overall outcome, the course was considered more successful in two of its components, group project and group discussion, and less successful in the other, the lecture. Overall, the Project which included the committees, administrative meetings, the formation and organization of the course, and all of the developmental work was considered to have achieved its results by meeting the planning objectives.

B. Curriculum Acceptance of the Course in the University

The success of the course was confirmed by its adoption into the required course structure of three of the five professional schools and by its continuation as a part of the curriculum of all five professional schools. The course continued with revisions based on those suggested by the evaluation. As indicated in the faculty evaluation, faculty have generally accepted the course, but continue to have many questions about some aspects, e.g., the size, the amount of effort, and the lack of good texts.

C. Evaluation of the Course Content and its Effect Upon Students

1. Comparison of Knowledge and Attitudes; Preprofessionals vs. Professionals

Answers to several questions pertaining to the preparation of team educated professionals were sought. For example:

1) Is the course successful in preparing preprofessionals in their knowledge, increasing their favorability toward health care teams, and in inculcating positive and consistent attitudes toward other health care professionals?

2) Are the preprofessionals significantly different from the professionals on the measured training variables: health knowledge and attitudes?

3) Is the reason for a significant difference due to the course or can it be explained that the results are due to experience or another factor such as differences between the health disciplines?

a. Method of Comparison

A comparison was made between the preprofessionals (students) and the professionals, using the latter as a standard (normative group) to see if training could help students achieve a knowledge

base comparable to that of professionals.

The two groups were found to be essentially matched on all descriptive characteristics except for experience and health discipline (see Chapter IV). As Suchman and Myers point out, matching according to group characteristics and then utilizing techniques for covariance with several variables permits controlled comparisons.[6]

In this case, the effect of experience, identified as a major intervening variable which distinguished the otherwise comparable disciplines and student groups, had to be determined. By controlling for on-the-job experience for professionals and prior experience for students, the effect of the course alone can be ascertained with more certainty. If the two groups and the health disciplines could be compared simultaneously on all major outcome variables with comparisons made before and after they are equated for experience by statistical design, it could then be concluded that the results for the preprofessionals are due to the advantage of training.

Similar designs using the technique of analysis of variance, as the preferred statistical method to measure interactive effects, were recommended by Kerlinger, Campbell and Myers.[7] In this case, the effect of experience is controlled as a covariate (by being held constant) while the interaction of the other aspects of training which produce variations in health knowledge and attitude are measured.

This method of comparison was made based upon the following rationale:

1. A baseline is formed to measure performance by comparing a student who is a university trained preprofessional with a team-experienced professional on knowledge and attitudes.

2. When experience is equated by statistical design for both these groups and the different disciplines, then one logical conclusion is that part of the difference in knowledge and attitudes would be due to the course only given to the preprofessionals.

b. Assessments of Knowledge and Attitudes

In this section, analysis is made of the contribution of the course to three areas: 1) health knowledge, 2) changes in favorability toward health care teams, and 3) positive and consistent attitudes toward health care professionals.

1. Assessment of Health Knowledge

A health knowledge test consisting of 53 multiple choice items was designed to measure general comprehensive health knowledge, especially knowledge of the training of each health professional group. Questions were pre-tested and developed by an interprofessional faculty who screened the questions submitted. A question such as the following was used:

> The physician may admit a patient to a hospital only if:
> (a) the patient is sick
> (b) he/she has "admission privileges" granted by the hospital
> (c) The admission committee approves
> (d) he/she belongs to the local (county) medical society
> (e) the patient has adequate insurance coverage.

A test of reliability for each item and for the whole test was established. On the 53-item test, a relatively high reliability coefficient of .895 was found. Although the validity of the instrument was not established, its submission to the faculty, their examination of it, and the response of other professions which were positive lent credence to the test's validity.

a. Comparison of the Preprofessional and Professional Groups on Health Knowledge

In comparing the two groups, two questions were asked:

1. How did the students do as compared to the professionals in terms of gained knowledge?

2. Is the knowledge gained associated with experience or does greater knowledge accrue through the learning process in the Project?

The following Table shows the means of two groups divided according to the three disciplines of social work, nursing, and allied health, indicating that the professionals have a higher mean score on the health knowledge test.

TABLE 10

MEAN HEALTH KNOWLEDGE SCORES OF PREPROFESSIONALS AND PROFESSIONALS BY HEALTH DISCIPLINE

Discipline	Preprofessionals	Professionals
Social Workers	6.7	27.5
Nurses	26.0	25.0
Allied Health	25.0	16.22
TOTAL	19.23	22.88

Since the means for practice disciplines and the two groups show wide variation, it was important to examine the scores more closely: 1) to see if the scores are actually significantly different, 2) to see if the scores reflect a significant interaction between the

different disciplines, and 3) to determine if the variation in the test scores could be explained by differences in experience.

As may be seen in Table 11, there is a statistically significant difference between preprofessionals and professionals in terms of their health knowledge after the preprofessionals have completed the course.

The information presented in the lower portion of the Table shows that there is also an important difference between the disciplines. These differences between the disciplines will be considered in the next section.

TABLE 11

COMPARISON OF TOTAL HEALTH KNOWLEDGE BY PREPROFESSIONALS AND PROFESSIONALS

Source	Mean Square	df	F
Preprofessionals/ Professionals	538.70	1	9.43**
Disciplines	479.30	2	8.39**
Covariate(Experience)			3.62
Error	57.08	83	

p=<.05*
p=<.01**
p=<.001***

In answer to question one, about whether the students learned as much as professionals, it was found that the professionals did receive a significantly higher score. This higher score possibly may be due

to the score differential of the social work students as shown in Table 10 and as discussed later on in this section.

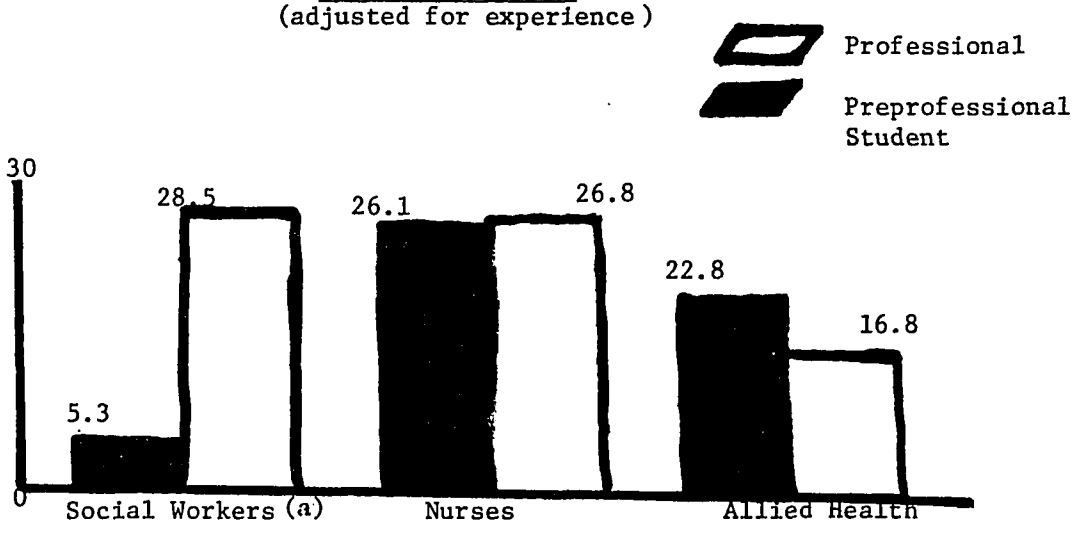
In answer to question two, when experience was equated in both groups, the difference in knowledge was not found to be statistically different. Thus, one might conclude that the knowledge gained by the preprofessionals could be associated with the course the students took. While it cannot be concluded that a single course can help students surpass their professional counterparts, they were moderately successful in meeting the knowledge objectives, and some interesting results are shown when the different disciplines are examined in the next section.

b. Comparison of Health Disciplines on Knowledge

In Graph 1, the illustration shows that each student discipline learned a different amount in the course and that there are large differences between some of the disciplines when they are compared with their professional counterparts.

GRAPH 1

MEAN HEALTH KNOWLEDGE FOR PREPROFESSIONALS AND PROFESSIONALS BY HEALTH DISCIPLINE
(adjusted for experience)



(a)Social work students included all graduate medical, dental, and other graduate students.

When the data shown in Graph 1 are examined in the light of the data shown in Table 11, it can be concluded that of the student disciplines, the nurses and the allied health disciplines, performed better than could be expected, and one discipline, the social workers, did not perform as well as could be expected. The low score of the social workers could have been the factor which explained the differences in the total health knowledge scores between the two groups. Without this score, the two groups compare very favorably on health knowledge.

The difference in scores between the students and the professionals was greatest among the social workers followed respectively by the allied health discipline and the nurses. The nursing students performed as well as their professional counterparts, and the allied health students exceeded the scores of their professional counterparts. The social work student scores were below that of their professional counterparts.

It is not totally clear from the above data why the social workers performed so poorly. Although it is difficult to specify or determine the exact effect of other course work upon students, it does seem likely that there was an advantage when other supports in the curriculum existed. The student social worker received little coordinated training in health practice - thus, there was a curricular disadvantage for them.

c. Normative Comparisons

The advantage of a normative comparison of students with

professionals as a baseline is that it allows a criterion linked to the field of practice to be established. Ebel and others have advocated, this type of educational measurement since widespread analysis of course effect or success, using many varieties of instruments, has generally shown that a background factor or factors were more responsible for school success or performance than the curriculum or a particular course.[8] Although the normative comparisons used in this Project do not totally exclude background factors, such as other curricular support, they were a valuable tool to measure the differential effects of team teaching upon very diversified students; they use a more equitable standard than comparing students with each other. Another major advantage is that different guidelines can be established for each discipline. This is especially useful for the professionals who are interested in the transfer of knowledge to practice. It is also useful to students to know how they measure against their counterparts.

In terms of the overall tested scores of the preprofessionals, the course could be considered to have been mostly successful in giving students an equivalent health knowledge with professionals as a baseline. The course more than met its content objectives with two of the student disciplines, the nurses and the allied health students. However, the benefits of the course cannot be considered to be equal across discipline lines. One of the conclusions is that the course did contribute to some of the gains shown in health knowledge.

2. Comparison of Preprofessionals and Professionals on Favorability Toward Health Care Teams

If all the health disciplines were essentially equal in their capacity to perceive their own attitudes toward health care teams, the direction of students' attitudes would be toward a more positive position. The hypothesis that training can produce positive attitudes toward teams which might be acted upon in the future is also a focus of this study. If students are as favorable toward health care teams as professionals who work daily on teams, then the course would have helped students to clarify and perhaps expand their positive attitudes toward teams.

a. Scale for Assessing Favorability

A measure of favorability was made which consisted of a rating scale made up of five concepts: the belief in the efficiency of a health care team; the opportunity to be on a health care team; the belief in team quality; the importance of the health team; and the level of confidence in the health team. For example, students and professions were asked to circle the number on the scale which best reflected their opinion on efficiency of health teams:

1. How efficient do you think Interprofessional Health Teams are in delivering health care?

1	2	3	4	5	6	7
Much less efficient: more costly			About equally effective as the present system			Much more efficient; less costly

Since a clear pattern of correlation and interconnection emerged

across the five concepts, the mean of all the scored items constituted the favorability score. This instrument measured the comparative success of training efforts by looking at future desires in team practice.

The major questions to be answered are:

1. Are preprofessionals as favorable as professionals toward health care teams?
2. If preprofessionals are as favorable in this regard as professionals, is this due to the experience difference or to the course?
3. Are there differences in favorability toward health care teams within the health disciplines?

When the mean favorability scores of the two groups are shown in Table 12, the preprofessionals, after completing the course, were almost as favorable toward health care teams as professionals. With seven as a highly favorable score and one as a low score, preprofessionals ($\overline{X}$ 5.2) achieved almost as favorable an attitude toward health care teams as professionals ($\overline{X}$ 5.6), and question one can be answered affirmatively.

TABLE 12

MEAN SCORES ON FAVORABILITY FOR PREPROFESSIONALS AND PROFESSIONALS BY HEALTH DISCIPLINE

Disciplines	Preprofessionals	Professionals
Social Workers	4.48	5.37
Nurses	5.60	5.67
Allied Health	5.80	5.90
Total	5.18	5.64

In the Table below, the fact that the differences were not significant between the two groups is confirmed. In the lower section of the Table, however, a significant difference is shown between the health disciplines.

TABLE 13

COMPARISON OF PREPROFESSIONALS AND PROFESSIONALS ON FAVORABILITY TOWARD HEALTH CARE TEAMS

Source	Mean Square	df	F
Preprofessionals/professionals	3.16	1	.97
Disciplines	4.54	2	4.96**
Covariate (Experience)	1.05	1	1.53
Error	.91	83	

p=<.05*
p=<.01**
p=<.001***

As shown in the Table above, the answer to question two is that when all the groups were equalled with respect to experience, the differences were not significant between the preprofessionals and professionals. Both groups were very favorable toward health care teams. The course could have influenced this aspect of attitudes among the health disciplines.

There are some significant differences within the health disciplines on their favorability toward health care teams. In both groups, the allied health disciplines gave the most favorable

rating to health care teams, followed by the nurses, and the social workers. The students, in this instance, reflect their professional counterparts' preferences for teams with remarkable similarity.

This information might be used in an interprofessional course by informing students and instructors of the potential differences between the disciplines in favorable team orientation and of the similarity of these disciplines with their professional counterparts. Greater efforts might be made to instruct and make social workers and nurses aware of the benefits of teamwork. Since the differences occur between the disciplines with some regularity, there does seem to be some regulating of preference for team work as in the allied health professions which may, in part, reflect the inherent attraction to this particular field and/or early socialization to the values of this discpline.

The course seemed to have met its objective of positive influence upon students to choose health care teams as a viable way of working since students, after completing the course, are as favorable as professionals toward health care teams. It also might be possible to build upon the early expressed, positive preference for teams of the allied health professional.

3. Positive Attitudes Toward Other Health Professionals

One other important factor is the positive attitude of both groups toward other health professionals. If favorable attitudes exist toward teams, then what are the attitudes toward physicians, nurses, social workers, and allied health personnel who would be working with them on teams daily?

If the course was successful in helping to form more

positive attitudes toward other health professionals, then a major objective would have been achieved.

a. Measurement of Positive Attitudes Toward Health Professionals

Attitudes toward other health professionals were assessed by using a 13 item scale in which both groups were asked to rate physicians, nurses, social workers, pharmacists, clinical dieticians, physical therapists, and medical technologists on a series of concepts related to personal characteristics thought to be important to all professionals.

For example, both groups were asked to "reflect how they view the typical attitudes of other health professionals":

Physicians seem to me ...

Not care _____: _____: _____: _____: _____: _____: _____: Caring

Not Self-assured _____: _____: _____: _____: _____: _____: _____: Assured

Each group of health professionals was rated in turn, i.e., "Nurses seem to me ...". After each health discipline rated their own discipline and others, a score was obtained for their positive attitudes toward each discipline mentioned. The seven on the scale represented a high score or a relatively more positive attitude score toward other health professionals.

The major questions to be answered in terms of positive attitudes toward other health professions are as follows:

1. Is the course successful in inculcating positive attitudes toward other health professionals?
2. If both groups have a positive attitude toward

health professionals would they want to work with them on a team? Are their attitudes consistent?

As shown in Table 14, there are no differences in the two groups in terms of their positive attitudes toward health care professionals.

TABLE 14

COMPARISON OF POSITIVE MEAN ATTITUDES BETWEEN THE PREPROFESSIONAL AND PROFESSIONAL BY HEALTH DISCIPLINE

Discipline	Preprofessionals	Professionals
Social Workers	3.19	3.10
Nurses	3.05	3.15
Allied Health	2.77	2.97
Total	3.00	3.00

As shown in Table 14, there was also not much variation between the disciplines. Although the differences are very slight, the social workers were viewed as most positive by both the nurses and the allied health worker. The social workers and nurses had the least positive attitude toward the allied health disciplines although the differences were minor. Future courses and on-the-job training might try to ameliorate the slightly less positive attitude toward the allied health disciplines.

The test for positive attitudes did not discriminate very well between negative and positive attitude toward other health care

professionals. For example, in examination of the scores, the most positive score was received by the social worker ($\overline{X}$ 3.19) out of a possible seven. Thus, all of the scores seem to be on the low side since the mid-point was 3.5 and four represented a more positive attitude.

The information that both groups rate each other on the low side for all disciplines indicates that some use could be made of this information to point out the need for change in future training of both students and professionals. One of the major goals in inter-professional education is the inculcation of positive attitudes and the understanding of the function and place of other professionals. This goal cannot be achieved unless all the disciplines have a more balanced view of each other and of themselves.

b. Measurement of Preferred Choice of Discipline on a Health Team

Students and professionals were asked to identify a preferred health professional group by answering the following questions about desirable teammates:

> "Imagine you were about to work with other health professionals as a team. We assume that you have expectations about your working relationships ..."
>
> 1. Which other discipline on a team would you anticipate having the most difficulty in working with?
>
> 2. Which other discipline on the team will it be easiest for you to work with?

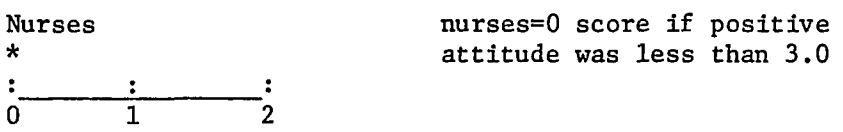
After categorization into the group most difficult and the easiest to work with, a score was obtained which was then compared with the positive attitude rating previously described for each discipline.

A score was obtained by answering the following questions:

1. If both groups had a positive attitude toward a health professional group, would they want to work with that discipline on a team?
2. Are their attitudes consistent?

The example shows how the consistency score was used: If the nursing discipline chose a discipline which was easiest to work with on teams, but which as a group they felt negatively about (below 3.0) on the attitudinal scale, they would be inconsistent. Their group score would be rated at a zero point as shown below for nurses:

Weighted Attitude Preferred Choice Score



This scheme formed the basis on which the different discplines' consistent, preferred choice of discipline score was obtained for use in Table 15. A high score would be two and a low score would be less than one.

TABLE 15

COMPARISON OF CONSISTENT ATTITUDE MEANS OF PREPROFESSIONALS AND PROFESSIONALS BY HEALTH DISCIPLINE

Discipline	Preprofessionals	Professionals
Social Workers	.33	1.38
Nurses	.94	1.06
Allied Health	.38	.50
Total	.60	1.0

As can be noted above, the preprofessionals were less consistent than professionals although both groups did not seem to have very consistent attitudes.

Table 16 compares the two groups in terms of attitude consistency; no significant differences between the preprofessionals and professionals were found in terms of their consistency. Since there is a significant difference between the various disciplines (shown in the lower part of the Table), and it is likely that experience does have a major effect upon the scores. This effect is examined in the next section.

TABLE 16

COMPARISON OF PREPROFESSIONALS AND PROFESSIONALS ON CONSISTENT ATTITUDES

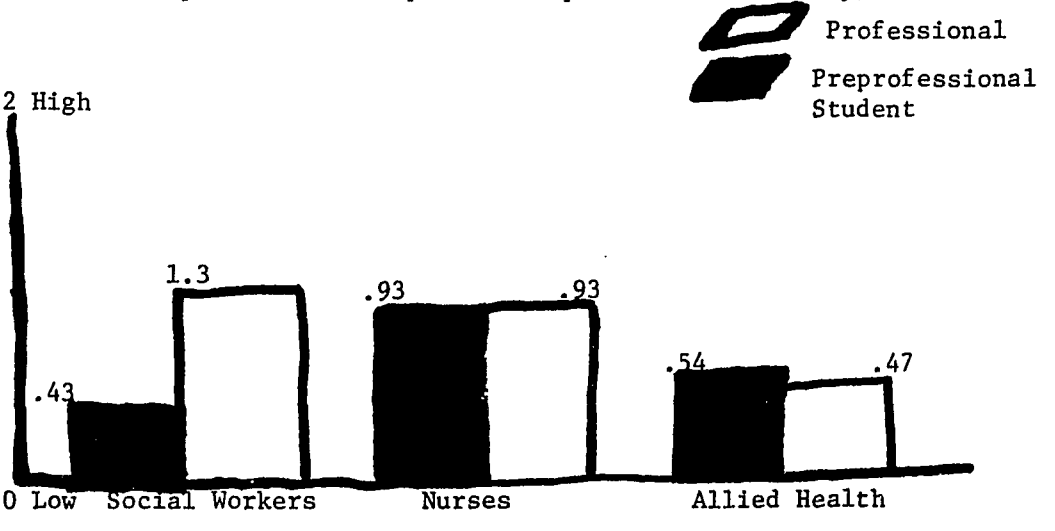
Source	Mean Square	df	F
Preprofessionals/professionals	.724	1	3.09
Disciplines	.98	2	4.19*
Covariate (Experience)	1.04	1	4.44*
Error	.23	83	

p=<.05*
p=<.01**
p=<.001***

c. Experience as a Factor

GRAPH 2

Adjusted Mean Attitude Score for the Disciplines (with experience equated statistically)



One of the student groups, the nurses was as consistent as their professional counterparts when experience was considered.

Of the student groups, the allied health group was slightly more consistent than their professional counterparts. The social work students had the most inconsistent attitudes toward other health professionals. Other major studies have confirmed that the student social workers can have the greatest difficult with defining their consistent roles as Beloff and Winerman noted in their studies at Yale.[10] The low scoring in these ratings reflects part of the reason for their role difficulty.

The fact that students do not have consistent attitudes was expected. As professionals, the social workers were the most consistent group examined, followed by the nurses and the allied health professionals. The above information could improve our efforts to focus the effects of training. The data suggest that although positive attitudes may be inculcated, the other remnants of stereotypical ideas may prevent some students from altering their attitudes or from wanting to work with some disciplines on teams. Since no discipline showed a totally consistent viewpoint, a synergistic learning process in interprofessional education which encourages new positive attitudes, may need to be developed. This process could encourage increases in the general knowledge about other professionals and ensure more exposure of students to attitudes toward teams which might make it less difficult to overcome background influences and preferences.

Another totally different approach might be taken to the problem. The admissions process of the different professional schools could select individuals who express attitudes which could be compatible with collaborative teamwork. This may be the more fruitful

approach in the long run.

D. Discussion and Interpretation of Findings Regarding Interdepartmental 200

The findings suggest that the course can be considered to have satisfactorily achieved its objectives. In terms of overall outcome the following points should be considered:

The most successful component of the course as rated by the students was the group project, followed by the discussion group, and then the lecture component. The course met its objective by being adopted into the general curriculum and was a required course for two out of the five health professional schools. From the point of view of the faculty, the course was partly successful, and they concurred with the students that small group process was the most helpful way to approach team education.

The course, in large part, with the exceptions noted below, met its objectives in content and attitude inculcation when the following differences and similarities between students and professionals and the disciplines are considered.

1. Students compared favorably to professionals in terms of health knowledge, and it is likely that the Project, in part, accounted for the knowledge gained by the students. Two of three groups of students performed better than could be expected, and one group did not perform as well as could be expected. With the exception noted above, the course could be considered to be partially effective in giving students the content they needed.

2. The course is substantially helpful in helping students to form positive attitudes toward other health professionals. Using

the professionals as a normative group, the students had: 1) as favorable an attitude toward health care teams as professionals, 2) as positive attitudes toward other health workers as professionals, and 3) were almost as consistent in those attitudes as professionals. Neither the professionals nor the students were very positive in their attitudes toward other health professionals. Although the professional did have a slightly greater, but not significant, tendency to be more consistent in their attitudes, both groups did not seem very consistent in their attitudes.

These results can be attributed to these three influences: 1) differences in actual experience, 2) differences between the disciplines, and 3) differences which were accounted for by the course. First, there was no significant interaction due to experience on any of the training variables except attitude consistency. It seems reasonable to conclude that greater team experience may affect the consistency of attitudes.

Second, since there were major differences between the disciplines, it seems reasonable to conclude that the course did have a different effect on the attitudes of each student discipline and that the disciplines may, in turn, affect how future courses should be handled.

Third, the course met its overall attitude objective when the students are compared with the professionals. However, future courses would need to concentrate more in this area by considering whole curricula and their influences, by consideration of different teaching strategies that might be needed for each discipline, and by obtaining considerably more curriculum supports for team-based

education in social work.

3. The training achievement in the course suggests that the adoption of new, positive attitudes toward health care teams can be encouraged more in small groups than in the classroom, but that these attitudes will need to be selectively reinforced for each discipline. Coursework assisted by a well-designed clinical experience could be an effective educational addition to the coursework. On the basis of these findings, model clinical sites staffed by unambivalent, motivated professionals who believe in the team method should be encouraged. The group project could be enhanced by an opportunity for students to work with professionals at such clinical sites.

University-based training can help students learn about health knowledge and understand the limitations of their own and other disciplines with whom they interact in group projects and discussion. Without losing sight of the fact that any anticipated level of classroom or small group success must be ultimately tested in a clinical setting, it can be concluded that the process of learning and the fusion of a collaborative identity through team-oriented education can be partially enhanced by coursework at an early point in career development.

Chapter VI

1. Ruth E. Weber and Norman Polansky, "Evaluation", in Social Work Research: Methods for the Helping Professions (revised), ed. Norman Polansky (Chicago, Ill. University of Chicago Press, 1976), p. 182.

2. R. W. Carlaw and L. B. Callan, "Team Training, An Experiment with Promise", Health Services Report, (April, 1973) 88, pp. 328-336.

3. Ralph W. Eichenberger and Robert F. Gloor, "A Team Approach to Learning Community Health", Journal of Medical Education, (August, 1969), 44, pp. 655-66; Jerome Beloff et al, "Medical Student Response to a Program for Teaching Comprehensive Care", Journal of Medical Education, 45, (December, 1970), pp. 1047-1059; George Madelon, "The Comprehensive Health Team; A Conceptual Model", Journal of Nursing Administration, 1, (March/April, 1971), pp. 9-13.

4. Luverne Kunze, et al, "Interdisciplinary Training in Mental Retardation, (February, 1909), 15-19; Madelaine Lenniger, "This I Believe", Nursing Outlook, (December, 1971), 19, pp. 787-791.

5. Charles Lewis, "Home Care Revisited: An Experiment in Medical and Nursing Education", Journal of Medical Education, (February, 1965), 40, pp. 84-91; Elizabeth Mason and John Parascandola, "Preparing Tomorrow's Health Care Team", Nursing Outlook, (November, 1972), 20, pp. 728-731.

6. Edward A. Suchman, "Evaluative Research: Principles and Practices", (New York: Russell Sage Foundation, 1976), pp. 30-31; Jerome Myers, "Fundamentals of Experimental Design", (Boston: Allyn-Bacon, Inc., 1972), p. 100.

7. F. N. Kerlinger, "Foundations of Behavioral Research: Educational and Psychological Inquiry", (New York: Holt, Rinehart Winston, Inc., 1962), p. 206; Donald T. Campbell, "Factors Relevant to the Validity of Experiments in Social Settings", Stages of Social Research: Contemporary Perspectives, (Englewood Cliffs, New Jersey, 1970), p. 116; Myers, Op. cit., p. 20.

8. Robert Ebel, (ed.) "Introduction", Encyclopedia of Educational Research, (New York: MacMillan, 1969), p. xxviii to p.4; See, also, Kenneth E. Eble, Professors as Teachers, (San Francisco, Calif.: Jossey Bass, 1972), pp. 30-70.

CHAPTER VII

SUMMARY AND CONCLUSIONS

I. SUMMARY

At its best, teamwork includes the spark of scientific theories, individual genius, joint ingenuity, and good personal relationships among collaborators.[1] "At its worst," Eaton has said, "teamwork has been a facade behind which people work under the label of togetherness or collaboration, while they engage in meaningless activity or sabotage each others' efforts."[2]

The course described in the preceding Chapters has been an interprofessional attempt to reduce isolation and conflict among the health disciplines, and to foster the best in teamwork by exposing students and faculty to some of the concepts, issues, and problems of team interaction. At the same time, efforts were made to design the course and administer it interprofessionally, and to actively influence the learning process of students both through the presentation of sound, basic, health knowledge and through stressing the development of attitudes thought to be important to interprofessional teamwork.

A. Changing Needs for Teamwork

As reported in the preceding Chapters, professional educators have been increasingly concerned over the adequacy of current

professional education for undergraduates. Universities, educators, and students, as well as the public, are questioning whether the methods and practices currently followed will be adequate to meet health manpower needs for effective, efficient, and less costly arrangements of personnel who can deliver humanized, comprehensive health care in a wide range of settings.

The undergraduate course (ID200), central to this Project, was a response to these needs and to a health care system that is undergoing change, particularly in the development of health care teams.

At their best, teams can improve health care by bringing the full spectrum of health knowledge to bear on a patient's problems. The trend toward the use of health care teams, as described earlier, holds great promise for the optimum application of the knowledge of professionals from various health fields. But, that promise cannot be fulfilled unless professionals who will work in teams are taught early in their education to work together efficiently and harmoniously.

A number of experimental programs have been undertaken to help foster that efficiency and harmony, programs exploring the training of graduates and undergraduates as well as on-the-job training. The course prepared and conducted in this Project at the University of Connecticut is one experimental effort designed to develop the interprofessional knowledge and skills of the undergraduate.

The course design reflected these considerations in the

development of a large, interdepartmental, one-semester course for over 200 students from all five health schools at the University of Connecticut. The courses offered 15 one-hour lectures on general health issues, integrated with small group discussions of topics generated by the lectures. Within these small groups, research ideas were evolved and developed with faculty guidance by a multi-disciplinary team of students who completed a project together.

Course content focused on interdisciplinary definitions of health; a description and analysis of the health care system; and an in depth exploration of health policy issues, including the legal, social and cultural impact of these issues on consumers and providers.

A core faculty, including the author, taught the lectures in teams. The core faculty was also responsible for the planning and administration of the course. Another group of faculty members from these same schools led the group discussions and supervised the student research in teams of two. Integration and administration of the course components -- large lectures, group discussions, and student research projects -- were achieved in weekly team meetings of the core faculty. Guidance and policy direction was given by an all-University interdisciplinary committee.

The objectives of the course were implemented in three ways:

1) by the educational methods used and their associated components;

2) by the integration and leadership provided in the weekly and bi-weekly administration meetings;

3) by the demonstration of collaboration, emphasis on positive attitude building, and communication throughout the format and content of the course.

Both the design of these collaborative aspects of the course and the content of the course were seen as important facets of a total approach to creation of an early effort to educate students to a model of professionalism which emphasized collaboration among health disciplines. The growth of practicing health care teams is creating a demand for higher levels of this type of cooperation at earlier stages of professional development. This, in turn, means greater efforts must be made to establish a common instructional and communication base within the university, and to develop a jointly held and mutually reinforcing respect among the health professions. With this increased understanding might come a new, altered professional framework for those who deliver care in teams and a new framework for teaching basic health care courses to joint classes of students from various health disciplines.

There are, and will continue to be, major obstacles to the development of this new interprofessional framework. These obstacles include practical problems of reorganizing curricula; the persistence of established values which emphasize professional differences and hierarchical status problems, including an exclusionary admissions process in the different professions; and the idealization of clinical practice, which tends to glorify the isolated, individual practitioner. But new health settings and national legislation may already be transforming the old system of values attached to "specialization and health disciplines" into a new system which will change educational goals.[3]

Five factors are acting and interacting to bring about this new system: the need for educational change; the proliferation of health workers; the challenge to the biomedical model espoused by many conservative health educators; new federal funding for team education; and an incipient challenge to traditional professional education in the university. This interaction ultimately may result in a higher priority being given to team education and to interprofessional settings within the professional schools.

The Project is useful in providing information to those interested in similar projects, since it brought together members of the faculties of five professional health schools and generated data on both student and professional attitudes toward team practice. The evaluation was also useful to the University of Connecticut since it generated specific suggestions for change in a continuing course.

To better define what changes in health education were needed, the results and implications of the Project -- both the expected changes at the University of Connecticut and the implications for other coursework -- have been examined. Some practical implications for professional education are discussed, followed by the impact of these new design considerations upon faculty and students; next is considered the Project's impact and potential contribution to the educational problems encountered in professional education.

B. The Project's Implications for Future Courses at the University of Connecticut

1. Continuation of the Course

This dissertation has focused on the early stages in the

cycle of developing an interprofessional course and on the evaluation of its success in meeting its objectives. After the Project was completed, the evaluation helped the faculty of the five schools involved to refine the course, which continues to be offered to students of all five schools and is required by three of them. Some 600 students have taken the course since its inception and there is evidence that some of the implications could be generalized as relevant for education in other universities or professional settings and with other health students.

The design of the course with several different components has been maintained as appropriate to the structure of an interprofessional course. The use of team teaching and the small group process as teaching methodologies have been endorsed by both the faculty and students.

Educational research in other universities has also confirmed that small groups are preferred to large groups as learning settings.[4] This small group component of the course should receive as much emphasis as possible within the constraints of time and money.

In terms of the future, it is important that efforts be made to garner more curricular support from two of the five health schools at the University of Connecticut, the Medical-Dental School and the School of Social Work. These two schools had fewer resources and fewer students involved in the course than other schools. Their support might be increased by including master of social work candidates and medical-dental students in the course and by actively engaging more faculty in the course.

2. Design of Course Content

There was a general agreement among the faculty and students that the material covered in ID200 was the right subject matter and appropriate for undergraduates, but that it lacked depth and support by more advanced readings and clinical illustration.

Although consensus about the nature of the course structure or course material was not expected at this demonstration-experimental level, the degree of acceptance was greater than might have been expected from both students and faculty. Both expressed some disappointment in this initial effort, but their criticism was useful. It was almost as if the long-awaited opportunity to cooperate released and focused some real and unreal expectations. While the course content generated some approval and some moderate dissatisfaction, it was also a focal point for positive suggestions and questions that faculty and students had about each other as representatives of different disciplines. Airing such criticism and expectations is often a necessary first step in creating greater interprofessional understanding.

3. The Comparison of Students and Professionals

When students in the original course were compared after training with professionals already active in health care teams, it was shown that they had learned from the course content. But the comparison resulted in some surprises, including unexpected differences among the health care students from different schools.

For example, the course was more successful in imparting knowledge to the allied health students and to the nurses who com-

pared well with their professional counterparts. But, it was less successful with social work students. The course was comparatively successful in shaping student attitudes, so that student attitudes after the course were almost like those of their professional counterparts in terms of favorability toward health care teams and consistency of attitudes toward health professions. However, it is difficult to state definitely whether or not other supporting courses in the curriculum affected these results, and how much.

It was not expected that students and professionals would be as favorable toward health care teams as the testing showed. Nor was it expected they would be so lacking in positive attitudes toward other health professionals. Both students and professionals rated other health professions very low in characteristics assumed to be at the core of professionalism.

This discovery may be an important starting point for further research into issues in early career development, professionalism and bias.

It was not expected that attitudinal differences among students at an early, preprofessional level would be so reflective of attitudes, preferences and differences among professionals in corresponding disciplines. Whether or not the content of an interprofessional course alone can deal with these complex issues is problematic. However, the sharing of these results through discussions in the course might help to shed light upon the lack of attitude consistency and role satisfaction of team professionals revealed in the Project testing.

Educators must consider the built-in biases students bring to their professional education as well as explore the effect of these biases upon student development. Thus, educators may use the data generated by the Project as a starting point for further exploration and definition of who enters a given profession and why. More data is needed for comparison since it is important to determine whether these findings are particular to the five schools studied or are generally supported by data from other universities.

C. Implications for the Design and Content of Future Interprofessional Courses

1. Design of Courses

Since the course was a new undertaking, there were few comparable efforts from which to draw information. The resolution of the expected design issues and the benefits of this experience may be useful to others interested in pursuing interprofessional education. Four aspects of designing the course emerged as crucial: selection of faculty and students; degree of involvement of the various schools; the administration of the course, including the amount of time allocated for delivery, planning, and communication; and the integration of the course within the total curricula of all professional schools.

One of the important design issues was the number and kind of professional schools to be involved. For example, it was expected that there would be varying degrees of support. But the significance of this uneven support was even greater than expected. Each school had different numbers of students and resources involved, different orientations to knowledge, different lengths of training

time, and a different organizational framework, including class schedules. Unfortunately, although one course can succeed within its own defined limits, it will take more than one course to transcend the influence of a biomedical model and the disciplinary differences reflected in a student's professional education.

While it was anticipated that there would be a need to invest a great deal of administrative time in the course, the investment was underestimated. The amount of planning and administrative time exceeded expectations since the course was designed to reach a large number of students and involve a large number of faculty. The involvement of fewer students and fewer faculty would reduce some of the administrative burdens, such as the administration of tests to large numbers of students, coordination and scheduling of the numerous faculty involved in the group discussions, and this would make future courses more manageable in terms of time.

The practical difficulty of communicating with faculty and students on different campuses was also underestimated at the beginning. Nor were the true differences between educational approaches of the different disciplines immediately apparent. For example, each professional school might be presenting certain basic material in the health care field in its curriculum, but the timing and priority given to the material varied. A thoughtful consideration of the total curricula of all schools would make it easier to assess the content level, appropriate format, and appropriate placement of the course within each different curriculum.

As a result of their varied backgrounds, the students who enrolled in the Interdepartmental course reflected varying degrees

of preparedness for the course content. Those who had been exposed to other courses which supported the interdisciplinary approach had certain advantages which were reflected in their attitudes and in their testing. The design of future courses should take into consideration this range of academic backgrounds among the students.

It would be prudent to study the total curriculum of each discipline and then determine at which stage students in each school might best benefit from an interprofessional course. Students might then ideally enter at different stages in professional training, with the time of entrance varying from school to school. It would then be reasonable to offer the course to a mix of undergraduate and graduate students.

2. Designing Future Course Content

In designing future courses, it is important to keep in mind that students and faculty generally agreed that the material covered in the Project course was appropriate for undergraduates. But, they indicated more advanced readings and clinical illustrations could be provided. Students indicated that there should be more emphasis on joint, task-oriented research projects and that they were ready for more independent, advanced work earlier than expected.

When the Project course was designed, emphasis was given to helping students understand the demands, rewards and conflicting stresses of teamwork. This emphasis was aimed at creating favorable attitudes towards teamwork. Testing revealed, however, that students were more favorable toward health care teams than expected, so the content of the course could be adjusted to deal with other problems

in greater depth. One of the problems that might be studied in the course is the low esteem health professionals showed for one another in the testing done for the Project.

3. Design of Additional Interprofessional Offerings

Clearly, one way of dealing with this problem and possibly evolving a long-term benefit would be the inclusion of a clinical component to follow an initial interprofessional course. This clinical component would include material and structured experiences designed to support and reinforce concepts presented in the first course.

A minimum offering to reinforce the course in all professional schools would be more elective interprofessional courses.

4. Interprofessional Training and the Student

a. Sharing Research

Before this Project, little was known about the impact of large-scale, early team education upon the knowledge, attitudes and perceptions of students. Much remains to be learned, but it is important that the results of the research portions of the Project be shared with students and faculty as a means of developing realistic attitudes and expectations for teamwork.

For example, both nursing and social work students might benefit from learning the results of testing which showed their attitudes toward team training were less favorable than the attitudes of other students. And students might also benefit from seeing how those in the course scored in knowledge and attitude testing when compared with professional counterparts.

The faculties of health schools might also benefit from the results of Project testing. The faculty of the allied health school might decide, for example, that allied health students might enter ID200 at a relatively early stage in their professional development since allied health students had such high scores in knowledge testing. The value of such normative testing is that it allows for a standard of comparison outside of each of the schools and gives accurate feedback as to how these students are doing in terms that have implications for the individual schools and their faculties.

b. Understanding Student Pressures

The pressures on the student in interprofessional courses should be examined further. For as Coser states, "In learning new roles, a person faces ... ambivalence twice compounded: he faces different expectations from various reference groups who all have an inherent interest in his growth ... at the same time, each reference group (health discipline) expects him to live up to role requirements surrounding his present as well as future status."[5] Thus, conforming with a new requirement in student team cooperation requires "nonconforming" with some of the role requirements of the student's other position in his own profession. As Fuchs, Millis, and Coser have suggested, "This simultaneity of conformity raises some issues in regard to the (using of the) process of (professional) socialization."[6]

At times, as this Project demonstrates, the inherent student role problems and new attitudinal positions rather than being

a source of constraint, provided an opportunity for socially creative behavior by the student professional.

c. Increasing Student Satisfaction

The lack of a perfect system for the inclusion of all the professions in one course does not mean that interprofessional courses should not be attempted or modified.

What seems clear was that each university must try many different combinations, such as: the teaching of clinical interviewing jointly; the inclusion of all students in basic science courses together, followed by an all-professional course such as this one. Interprofessionalism confronts students with "complex, untidy tasks" which challenge the relevance and worth of one's professional, educational investment.[7] The prevalent view, sustained by this Project, is that a change in the values held in professional education must accompany any effort to change the individual student or his bias toward individual work preferably at an early preprofessional level.

The problems outlined for the student do not mean that large-scale, team-oriented courses, as demonstrated, should be abandoned. The continuation of the course in its present, large-lecture format is proof that it is possible to satisfy some of the major content objections by developing lectures of more interest to students, providing curricular support to students, and thus, increasing student satisfaction.

d. Adapting to Preprofessional vs Professional Education

One conclusion that seemed reasonable is that there is a committment to professional education that does not actually crystallize until entrance into a full-time health professional program. The indoctrination into interprofessionalism is a complex process for both faculty and students and the clear indication of the Project seemed to be that team education should be undertaken when that committment is made.

One reason for the generally lower performance scores on the health knowledge test of the social workers and other pre-medical students was their lack of a clear cohesive program and committment to a health profession. The undergraduate student planning on graduate education may make a different decision about his vocation or may not be able to enter his chosen health profession due to a lower grade point average or other reasons, e.g. a lack of appropriate experience. In the Project, the student social workers and the pre-medical students were a small number of students who may have been "trying out" the professions as opposed to those students who were already admitted to professional programs. It may not be fair to compare them to practising professionals.

Understandable differentials of status and grade point average between graduates and undergraduates would make a difference to those responsible for planning future programs. Certainly, the degree of committment to profession varies even within those accepted into programs. However, this Project, at the undergraduate level, has shown that team education might be attempted with a mix of students if different assignments and performance expectations were designated.

5. Implications for Faculty in Health Professional Schools

As demonstrated in the course, the interprofessional approach to problem-solving by the participating faculties was highly valued. Inherent in an interprofessional approach is the notion that a number of professional teachers can and do merge their energies as a team in a collective effort to produce a more effective, more original course.

a. Problems and Opportunities

As the testing showed, the nature of team teaching was felt by the faculty involved in the Project to be qualitatively superior to, if not also quantitatively more extensive than the work that any single health professional could achieve alone. As Powers and Moss have suggested, this means, in essence, that each of the faculty participants on an interprofessional teaching team holds a power over certain key functions considered essential to the ultimate achievement of the course's stated objectives.[8]

One problem in conducting the course centered on the individual contributions of faculty members. For example, a few of the faculty leading the small group discussions felt that there were communication difficulties that implied status difference between them and the core team teachers. This problem could be simply solved by assigning the same faculty to a core team for lectures and the small group discussions. This would also have the added advantage of lessening time-consuming communication problems.

Another problem, which may have contributed to an overly critical attitude toward certain aspects of the interprofes-

sional course, was an original lack of total consensus about the value of the course and a misunderstanding about the supposed merging of "professional identity." Since these issues arise among most faculty, it is imperative to deal with these misconceptions about interprofessional cooperation early in future courses.

A third consideration in the design of any interprofessional course is the opportunity it presents for informal interaction within the cooperative effort. The inculcation of professional roles is a complex socialization process not totally dependent upon one course, but much of the informal interaction of faculty with students helped to create an easy atmosphere of exchange. In this atmosphere, any agreements or disagreements between faculty members were readily apparent to students.

This added another dimension to the demand placed on the faculty, a dimension not present in individual classroom instruction. This dimension of faculty teaching can be threatening or useful, but it must be anticipated in future courses.

b. Improved Recruitment of Faculty Teaching Team

The experience of this Project indicates that faculty selection for interprofessional coursework should not be based solely upon requisite knowledge, but upon interpersonal skills and observational capacity as well. The task of proper selection of personnel emerges as one of the essential prerequisites of interprofessional education. All too often, chance rather than an educated judgment, determines which faculty and which students are involved. This Project demonstrated that voluntariness, while

sometimes important, did not have to be a criterion for student or faculty selection. In one sense, the effort to include representatives of all health schools was one of the valuable contributions to developing an interprofessional practice.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

A. Findings

The efficacy of team training in the pre-clinical baccalaureate years depends upon these important considerations: the extent to which training can or should increase knowledge about general health care, shorten the amount of individual adjustment necessary for students who work on teams, and modify attitudes toward health care teams and other health professionals.

The prospect provided some insights into the dynamics of training students for teamwork:

1. A strong positive relationship between the preprofessional students' positive perceptions of the course and the faculty's endorsement was shown.

2. Students perceived the objectives of the course and reinforced them as faculty did also.

3. After a comparison between students and professionals was made, it was found: (a) students were as favorable toward health care teams as were professionals, (b) students held varying degrees of positive attitudes toward other health professionals, and (c) students were inconsistent in their choice of which health discipline they wanted to work with on a team.

4. The course did help students to gain knowledge across disciplines although they gained knowledge in varying degrees. These gains helped them to compare favorably with professionals.

5. Since the structure of the course reinforced the interprofessional content it would be important to

> focus future course design on content and format which are inter-related and were proven in this Project to be successful. The most successful component in the course was the small group research project done by students, followed by the small group discussions, and the large lecture. Variations of the design of these aspects of the course should be considered.

These findings indicate that one optimal use of cooperative resources, as demonstrated in the Project, can open new, educational options to students and faculty by helping them to cooperatively solve mutual problems within a new training structure. Exercising these new educational options over time should influence what is done in university facilities; the impact of an expanded interprofessional effort would be far-reaching in its implications since:

> " ...in all societies, health, illness and medicine constitute a nexus of great symbolic as well as structural importance, involving interconnecting biological, social, psychological and cultural systems of action."[9]

Unless challenged, separate health professional education with its ingrained habits, attitudes, and procedures, threatens to become an aggregation of disparate parts more responsive to divisive than integrative forces. As Evans and others have advocated, and as the Project demonstrates, the university cannot exercise its unique role in the future of human health if this seemingly haphazard arrangement is permitted to continue.[10] If the hallmark of the university is anticipation of the future, then, interprofessional education is one of the mediums through which faculties can energize themselves for change. Even though interprofessional education seems to provide a local avenue for change, it is incumbent on those who promulgate this type of education to base more of their decisions upon continuing

research into interprofessionalism and teamwork.

B. Recommendations for Interprofessional Education

The experience gained in planning, conducting, and evaluating Interdepartmental 200 showed that an ideal course in teamwork can achieve its interprofessional objectives and should include the following:

1. A conceptual framework which emphasizes comprehensive health care within a team format and which values each profession's contribution;

2. Continuity with, and reinforcement of, the course in other areas of the student's curriculum;

3. Joint management of the course by all the health schools;

4. Emphasis not only on knowledge of health, but on an understanding of attitudes and team relationships;

5. Study of the interprofessional aspects of health care knowledge, including role and status problems and communication skills;

6. Use of several integrated components, such as faculty team teaching and small group research project by students;

7. An emphasis on developing positive and consistent attitudes toward working with other professionals.

In addition, more work is needed to measure the long term success of interprofessional courses; this could be done by planned follow-up, interviewing, and testing of students after they enter the job market.

It is clear, however, that early inculcation of regard for other health professionals can be achieved and that knowledge can be imparted in the process, but not without some difficulties. Although a tradition of separate training was broken in this Project, one course, even when combined with an effort to use

socialization to produce different values, cannot bring about interprofessionalism.

An important part of the success of the course grew out of two efforts. One of them was the administrative coordination of the course. The other was the attempt to use and combine educational methods with the teaching and inculcation of new attitudes.

The following recommendations were drawn by the author from a review of the total experience with the Project. These recommendations have been selected from the perspective of their value to the student, the faculty, and the university:

1. To start and complete an interprofessional effort, the administrative responsibility must be allocated and fixed with an individual or team of individuals to avoid time-consuming and complex decision-making.

2. The selection of faculty should be based on the following criteria: teaching ability and ability to collaborate, personal attributes which make it easy to cooperate, and belief in the efficacy of teams. If possible, experienced team teachers should train interprofessional teams prior to their participation in the course.

3. The course should have available more time, faculty, and resources than the ordinary course since the effort is time-consuming and requires constant revision and communication among faculty.

4. Since the physical setting of the course proved a critical factor in the large lectures, efforts should be made to find a convenient and suitable meeting place, even one outside the university in a community laboratory.

5. Outside funding or elaborate resources are not needed; however, an organizational consultant or faculty person from outside the health schools might be involved to help faculty develop sound interpersonal relationships.

6. From the experience of this Project, it is clearly valuable to make the course a requirement at some, if not all, the health professional schools. This underscores the importance of the course and makes it less

a special demonstration project and more a part of routine professional study.

7. It is reasonable and beneficial to include a mix of graduate and undergraduate students, although the present course included only undergraduates.

These recommendations can be an important step in developing the best in team care. It is hoped they will stimulate other interprofessional demonstration courses in other universities. The new courses, in turn, can provide more basic research into the effects of interprofessional training on students and faculty by adding to interdisciplinary knowledge.

For students, this Project has demonstrated that an undergraduate course can help meet the need for teamwork in a less haphazard fashion. Students and faculty responded and gained in knowledge about each other while engaging in a socialization process across professions. Specifically, students demonstrated that they gained in knowledge and also developed more positive attitudes toward interprofessional teamwork within a required course format. Their exposure to the concepts, issues, and problems of team interaction should help them adjust more quickly to the practice of professional teamwork.

For faculty, this Project has demonstrated that in individually-oriented health professional schools it is feasible and possible to develop jointly a curriculum that cuts across disciplines. The demonstrated value of this interprofessionalism for health faculty lies in the opportunity to learn from each other by making the best cooperative use of knowledge and skills.

If the university is to utilize its faculty and student

resources efficiently and effectively in fostering the best in team care, a permanent administrative mechanism for the implementation of interprofessional coursework has to be developed to synchronize curricula and to make feasible the entry of both graduate and undergraduate students into similar interprofessional courses with corresponding and supportive clinical experience. This would help to end the costly duplication of basic coursework with individual professional health schools. The possibility also exists that a reallocation of faculty and resources might be beneficially and equitably made among health schools. The universities and the professional schools have an opportunity to exercise leadership in changing a disciplinary focus which constricts by exercising leadership in anticipating the need for a more comprehensive, publicly-oriented, team-trained health professional before changes in the health care system make educational changes immediately imperative.

CHAPTER VII

1. Wayne Eaton, "The Social Processes of Professional Teamwork", 802, 1, (Jan. 1970) American Sociological Review, p. 709.

2. Ibid.

3. Sidney Katz, Joseph Pasidero, and Lauro Halsted, "Team Care and Chronic Illness: A Framework for Teaching Comprehensive Health Care", Teaching of Chronic Illness and Aging edited by Duncan W. Clark and T. Franklin Williams, Vol. 2, A Conference Sponsored by the Association of Teachers of Preventive Medicine (Washington, D.C.: DHEW No. 75-876), 1973. p. 53.

4. Alvin Zander, "Influencing People in the Face to Face Setting: Research Findings and Their Applications", 13, Health Education Monographs (Rye, New York: Society of Public Health Educators, Inc.), 1962, pp. 3-18.

5. Ruth Coser, "Sociological Ambivalence", 97, 1 (Jan. 1972), American Sociological Review, p. 408.

6. Katz, et al., op. cit. p. 54.

7. Laura Bertino and Robert C. Jackson, Social Work Trainers in Health Programs, (Berkeley, Calif.: Programs in Public Health), 1972, p. 7

8. Jeffrey Moss, "Interprofessional Collaboration to Influence the Formation of Social Policy in Mental Health", DSW dissertation, Ohio State University, 1972, p. 172; Powers, op. cit., pp. 50-55.

9. Herschel A. Prins and Marian B. H. Whyte, Social Work and Medical Practice, (London: Pergamon Press, 1972) p. 40.

10. Norman Evans, "Together or Apart? Teachers and Social Workers", Social Service Quarterly, 43, 3 (Winter, 1970), pp. 108-10.

APPENDIX A

List of Objectives
For Interprofessional Project: Phases, I, II, and III

PROJECT OVERALL

Objectives are listed sequentially in the order of accomplishment:

1. Establish a committee. The Interdepartmental Health Committee (coordinated in Phase I).

2. Implement a coordinated curriculum (planned by a team of faculty). This resulted in a course, Interdepartmental 200 (Coordinated in Phase II).

3. Assess the institutionalization of Interdepartmental 200 in five University of Connecticut professional schools (Coordinated with Phase III).

Objectives for Attitudinal Skill Knowledge Development in Interdepartmental 200 (Ind. 200): Evaluation in Phase III by Attitudinal Scale.

1. Understand and have favorable attitudes toward professional roles among interprofessional teams.

2. Apply a problem-solving method in the discussion section to the activities of the health-care team. Be aware of potential management problems in teams.

Minor objectives related to Knowledge: Evaluation by Health Knowledge Test in Phase III.

1. Have knowledge of the health-care delivery system.

2. Have knowledge of the educational preparation of the various health team members.

3. Have basic knowledge of the legal and ethical responsibilities of health professionals.

APPENDIX A
2

COURSE NUMBER AND TITLE: INTERDEPARTMENTAL 200. An Interdisciplinary Approach to Health Care.

COURSE DESCRIPTION:

An interdisciplinary approach to health care which focuses on the role of the health team in the health care delivery system. Emphasis is placed on the preparation and roles of the health team members, both independent and interdependent, the system of health care delivery in the nation, modes of communication and collaboration, the role of the consumer of health care, and the ethical and legal responsibilities of health professionals.

COURSE OBJECTIVES:

At the conclusion of each section of the course the student must understand:

I. The Meaning of Health

1.1 Define "health" and the "wellness".
1.2 Describe and compare the various states of "illness" and "infirmity".
1.3 Identify and compare the major factors influencing the health needs of individuals by social and economic groupings.

Identify and contrast the major environmental factors and personal living patterns which influence the health of individuals and groups.
1.4 Identify responsibilities of health professionals as a group and promoting the health of individuals.

Identify the common and individual goals of health professionals.

II. Health Care Planning

2.1 Identify the major components of the health care delivery systems in the United States.

Describe how the current system meets/fails to meet the health care objectives of prevention, amelioration, restoration and maintenance or conservation.

COURSE PLANNING FORMAT

Course Objectives	Rationale	Learning Activities	Resources	Evaluation
Unit 1. Time: 2 hours				
Knows a definition of "health" and "wellness"	Understands the delicate balance to be maintained in health	Cognitive Exercises, Small group process	Dunn - "High Level Wellness" Who definition of health	
Knows a definition or description of "illness" and "infirmity" or "aging"	Understands how illness differs from health; understands the significance of aging	Uses definitions in speech		
Recognizes major environmental factors and personal living patterns which influence the health of individuals. sick role well role		Observation in Teams		Group notation: evaluation
Knows the responsibilities of health professionals as a group in preserving and promoting the health of individuals (emphasis on consumer and his needs)		Development of Positive attitudes		
Unit II. Time: 12 hours				
Knows aspects of the health care delivery system in the U. S.	Understands how care is secured.			
Understands how health care policy is established.				

Course Objectives	Rationale	Learning Activities	Resources	Evaluation
Understands the role of government in the establishment of policy concerning health care	To learn the issues and goals of National Health Insurance. Knows of legislation affecting health care.	Lecture by team followed by discussion	Medicine in a Changing Society, Corey et al	Test, Items 3,4,6,7,8
Understands the role played by private interests in the establishment of health care policy		Lecture by team followed by discussion	National Health Care, Elling	Test, Items
Identifies expectations which consumers have of health workers		Small Group Discussions and Role Relations	Sociology of Medicine, Coe	No Evaluation
Identifies the cultural and attitudinal problems of the client facing a health problem.	Appreciates some of the social barriers to obtaining health care.	Considers problems of the deprived, minority groups, the affluent, and the middle-class		Test, Items 12, 17,18,21,22
Knows of the costs involved in securing health care.	To learn about health insurance 1. Private 2. Public	Examine various types of policies	Health Strategy Game, Hepner and Hepner	Test, Items 5,8
Recognizes deficiencies in the current systems and organizations of health care.	To understand changing health needs and demands dictated by social changes	Lecture/followed by small group discussion.	The American Health Empire	Test Examination (Essay)

Course Objectives	Rationale	Learning Activities	Resources	Evaluation
Unit III. Time: 14 hours Knows the fundamentals or essential aspects of role theory.		Role modeling in small groups as a team/Project/Peer Review.	Role Theory: Concepts and Research, Biddle and Thomas	
Understands the process of system analysis	To understand role strain and status inconsistency	Role modeling in small groups as a team/Project/Peer Review.	Joyce Finch, Systems Analysis...	Test of Health Care Team Inconsistency and Management of Dissonance
Knows the educational preparation and area of expertise of the various health team workers	Understands their basic preparation in order to know the potential contribution of each team member.	Expects conflict and can identify. Positive Attitudes.	Odgers and Henberg, Introduction to Health Professions	Test, Items, 1,2,3,4
Knows the function, roles and activities of the health team members.	Understands what each team member contributes to health care.	Identifies and verbalizes stereotypes of each of the health professionals.	See position papers prepared by each faculty representative.	Test, Items 1,2,3,4
Can name the Health Professional Goals - Prevention, Restoration, Amelioration, Conservation.	Contributes to common value base.	Lecture and small group project.	Faculty represents value base consensus to students.	No Evaluation
Applies the problem-solving method to the activities of the health team.	Ameliorates role strain.	Small group Research /project.	Theory of Cognitive Dissonance.	

Course Objectives	Rationale	Learning Activities	Resources	Evaluation
Knows the purpose and methods of evaluation of clients' health and social status used by various members of the health team.	Ameliorates status problems.	Small group Research/project.	Human Problem Solving, Newall and Simon	
Understands the role conflicts and status differences and their effect on the health team.	Develops management of conflict.	Small group Research/project.		
Knows how to determine the leader of the health team.		Small group Research/project.	Social Stress (ed) by Levine and Scotch	No Evaluation
Unit IV. Time: 12 hours				
Understands the meaning of collaboration/and attitudes. (Clarifies the need/identification style)				Test of Health Care Team
Understands the importance of the coordination of activities in the delivery of care.			Motivation Productivity & Satisfaction of Workers - Mimeographed paper	No Evaluation
Knows the purpose and goals of interprofessional planning conferences.				No Evaluation.
Participates in student health team planning conferences.	Anticipatory Socialization.	Participates in teams to work on case study. Role play health professionals and consumers in groups.	Small group project. project.	Evaluation by faculty of peer review and group project.

Course Objectives	Rationale	Learning Activities	Resources	Evaluation
Understands the need for health team members to conduct research in appropriate groups.	Contributes to knowledge base.	None	Lecture material.	Evaluation by faculty of peer review and group project and test, item 19
Understands the legal and ethical responsibilities of health professionals.	Contributes to value base, attitudes	Lecture material	Faculty represents value base consensus to students.	No Evaluation

Estimated Examination Time: 6 hours

Total Time - 46 hours

TOTAL TIME - 46 Hours

APPENDIX B

RESPONSIBILITIES OF SMALL GROUPS

Each student enrolled in Interdepartmental 200 is required to participate in the activities of one small group in order to earn credit for the course. Students and faculty have been assigned randomly to groups.

During the first small group session, it is recommended that each group select a group leader and a recorder. In future sessions each group will probably subdivide into smaller groups of 5 or 6 students for the purpose of accomplishing the group project.

The tasks of the groups during the first session are to suggest problems in securing health care which might serve as the focus for a group project. Faculty will collate student suggestions as well as make further suggestions of their own. Decisions on topics for the group project should be reached during the second group session.

In addition to the above, each student should write a brief description of how he views himself as a health professional. The written material should be submitted to the faculty member assigned to that group.

The topic selected for the group project must, of course, be related to the content of this course. The focus of the work should be on the team approach to solving problems related to health care.

Each member of a small group will receive the same grade for the paper submitted by the group. This practice is necessary in a group effort. However, faculty are well acquainted with the difficulties sometimes encountered in group work. In order to compensate for some members of the group possibly contributing much more than others, faculty evaluation of the paper will be coupled with a system of peer review. Both determinations will be considered prior to assigning a final grade for the course to each student.

Peer review will provide the opportunity for each student to evaluate each other student in the group on the extent of each person's participation, as well as evaluating how each person carried through on the responsibility for tasks assumed. Faculty evaluation will be based on judgment of the quality of content of the project as well as perceptions of the extent to which the group functioned as a team.

The grade for the course will be determined as follows:

Term Paper	40%*
Mid-term Exam	30%
Final Exam	30%

*This was later changed to 50% of the grade by the faculty team.

APPENDIX B

CRITERIA FOR EVALUATION OF GROUP PROJECTS

The extent to which the group functioned as a team should be visible by the extent to which the perspectives and knowledges of each of the professions are represented in each segment of the paper, and this should be a consistent consideration in evaluation.

Each of the following factors may be taken into consideration, if appropriate:

Format - Spelling, punctuation, sentence composition, grammar, proofreading, readability of graphs, completeness of references, organization, smoothness of transition between sections, etc.

Statement of the problem - Description, including its nature, scope, severity and probable causes, possible consequences of problem situation if not corrected, consideration of viewpoints of the various professions and the consumer in definition of problem, consideration of factual material regarding problem.

Consideration of alternative potential solutions - Evidence that a reasonably complete literature search has been undertaken, appraisal of effectiveness/cost balance of various attempted solutions, relation of various potential solutions to the functions and roles of the various health professionals.

Conclusion - prescription of solution(s) or research program designed to lead toward elimination of problem, justification for deciding on this action over the various alternatives considered, relation of solution to roles, functions, perspectives of each profession.

Bibliography - Sources taken from literature of the various professions and social and biological sciences, if appropriate, accuracy, completeness.

Peer Evaluation - In addition to the above, each member of the group will be evaluated by his peers for his cooperation, contributions, and degree of responsibility and reliability assumed within the group.

APPENDIX B

PEER EVALUATION OF GROUP MEMBERS

Below are four statements describing certain behaviors which group members display to varying extents. Describe the frequency with which each group member showed these behaviors using the following scale:

1 - almost always

2 - usually

3 - occasionally

4 - hardly ever

In the top row of boxes write the name of each member of your group, including yourself. Then respond to each statement by writing the appropriate number in the boxes below.

Names of Group Members					
Contributes to group by communicating problems and knowledge of his particular profession.					
Listens to and comprehends viewpoints and knowledges from other professions.					
Helps group to synthesize the various perspectives.					
Works cooperatively with other group members as peers, taking leadership when appropriate and yielding leadership to others when appropriate.					
Carries through responsibly for tasks which he assumes.					
Using the scale below, rate the extent to which the contribution of this person was valuable to the group in its efforts to meet its goals. 1 - extreme value 2 - above average value 3 - moderate value 4 - questionable value					

APPENDIX B

GUIDELINES FOR GRADING GROUP PROJECT

DIRECTIONS: The following questions are intended to serve as criteria which should be considered in the evaluation of the group projects. After reading the paper, record the extent to which it meets each of the criteria which are listed. Use the scale below:

1 - To an exceptional extent
2 - To a moderate extent
3 - To a slight extent
4 - Not at all

	1	2	3	4
Is the description of problem and its causes accurate, convincing, and meaningful?				
Does the paper focus on a single topic and avoid irrelevant digressions?				
Does the prescribed solution follow logically from previous sections of the paper?				
Is established knowledge and dominant attitudes of various professions and of social and biological sciences taken into consideration?				
Are these various knowledges and perspectives synthesized in a constructive and balanced manner?				
Does the solution deal with causes behind the problem, rather than superficial manifestations?				

APPENDIX B

Interdepartmental 200

Group Leader and Core Faculty Evaluation

I GROUP LEADERS
Responding: 13
Not responding: 3

A. LECTURE

"What were your reactions to the team teaching?"

The theory of team teaching is good but there needs to be more evidence of collaboration. It was difficult to follow because there was inconsistency in the lecture method. It seemed more unit teaching than team which demonstrated a lack of continuity in the process. There was evidence of discrepancy in policy of team approach. Coordination of lectures minimal. Lack of continuity of lecture material.

"What impressions do you have regarding the scope of the content?"

The issues as stated are appropriate but the degree of depth limited. It may be that there is too much material or too broad and theoretical for adequate depth. The content needs more analysis with a stronger factual base. There is a question as to the adequate background of the student. Suggest 1. health professional, 2. team, 3 system.

"Were readings appropriate to the lectures?"

The general consensus is that the Horwitz text is extremely poor although one member stated that Chapters #3, 4, 5, were good but the rest overdid the concepts. There were statements of "boring", "uninteresting", "dry", and "narrow". Milio as a reference is illogical, poorly written, and although it did relate to the lectures, was narrow. Suggest bibliography of reading that would be more stimulating. Suggest more responsibility for students.

"What were your perceptions of the ... learnings ...?"

The objectives were good. Learning was impaired by anxieties and frustrations of the students.

B. GROUP DISCUSSIONS

"What did co-leadership of the group produce?"

The consensus of those reporting was that co-leadership was

a desirable arrangement except for those reporting minimal cooperation (2) from partners, not the idea. Wanted earlier contact.

"Comments on group size"

Three reported 23-26 too large, remainder stated O.K.

"Comments on structure ... ?"

Increase structure of the group sessions with questions, guidelines, planning by group leaders, designation of concepts to be carried over from lecture. Failed to foster team as lecture material had little to do with patient care functions - the basis of team activities. Little reaction to lecture. Suggest case studies, "food for thought" problems, simulation activities. Should be low on information sharing and high on discussion.

"Miscellaneous"

Poor attendance.

C. GROUP PROJECT

"Value"

There is little doubt of the value of the project. It tested group process skills, had high enthusiasm. Students prepared with those skills either formally or inherently did well. The group project was an academic exercise, not health team activity, i.e., a committee activity, not team.

"Weighting of grade for project, exam"

Three answered yes, one said too high and unrealistic. Needed consistency in grading; the criteria were appropriate but they needed further clarification, particularly the process and product criteria. Bias was highly evident in grading. More responsibility should be accepted by group leaders and not those faculty outside the group.

"Problems"

Clarify group leader responsibility in project. Needs to have more clarification of guidelines and objectives of project. Students need to meet regularly with stated objectives for each meeting. Suggest specific topics, or problems to solve.

D. OVERALL REACTIONS

"Value"

Course content invaluable, with graduate potential(?). Change the form with student input. Demonstrate more interaction of the core team. Increase the commitment of the core team, not research or vested interests. Make the contributions of both schools equitable. Do not assign the responsibilities.

"Exams"

Mid-semester exam ambiguous. It should be the responsibility of all to submit input, but role of core team to complete as it is their ultimate responsibility. Need essay type of exam, by group leaders with agreed upon guidelines. Need inservice training in exam writing.

"Management"

1. Instructions to co-leaders: Objectives too broad, too many, suggested objectives and sub-objectives. Hand out to students, dates, subject, lecturer, questions for discussion and guidelines with bibliography for each.

2. Group coordination: More group meetings, more communication, earlier contact with group leaders, prompt circulation of meeting minutes. Use meetings more productively, less strained. The expectations are for more equity in the responsibilities. Clarity in the responsibilities. Earlier contact with group leaders. Revisions should be done by faculty with a strong practitioner base.

The University of Connecticut

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SCHOOL OF SOCIAL WORK
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APPENDIX C

To students in:
School of Allied Health Planning
School of Nursing
School of Pharmacy
School of Social Work
and others in Interdepartmental 200

Interdisciplinary Education Research

Dear Student:

You are now in a course which began several years ago when health professionals, who were working on interdisciplinary education, developed an academic program for undergraduate health students in team development and health care. With your faculty, you have been exposed to many similar ideas and projects.

I became interested in the area of student/faculty learning during my doctoral studies at Hunter College. With a research team from Boston University and several other universities around the country, I am conducting a study. From previous studies, it has been found that certain data from faculty and students is useful before future, extensive training of students together can develop.

The research team and I would like you to respond to several questionnaires. These questionnaires are: (1) about you, (2) about some of your experiences prior to taking this course, and (3) about your knowledge and attitudes toward other health professional students.

I would like you to know why I am collecting this information, who will see it, and how it will be used. This research will help increase the understanding of interdisciplinary health teams and will help our comprehension of how people can be taught to work on such teams. Every effort will be made to return the data to you. The Student Research Contract explains fully how this data will be made available to you and to your faculty.

In no way should you feel coerced to respond to either the questionnaires or specific items on the questionnaire. I acknowledge your right to not respond to questions in my doctoral study although I believe my questions are reasonable and important.

I hope that this course has been worthwhile for you and that this research will contribute to your learning. If you have any questions, please feel free to contact me. A copy of the research design.is on file with the Dean of the School of Social Work.

Sincerely,

Regina W. Falcon, MSW, ACSW
Assistant Professor
School of Social Work

The University of Connecticut

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SCHOOL OF SOCIAL WORK
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School of Allied Health Planning
School of Nursing
School of Pharmacy
School of Social Work

Interdisciplinary Education Research

STUDENT RESEARCH CONTRACT

Because I am concerned about your understanding the policies and procedures of the following study, I would like to re-state a basic policy - that information will be returned to your schools; So that planning may be done and that you are under no obligation to respond to particular questionaires, items on questionnaires, or to participate in other research activities. While I hope you will participate, I respect your right to control any information you provide.

It would contribute to this study significantly if you would put your student number on the final course evaluation. A second basic policy is that, Unless otherwise instructed by you, I will make every effort to insure the confidentiality of your individual data.

Your individual data will be sent to outside consultants who will analyze the data and send the faculty results by groups and disciplines. Thus, the teaching faculty will not see your individual answers , and I hope this will allow you to answer as candidly as possible. Data will, also, be used in my doctoral research.

Regina W. Falcon, ACSW
Assistant Professor
School of Social Work
FACULTY TEAM IND 200

FACULTY OF
INTERDEPARTMENTAL
200

MEMORANDUM

Dear Colleague:

You have been a participant in an experimental course in interdisciplinary education. I am undertaking a study of the learning our students have done through their participation in this course, both as an effort to contribute to the development of our course and as part of my doctoral studies at Hunter College in New York City. Furthermore, this study is part of a larger collaborative effort going on in several large Universities. The instruments were designed with the assistance of Dr. Leonard Saxe and Mr. Jerry Porter of Boston University Psychology Dept.

An important dimension of this study requires some information about the teaching faculty. In order for me to obtain this information about you, I would appreciate your completing the enclosed questionnaire.

1. Please fill out questionnaire.
2. Please return by mail in the enclosed envelope by Dec. 19.

Please be advised that I respect your right not to respond to this questionnaire or to specific items within it, although I have made every effort to formulate the questions reasonably. I feel that the information will be important to us.

Note that you have been assigned a number from the Table of Random Numbers so that your name need not appear on the questionnaire and only a secretary will see the returns. The number is assigned so that a followup letter can be sent to those who need it.

The confidentiality of your answers will be respected. Data will be analyzed by groups.

Thank you in advance for your time.

Best Regards for a Warm,
Wonderful Holiday Season,

Regina W. Falcon, MSW, ACSW
Assistant Professor
School of Social Work
University of Connecticut

ID:200
11/12/75

STUDENT NUMBER_____
Discipline_____

PART I

I. Background Information

Directions: Please complete the following items by either filling in the blank where information is requested or circle the letter of the most appropriate answer. Please make any additional comments, in the margins or/ on the reverse side of the questionnaire booklet.

A. General background

1. Name.....

2. Sex: M_____ F_____

3. Date of birth _____

4. Marital status _____

5. No. of siblings (Ages): brothers_____sisters_____

6. Father's occupation_____

7. Mother's occupation _____

8. Spouse's occupation_____

9. Which of the following socio-economic groups would you consider your family of origin (i.e., your parents) as belonging to?

   a. lower class
   b. upper lower class
   c. lower middle class
   d. middle class
   e. upper middle class
   f. lower upper class
   g. upper class

10. Approximately, what is your family's (i.e., your parents yearly income)?

   a. less than $5,000
   b. $5,000-$9,999
   c. $10,000-$14,999
   d. $15,000-$19,999
   e. $20,000-$24,999
   f. $25,000-$29,000
   g. more than $30,000

10a. How many members of your family worked to produce this income?_____

I.2

B. Professional background

11. What is the highest academic degree you have been awarded to date?

    a. high school diploma
    b. associate's degree
    c. bachelor's degree
    d. master's degree
    e. M.D. or Ph. D.
    f. other (please specify)_____

12. What is the field and the sub-area, if applicable, of your highest academic degree?_____

13. What academic degree are you currently pursuing?

    a. associate's degree
    b. bachelor's degree
    c. master's degree
    d. doctorate (D.D.S., M.D., Ph.D.,etc)
    e. other (please specify)_____

14. What is your field and area of specialization, if any, of the degree you are currently pursuing?_____

15. If this is not the terminal degree you are seeking, what degree are you ultimately trying to obtain?_____

16. What, if any, professional certification do you have?_____

17. What professional certification are you currently seeking?_____

18. What is your current grade point average?_____(If it is not on a 1 to 4 scale, please describe the system)_____
    _____

19. What area of specialization, if any, do you want to enter when you finish your training?_____

20. In terms of your professional plans, please indicate how you think you would like to be able to allocate your professional time. Below are listed several types of activities and you can indicate your allocation of time by dividing 100% between the five categories.

    _____% administration
    _____% clinical
    _____% research
    _____% teaching
    _____% other (please specify_____)

PART ONE II.1

ID 200
11/12/75

Discussion Section #_____

Student No.

Discipline_____

II. Attitudes Toward Other Health Professionals

Directions: The following questions are designed to assess your attitudes towards other health professionals. When working with people in other roles (i.e., individuals trained to perform different functions than ourselves), we ordinarily have assumptions about what to expect. It is these assumptions this questionnaire is exploring.

A. Background attitudinal information.

1. Please indicate, using the scale shown directly below, how much experience you've had in working with professionals in each of these health fields.

1	2	3	4	5	6	7
no experience at all						very great deal of experience

8. physician _____
9. osteopathic physician _____
10. clinical dietetics _____
11. social worker _____
12. nurse practitioner _____
13. public health worker _____
14. nurse _____
15. physician assistant _____
16. pharmacist _____
17. physical therapist _____

B. Attitudes PART I

This questionnaire is designed to reflect how you view the typical attitudes of other health professionals. Your answers should be marked by a check placed in a position on the scale which reflects your feelings. Please make any additional comments about your attitudes and experience with health professionals, under the last scale at the bottom of the page.

2. Physicians seem to me...

cc 18.	self-assured	___	___	___	___	___	___	___	not self-assured
19.	putting down patients	___	___	___	___	___	___	___	not putting down patients
20.	interpersonally easy	___	___	___	___	___	___	___	interpersonally difficult
21.	professional	___	___	___	___	___	___	___	not professional
22.	caring about co-workers	___	___	___	___	___	___	___	not caring about co-workers
23.	feeling "put-upon"	___	___	___	___	___	___	___	not feeling "put-upon"
24.	egotistical	___	___	___	___	___	___	___	not egotistical
25.	reluctant to take responsibility	___	___	___	___	___	___	___	not reluctant to take responsibility
26.	dependent	___	___	___	___	___	___	___	not dependent
27.	putting down other roles	___	___	___	___	___	___	___	not putting down other roles
28.	collaborative	___	___	___	___	___	___	___	not collaborative
29.	concerned with total patient welfare	___	___	___	___	___	___	___	concerned with specific aspect of patient welfare
30.	wanting to learn from others	___	___	___	___	___	___	___	not interested in learning from others

Additional comments about your attitudes toward physicians:

3. Nurses seem to me...

self-assured	____	____	____	____	____	____	____	not self-assured
putting down patients	____	____	____	____	____	____	____	not putting down patients
interpersonally easy	____	____	____	____	____	____	____	interpersonally difficult
professional	____	____	____	____	____	____	____	not professional
caring about co-workers	____	____	____	____	____	____	____	not caring about co-workers
feeling "put upon"	____	____	____	____	____	____	____	not feeling "put upon"
egotistical	____	____	____	____	____	____	____	not egotistical
reluctant to take responsibility	____	____	____	____	____	____	____	not reluctant to take responsibility
dependent	____	____	____	____	____	____	____	not dependent
putting down other roles	____	____	____	____	____	____	____	not putting down other roles
collaborative	____	____	____	____	____	____	____	not collaborative
concerned with total patient welfare	____	____	____	____	____	____	____	concerned with specific aspect of patient welfare
wanting to learn from others	____	____	____	____	____	____	____	not interested in learning from others

Additional comments about your attitudes toward Nurses:

4. Social workers seem to me....

self-assured	___	___	___	___	___	___	___	not self-assured
putting down patients	___	___	___	___	___	___	___	not putting down patients
interpersonally easy	___	___	___	___	___	___	___	interpersonally difficult
professional	___	___	___	___	___	___	___	not professional
caring about co-workers	___	___	___	___	___	___	___	not caring about co-workers
feeling "put upon"	___	___	___	___	___	___	___	not feeling "put upon"
egotistical	___	___	___	___	___	___	___	not egotistical
reluctant to take responsibility	___	___	___	___	___	___	___	not reluctant to take responsibility
dependent	___	___	___	___	___	___	___	not dependent
putting down other roles	___	___	___	___	___	___	___	not putting down other roles
collaborative	___	___	___	___	___	___	___	not collaborative
concerned with total patient welfare	___	___	___	___	___	___	___	concerned with specific aspect of patient welfare
wanting to learn from others	___	___	___	___	___	___	___	not interested in learning from others

Additional comments about your attitudes toward social workers:

II. 5

5. Pharmacists seem to me...

self-assured	____	____	____	____	____	____	____	not self-assured
putting down patients	____	____	____	____	____	____	____	not putting down patients
interpersonally easy	____	____	____	____	____	____	____	interpersonally difficult
professional	____	____	____	____	____	____	____	not professional
caring about co-workers	____	____	____	____	____	____	____	not caring about co-workers
feeling "put upon"	____	____	____	____	____	____	____	not feeling "put upon"
egotistical	____	____	____	____	____	____	____	not egotistical
reluctant to take responsibility	____	____	____	____	____	____	____	not reluctant to take responsibility
dependent	____	____	____	____	____	____	____	not dependent
putting down other roles	____	____	____	____	____	____	____	not putting down other roles
collaborative	____	____	____	____	____	____	____	not collaborative
concerned with total patient welfare	____	____	____	____	____	____	____	concerned with specific aspect of patient welfare
wanting to learn from others	____	____	____	____	____	____	____	not interested in learning from others

Additional comments about your attitudes toward pharmacists:

6. Clinical dieticians seem to me.....

self-assured	____	____	____	____	____	____	____	not self-assured
putting down patients	____	____	____	____	____	____	____	not putting down patients
interpersonally easy	____	____	____	____	____	____	____	interpersonally difficult
professional	____	____	____	____	____	____	____	not professional
caring about co-workers	____	____	____	____	____	____	____	not caring about co-workers
feeling "put upon"	____	____	____	____	____	____	____	not feeling "put upon"
egotistical	____	____	____	____	____	____	____	not egotistical
reluctant to take responsibility	____	____	____	____	____	____	____	not reluctant to take responsibility
dependent	____	____	____	____	____	____	____	not dependent
putting down other roles	____	____	____	____	____	____	____	not putting down other roles
collaborative	____	____	____	____	____	____	____	not collaborative
concerned with total patient welfare	____	____	____	____	____	____	____	concerned with specific aspect of patient welfare
wanting to learn from others	____	____	____	____	____	____	____	not interested in learning from others

Additional comments about your attitudes toward clinical dieticians:

II. 7

7. Physical therapists seem to me....

self-assured	____:____:____:____:____:____:____:	not self-assured
putting down patients	____:____:____:____:____:____:____	not putting down patients
interpersonally easy	____:____:____:____:____:____:____:	interpersonally difficult
professional	____:____:____:____:____:____:____:	not professional
caring about co-workers	____:____:____:____:____:____:____:	not caring about co-workers
feeling "put upon"	____:____:____:____:____:____:____	not feeling "put upon"
egotistical	____:____:____:____:____:____:____:	not egotistical
reluctant to take responsibility	____:____:____:____:____:____:____	not reluctant to take responsibility
dependent	____:____:____:____:____:____:____	not dependent
putting down other roles	____:____:____:____:____:____:____	not putting down other roles
collaborative	____:____:____:____:____:____:____	not collaborative
concerned with total patient welfare	____:____:____:____:____:____:____	concerned with specific aspect of patient welfare
wanting to learn from others	____:____:____:____:____:____:____	not interested in learning from others

Additional comments about your attitudes toward physical therapists:

8. Medical Technologists seem to me.....

self-assured	____:____:____:____:____:____:____:	not self-assured
putting down patients	____:____:____:____:____:____:____	not putting down patients
interpersonally easy	____:____:____:____:____:____:____:	interpersonally difficult
professional	____:____:____:____:____:____:____:	not professional
caring about co-workers	____:____:____:____:____:____:____:	not caring about co-workers
feeling "put upon"	____:____:____:____:____:____:____	not feeling "put upon"
egotistical	____:____:____:____:____:____:____:	not egotistical
reluctant to take responsibility	____:____:____:____:____:____:____	not reluctant to take responsibility
dependent	____:____:____:____:____:____:____	not dependent
putting down other roles	____:____:____:____:____:____:____	not putting down other roles
collaborative	____:____:____:____:____:____:____	not collaborative
concerned with total patient welfare	____:____:____:____:____:____:____	concerned with specific aspect of patient welfare
wanting to learn from others	____:____:____:____:____:____:____	not interested in learning from others

Additional comments about your attitudes toward medical technologists:

C. Attitudes about work relationships

Imagine you were about to work with other health professionals as a team. We assume that you have expectations about your working relationships. Please answer the following two open-ended questions by imagining how it would be working closely with professionals who have other health team roles.

7. Which other discipline on a team would you anticipate having the most difficulty in working with? Why?

8. Which other discipline on the team will it be easiest for you to work with? Why?

Part IV.

ID 200
11/25/75

S.S.#_____

Discipline_____

Interdisciplinary Health Knowledge Test

Please answer each of the following questions by circling the one answer that you feel best answers the question.

1. In most states, the earliest that physicans may practice medicine independently is after completion of:

   (a) medical school
   (b) apprenticeship with a practicing, licensed M.D.
   (c) residency
   (d) 1 year post-graduate training
   (e) specialty training

2. A physician may admit a patient to a hospital only if:

   (a) the patient is sick
   (b) he/she has "admission privileges" granted by the hospital
   (c) the admission committee approves
   (d) he/she belongs to the local (county) medical society
   (e) the patient has adequate insurance coverage

3. A visit to a general internist's office is a visit to a:

   (a) primary care center
   (b) secondary care center
   (c) tertiary care center
   (d) comprehensive care center

4. In hospitals, the director of pharmacy or chief pharmacist often has completed additional training in obtaining a certificate of:

   (a) Residency in pharmacy
   (b) Residency in hospital pharmacy practice
   (c) Residency in pharmacy management
   (d) Internship in pharmacy
   (e) none of the above

5. The Doctor of Pharmacy (Pharm. D.) Degree is:

   (a) the undergraduate Baccalaureate Degree in Pharmacy
   (b) the Professional Doctorate Degree in Pharmacy
   (c) another way of expressing the academic Doctor of Philosophy degree in the pharmaceutical sciences
   (d) the degree given for advanced training in hospital pharmacy
   (e) none of the above.

6. In order to practice in any state, an M.D. must be:

(a) licensed
(b) certified by a specialty board
(c) a member of the state medical society
(d) periodically recertified by the state medical board
(e) a member of the local (county) medical society

7. The minimal educational requirements of an optometrist include:

(a) undergraduate degree only
(b) two years graduate degree training
(c) four years graduate degree training
(d) one year post professional degree training

8. Ordinary responsibilities of the optometrist include all of the following except:

(a) funduscopic exam
(b) refraction exam
(c) prescribing glasses
(d) prescription of topical anesthetics for the eye

9. In order to practice optometry, one must:

(a) be licensed by the state in which the practice is contemplated
(b) be a member of the AOA (American Optometric Association)
(c) not be employed by a lay corporation (non-health professions)
(d) be a diplomate of the ophthamology

10. The degree grated to a graduate of an optometry school is:

(a) D.O.
(b) O.D.
(c) M.D.
(d) D.E.S.

11. A dentist's education (minimum) includes:

(a) undergraduate degree only
(b) 2 years graduate degree training
(c) 4 years graduate degree training
(d) 1 year postgraduate training

12. Oral surgery allows procedures on the:

(a) nose
(b) throat
(c) mouth
(d) neck
(e) all of the above

6.

13. Licensure allows an M.D. to perform medical tasks and is grated by the:

(a) state
(b) specialty board
(c) hospital
(d) his/her medical group
(e) medical school

14. Which of the following functions may legally be performed by a dental assistant?

(a) drill teeth
(b) clean teeth
(c) fill cavities
(d) pull teeth
(e) b and c

15. The minimal education requirements to practice pharmacy include:

(a) undergraduate (i.e., B.S.) degree in pharmacy
(b) graduate degree in pharmacy
(c) 1 year postgraduate training (internship/apprenticeship) in pharmacy
(d) none of the aobve

16. The determination of whether or not a drug is a "prescription" drug is made by the:

(a) M.D.
(b) AMA
(c) FDA
(d) drug company
(e) state medical board

17. A hospital formulary is:

(a) a list of drugs approved by FDA
(b) a description of drugs manufactured with their side effects or contraindications
(c) a list of drugs approved for use in the hospital
(d) a list of drugs unavailable to the physicans of the hospital

18. A pharmacist may <u>not</u> fill a prescription signed by:

(a) an M.D.
(b) a D.O.
(c) a D.D.S.
(d) a nurse practitioner
(e) none of the above

19. What percentage of practicing physicians take specialized post-graduate training (i.e., a residency):

(a) less than 50%
(b) about 75%
(c) about 90%
(d) all

20. In most states, if a pharmacist fills a prescription for a toxic dosage of a drug, who is responsible?

(a) the doctor who wrote the prescription
(b) the pharmacist
(c) the drug company
(d) a and b
(e) all of the above

21. Which of the following degrees does not lead to R.N. designation:

(a) baccalaureate degree in nursing
(b) associate degree in nursing
(c) diploma in nursing
(d) practical nursing

22. omit

23. An R.N., under usual circumstances is permitted to do each of the following, except:

(a) take X-rays
(b) administer drugs
(c) do physical exams
(d) suture
(e) catherterize

24. Currently, a nurse practitioner may establish an independent practice (in most states) under what conditions?

(a) it is affiliated with a public health program
(b) the N.P. is certified by the state
(c) a physician agrees to consult (but not take responsibility for) the practice
(d) none of the above

25. Special registration is required for physicans to be able to prescribe:

(a) antibiotics
(b) diuretics
(c) cancer drugs
(d) barbiturates
(e) none of the above

26. When can a nurse change an inpatient order if the nurse considers the order inaccurate or potentially harmful to the patient?

(a) after telling the physican
(b) after consulting with the head nurse
(c) without discussing it with others
(d) none of the above

27. For nurse practitioners and physicans assistants, "under supervision" is a requirement that means:

(a) physical presence of physician
(b) accessibility of physician should assistance be required
(c) appropriate under standing orders
(d) anything a physician takes legal responsibility for

28. A nurse practitioner in order to practice is:

(a) licensed
(b) certified
(c) approved by medical society
(d) none of the above

29. Primary routine tasks performed by the Family Nurse Practitioner include all of the following except:

(a) well baby care
(b) antepartum care
(c) family planning
(d) minor, acute episodic problems
(e) annual physical exams

30. Under what circumstances may a pharmacist substitute a more appropriate drug for the drug prescribed by a physician?

(a) when the prescribed drug is not available (and a generic equivalent is available
(b) when he/she feels the prescribed drug is inappropriate
(c) when patient requests it
(d) when the prescribed drug has an adverse interaction with a simultaneously prescribed drug
(e) when the Drug Antisubstitution Law or Regulation has been repealed in the state

9.

31. The "PDR" (Physicians Desk Reference) is a:

(a) compendium of information on currently available drugs
(b) book of conversion tables and equivalents
(c) handbook of differential diagnoses
(d) manual for office procedures and legal restraints
(e) none of the above

32. The primary professional degree for social work is:

(a) bachelor's degree (major in sociology)
(b) S.W.D. (doctorate in social work)
(c) M.S.W. (Master of Social Work)
(d) any of the above
(e) none of the above

33. To be licensed to practice social work in most states, the following is a requirement:

(a) M.S.W.
(b) membership in ACSW (Academy of Certified Social Workers)
(c) membership in NASW (National Association of Social Workers)
(d) none of the above
(e) all of the above

34. Examples of tasks currently common to social workers include all of the following except:

(a) counseling individuals, families and groups
(b) helping clients effectively utilize community resources
(c) preparing plans for proposed social programs
(d) admitting indigent patients to the hospital
(e) working with community agencies to establish needed services

35. Currently appropriate tasks for the physicans assistant without supervision include all of the following except:

(a) physical examination
(b) suturing
(c) debridement and dressing of wounds
(d) Pap smear
(e) D and C

36. All of the following are licensed to practice their profession except:

(a) physicians
(b) nurses
(c) physicians assistants
(d) optometrists
(e) osteopaths

10.

37. Social work skills might include all of the following, except:

(a) administering projective tests and IQ tests
(b) formulation of a therapy plan for a client
(c) leading a treatment group for troubled adolescents
(d) using play therapy as a tool in treating a child
(e) none of the above are social work skills

38. Which of the following areas is not a major field of concentration in most graduate social work programs:

(a) casework
(b) groupwork
(c) marriage counseling
(d) community organization

39. omit

40. "Coping patterns", as used by social workers refer to:

(a) rationalization for stressful behavior
(b) different expressions of anxiety
(c) behavior patterns in certain disease states
(d) a characteristic mode or manner the client utilizes to solve problems
(e) none of the above

41. The "client" in social work:

(a) refers to those who come for service
(b) is a term interchangeable with "patient"
(c) is, by definition, physically ill
(d) is clearly subservient to the practitioner

42. POMR refers to:

(a) reference manual for orthopedic clinicians
(b) passive movements to limbs
(c) a new patient record keeping system
(d) a type of respirator

43. What is CPR?

(a) a component of the central nervous system
(b) heart and lung resuscitation
(c) the professional organization of physicians who specialize in children's diseases
(d) a reference book for clinicians
(e) none of the above

44. A physician's assistant, in order to practice, must be:

(a) licensed
(b) certified
(c) approved by medical board
(d) an R.N.

45. At present, certified specialties for physicians assistants are:

(a) surgery
(b) orthopedics
(c) urology
(d) all of the above

46. Which of the following health professionals are not considered "mid-level" practitioners:

(a) physicians assistants
(b) nurse practitioners
(c) medexes
(d) physical therapists
(e) nurse mid-wife

47. Graduates of a 4 year dental school receive the following degree(s):

(a) D.D.S.
(b) D.M.D.
(c) M.D.
(d) a and b
(e) all of the above

48. Dentists are allowed to prescribe:

(a) antibiotics (e.g., penicillin)
(b) anesthetics (e.g., novocaine)
(c) barbiturates (e.g., phenobarbitol)
(d) analgesics (e.g., codeine)
(e) all of the above

49. Plaque is:

(a) heavy staining on the enamel above the gumline
(b) residue left between teeth
(c) invisible film on the enamel
(d) denuded gum tissue
(e) none of the above

50. In order to practice dentistry, one must be:

(a) a graduate of an approved dental school
(b) perform a one-year internship (apprenticeship)
(c) receive certification from the state he/she resides
(d) all of the above
(e) none of the above

51. The difference between the D.M.D. and D.D.S. degree

(a) allows one greater privileges in the practice of dentistry
(b) is of no consequence
(c) lies in the different required areas of training
(d) reflects presence or absence of medical school affiliation
(e) a and c

52. Caries are:

(a) synonymous with bridge work pieces
(b) decayed areas of enamel
(c) sores in oral cavity
(d) pieces of a chipped tooth
(e) small laceration on the tongue

53. For an expanded role in a primary care setting, list the most appropriate additional responsibilities for each discipline (physician, dentist, pharmacist, social worker, optometrist, physicians' assistant, nurse, nurse practitioner)

13.

54. By using the graduated scale below, circle a number to indicate how much you know about the function of each of the following health professions.

1 2 3 4 5 6 7
nothing a great deal

M.D. _____

physician assistant _____

medical technologist _____

nurse _____

physical therapist _____

clinical dietetics _____

social worker _____

nurse practitioner _____

55. List 5 responsibilities of the following disciplines found in a primary care setting:

1. physician

2. clinical dietetics

3. pharmacist

4. social worker

5. physical therapist

6. physicians assistant

7. nurse

8. nurse practitioner

ID 200
11/75

Student Number_____

Discipline_____

III.1. PART I.

ATTITUDES TOWARDS INTERPROFESSIONAL HEALTH TEAMS

Directions: Please circle the number on the scale which reflects your attitude to the question.

1. How efficient do you think Interprofessional Health Teams are in delivering health care?

1	2	3	4	5	6	7
Much less efficient: more costly			About equally effective as present systems			Much more efficient; less costly

Comments on your answer_____

2. When you are in practice, if you have the opportunity, would you want to practice as part of an Interprofessional Health Team?

1	2	3	4	5	6	7
Definitely not; I would avoid it if possible			Wouldn't matter much one way or the other			Definitely yes; I would choose it if possible

Comments on your answer_____

3. Compared to the usual system of Health Care delivery, interprofessional health teams provide....

1	2	3	4	5	6	7
Much poorer quality primarily care			About the same quality primary care			Much better quality primary care

Comments on your answer_____

4. How important is it to you that you practice as a member of health team?

1	2	3	4	5	6	7
Very unimportant; I would go out of my way to avoid it			Makes no difference would neither seek it or avoid it			Very important; I would go out of my way to seek it

Comments on your answer_____

5. How confident are you that you know enough about health teams to decide whether you would like to work in a team or not?

1	2	3	4	5	6	7
Not at all confident			Fairly confident			Very confident

Comments on your answer_____

(1)

REACTIONS TO YOUR DISCUSSION SECTIONS

Directions: Please circle the number along the scale for each item that best represents your feelings. While answering the questions, try to use the words which describe the scale points as guide lines.

1. On the average, how many students came to your discussion group? (If your section split up, how many in the part you met with?) _____

2. How completely have you shared your ideas in your discussion section?

1	2	3	4	5	6	7
I've not shared any of my ideas			I've shared a few, but not all my ideas			I've shared all of the ideas I had

3. How much have you tried to influence what has happened in your discussion section?

1	2	3	4	5	6	7
I haven't tried to influence them at all			I've tried to be an influence about half of the time			I've tried to influence everything that has happened

4. How clearly have you been able to communicate both your positive and negative feelings in the discussion section?

1	2	3	4	5	6	7
Not clearly at all; no one knowshow I have been feeling			I've communicated some of my feelings, but not all			Completely clear; everyone knows how I feel

5. How clearly do you understant the positive anf negative feelings of others in the discussion section?

1	2	3	4	5	6	7
I have no idea about how anyone feels			I am clear about some, but unclear about others			I know exactly how everyone feels

(2)

6. Has the discussion section benefited to any extent from the unique contributions of each individual in the discussion section

1	2	3	4	5	6	7
Not at all; uniqueness has caused more problems than solved			Some benefits, some problems because of uniqueness			Completely; benefited from everyone in the group as much as possible

7. To what extend were the objectives of your initial discussion session (s) achieved?

1	2	3	4	5	6	7
Not at all			About 50-50			Completely

8. How much do you feel you have learned from your discussion section about interprofessional health teams?

1	2	3	4	5	6	7
Nothing at all; completely worthless			Some			A great deal; Very worthwhile

9. Is there anything else you would like to share about your initial reactions to being a member of your discussion group?

(3)

REACTIONS TO PROJECT GROUPS

Directions: Please circle the number along the scale which best represents your feelings. When answering the questions, try to carefully consider the words used along the scale points.

1. How many students were there (including yourself) working on your small group project? _____

2. How did you share your ideas in the project group?

1	2	3	4	5	6	7
I've not shared any of my ideas			I've shared a few, but not all my ideas			I've shared all of the ideas I had

3. How much did you try to influence what happened in your project group meetings?

1	2	3	4	5	6	7
I haven't tried to influence them at all			I've tried to be an influence about half of the time			I've tried to influence everything that has happened

4. How clearly were you able to communicate both your positive and negative feelings to the project group?

1	2	3	4	5	6	7
Not at all clearly; no one knowshow I have been feeling			I've communicated some of my feelings, but not all			Completely clear; everyone knows how I feel

5. How aware were you about the positive and negative feelings of others on the project group?

1	2	3	4	5	6	7
I have not idea about how anyone feels			I am clear about some, but unclear about others			I know exactly how everyone feels

(4)

6. Did the project group benefit from the unique contribution of each individual in the group?

1	2	3	4	5	6	7
Not at all; uniqueness has caused more problems than solved			Some benefits, some problems because of uniqueness			Completely; benefited from everyone in the group as much as possible

7. How productive was your project group?

1	2	3	4	5	6	7
Completely unproductive; project is worthless			About half as productive as we could be			Extremely productive; project is excellent

8. How creative has your project group been in developing ideas?

1	2	3	4	5	6	7
Not creative at all; ideas have been lowest common denominator of ideas from the group			About 50-50			Extremely creative; ideas have been better than any one alone could have come up with

9. To what extent did you feel the objectives of your project group were achieved?

1	2	3	4	5	6	7
Not at all			About 50-50			Completely

10. Is there anything else you would like to share about your initial reactions to being a member of your project group?

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PART II
(5)

OVERALL COURSE EVALUATION

DIRECTIONS: The numbers on the following scale illustrate some typical feelings about the quality of the course and the instructors. Please give a number (1-7) on the blank at the right.

7	6	5	4	3	2	1
Strongly Agree	Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Disagree	Strongly Disagree

1. The class spent so much time trying to figure out what it wanted to do that it didn't have time to accomplish much of anything. ____

2. One thing which detracted from the class' effectiveness was the teaching teams's manner, which, at times, was distant and even unfriendly. ____

3. The instructors always seemed to have references and readings at their fingertips regardless of the issue and regardless of their own professional field. ____

4. The instructors set high standards for the class (without making them seem arbitrary). ____

5. The instructors were too easily fooled by hard-luck and sob-stories; some students got away with murder in the classes. ____

6. The instructors were so dry, unemotional, and impersonal that it was difficult to imagine how they could be interested in the material they were presenting. ____

7. The instructors were effective because they were able to communicate a great deal of accumulated knowledge. ____

8. The instructors stressed their power over students by frequently talking about grades, rules and regulations, and deadlines for assignments. ____

9. Despite the instructors' efforts to generate interest and involvement, I was generally bored in large lectures. ____

10. Overall, I have learned a great deal from this course. ____

BIBLIOGRAPHY

INTERPROFESSIONAL EDUCATION

A. General

Aradine, C. R. and M.F. Hanse, Interdisciplinary Teamwork in Family Health Care. "Nursing Clinicians of North America, Vol. 2, no. 211, pp. 108-110.

Bassoff, Betty Zippin. "Interdisciplinary Education for Health Professionals: Issues and Directions". Social Work in Health Care, Vol. 2, no. 2, Winter 1976-77, pp. 219-228.

Brill, Naomi. "Teamwork: Working Together in the Human Services". Philadelphia: Lippincott & Co. 1976.

Dana, Bess S. and Cecil G. Sheps. "Trends and Issues in Interprofessional Education: Pride, Prejudice, and Progress". Journal of Education for Social Work, Vol. 4, no. 2, Fall 1968, pp. 35-41.

Eichenberger, Ralph W. and Robert F. Gloor. "A Team Approach to Learning Community Health". Journal of Medical Education, Vol. 44, August 1919, pp. 655-66.

Engle, George. "The Medical Professions". Science, Vol. 196, April 1977, pp. 134-146.

Friedson, Elliot. "Professionalism, the Doctor's Dilemma". Social Policy, January-February 1971, pp. 80-82.

Graubard, Stephen, ed. "Doing Better and Feeling Worse in the United States". Daedalus, Vol. 106, Winter 1977,

Kane, Rosalie Ann Smolkin. "Interprofessional Education and Social Work: a Survey". Social Work in Health Care, Vol. 2. no. 2, Winter 1976-77, pp. 229-238.

Kane, Rosalie Ann Smolkin. "The Interprofessional Team" (With Special Reference to the Role and Education of the Social Worker). Doctoral dissertation, University of Utah, 1975.

Lees, Ray. "Education for Social Service". British Hospital Journal and Social Service Review, Vol. 81, 21 August, 1971, p. 1711.

Linn, Margaret W. et al. "The C.A.R.E. Project: Interdisciplinary and Community-oriented Approach to Training Social Work Students". Journal of Education for Social Work, Vol. 10, no. 2, Spring 1974, pp. 47-50.

Maslach, George J. "The Reorganization of Educational Resources". Daedalus, Vol. 96, no. 4, Fall 1967, pp. 1200-09.

Millis, John. "A Rational Policy For Medical Education and its Financing". New York: National Fund for Medical Education, 1971.

Neubauer, Peter B. and Joseph Steinert. "The Significance for Social Workers of the Multidiscipline Approach to Child Development". Social Service Review, Vol. 29, no. 4, December 1950, pp. 459-65. Discussion by Charlotte Towle, pp. 466-68.

New, Peter King-Ming. "An Analysis of the Concept of Teamwork". Community Mental Health Journal, Vol. 4, September 1968, pp. 327-29.

Pellegrino. "What's Wrong with Nurse-Physician Relationships in Today's Hospitals". Hospitals, Vol. 40, December 1966, pp. 170-73.

Reinhardt, Uwe. "Proposed Changes in the Organization of Health Care Delivery: A Overview and Critique". Milbank Memorial Fund Quarterly, Vol. 51, Spring 1973, pp. 169-70.

Ruhe, C.H. William and Paul L. McLain. "An Interprofessional Seminar at the University of Pittsburgh". Journal of Legal Education, Vol. 13, no. 4, 1961, pp. 505-11.

Steinmann, Ann. "Cultural Values, Female Role Expectancies and Therapeutic Goals: Research and Interpretation". Women in Therapy, New York: Brunner/Mazel, 1974, p. 310.

B. Education

Conference on Interprofessional Communication: Challenge to Social Work and Education. Society and the School; Communication Challenge to Education and Social Work; report. Edited by Robert H. Beck. New York, National Association of Social Workers, 1965.

Craft, Maurice. "Education and Social Work". Education and Social Work: A Symposium. Edited by F. H. Pedley. New York, Pergamon Press, 1967, pp. 1-27.

_____ and Alma Craft. "The Interprofessional Perspectives of Teachers and Social Workers: A Pilot Inquiry". Social and Economic Administration, Vol. 5, no. 1, January 1971, pp. 19-28.

_____. "Teaching Social Work and Interprofessional Training". Youth Service and Interprofessional Studies. Edited by Inga Bulman, Maurice Craft and Fred Milson. New York, Pergamon Press, 1970, pp. 121-40.

Evans, Norman. "Together or Apart? Teachers and Social Workers". Social Service Quarterly, Vol. 43, no. 3, Winter 1970, pp.108-10.

Everett, Edith M. "Teaching Teachers". Family, Vol. 7, no. 3, May 1926, pp. 71-75.

Fox, Raymond. "Social Agency and School: Training Educators to Deliver Helping Services". Child Welfare, Vol. 53, no. 6, June 1974, pp. 386-93.

Hawkins, Mabel T. "Interdisciplinary Team Training: Social Work Students in Public School Field Placement Setting". The Dynamics of Field Instruction: Learning Through Doing. Compiled by the Council on Social Work Education. New York, The Council, 1975, pp. 40-49.

Kerry, Trevor and Carolle Kerry. "Social Concern in Teacher Training". Spectrum, Vol. 4, January 1972, pp. 56-57.

Kitson, G. M. "The More We Are Together". Education and Training, Vol. 14, October 1972, pp. 315-316.

Lees, Sue and Ray Lees. "Social Work and Teacher Training". Social Work Today, Vol. 3, no. 14, October 19, 1972, pp. 9-11.

McGrath, Earl J. "Cooperation of Education and Social Work". Social Welfare Forum, 1949; official proceedings of the National Conference of Social Work. New York, Columbia University Press, 1950, pp. 90-101.

Moore, Barbara M. "Challenge to Colleges of Education and Schools of Social Work". Social Work in Schools: Patterns and Perspectives. Edited by John J. Alderson. Northbrook, Ill., Whitehall 1969, pp. 118-26.

Olshansky, Bernard. "The Community Organization Component in Jewish Education". Journal of Jewish Communal Service, Vol. 44, no. 3, Spring 1968, pp. 271-79. Discussion by Louis Schwartzman, pp. 280-83.

Reid, Ivan. "Social Science and Teaching Performance". Educational Research, Vol. 15, no. 1, November 1972, pp. 52-54.

Tibble, J. W. "Interprofessional Education". Youth Service and Interprofessional Studies. Edited by Inga Bulman, Maurice Craft and Fred Milson. New York, Pergamon Press 1970, pp. 141-49.

Wormald, Eileen. "Teachers and the Social Services". Social Service Quarterly, Vol. 44, no. 3, Winter 1971, pp. 112-14.

C. Medicine

American Association of Medical Social Workers. Committee on Participation in Teaching of Medical Students. Medical Social Workers Participate in Medical Education. Washington, D.C., American Association of Medical Social Workers, 1954.

Bartlett, Harriett M. "The Participation of Medical Social Workers in the Teaching of Medical Students". Chicago, American Association of Medical Social Workers, 1939.

_____. Social Work Practice in the Health Field. New York, Association of Social Workers, 1961.

Beall, Patricia and Morris Green. "Role of the Social Worker in a Children's Diagnostic Service". Social Work, Vol. 5, no. 1, January 1960, pp. 77-83.

Bertino, Laura and Robert C. Jackson, editors. Social Workers as Trainers in Health Programs. Berkeley, Program in Public Health Social Work, University of California, 1972.

Bloom, Samuel W. "Growth of the Behavioral Sciences in Medical Education: Some Implications for Social Workers". Social Work in Health Care, Vol. 1, no. 1, Fall 1975, pp. 7-17.

Bracht, Neil F. and Inge Anderson. "Community Field Work Collaboration Between Medical and Social Work Students". Social Work in Health Care, Vol. 1, no. 1, Fall 1975, pp. 7-17.

Bracht, Neil F. "The Contribution of Public Health Social Work in Academic Departments of Community Medicine". Milbank Memorial Fund Quarterly, Vol. 47, no. 1, January 1969, Part I pp. 73-89.

Dalgleish, Katherine B., Rosalie Ann Kane and James J. McNamara. "Rotating Social Work Students Within a Medical Center". Health and Social Work, Vol. 1, no. 2, May 1976, pp. 166-71.

Edelson, S. Eric. "The Changing Role of the Social Workers in Medical Education". Social Work, Vol. 10, no. 1, January 1965, pp. 81-86.

Elliott, Valerie. "Social Work and Medical Education". Social Worker-Travailleur Social, Vol. 40, no. 3, September 1972, pp. 163-68.

Ellis, June. "The Social Worker as a Clinical Instructor of Medical Students". Journal of Medical Education, Vol. 43, no. 4, April 1968, pp. 508-10.

Gang, Stephen and Mary Brueton. "Social Worker and General Practitioner: an Experiment in Combined Learning". Practitioner, Vol. 206, no. 1233, March 1971, pp. 395-98.

Grinnell, Richard M. Jr., Nancy S. Kyte and S. Hunter. "Social Workers Teaching in Medical School". Health and Social Work, Vol. 1, no. 2, May 1976, pp. 151-65.

Grinnell, Richard M. Jr., et al. "The Status of Graduate-level Social Workers Teaching in Medical Schools". Social Work in Health Care, Vol. 1, no. 3, Spring 1976, pp. 317-24.

Haselkorn, Florence. "Some Dynamic Aspects of Interprofessional Practice in Rehabilitation". Social Casework, Vol. 39, no. 7, July 1958, pp. 396-401.

Hutter, M. J., G. E. Zakus and C. I. Dungy. "Social Work Training of New Health Professionals". Health and Social Work, Vol. 1, no. 2, May 1976, pp. 125-36.

Joint Committee of the Association of American Medical Colleges and the American Association of Medical Social Workers. "Widening Horizons in Medical Education: A Study of the Teaching of Social and Environmental Factors in Medicine". 1945-1946. New York, Commonwealth Fund, 1948.

Kemple, David P. "Social Worker Graduates of Schools of Public Health". Doctoral dissertation, University of Pittsburgh, 1971.

Knight, Janet. "The Medical Social Worker's Participation in Medical Student Teaching: Conference Report". Medical Social Work (London), Vol. 20, no. 6, October 1967, pp. 212-14.

Knox, Elspeth and John Rendle-Short. "The Training of Medical Students in Social Paediatrics". Australian Journal of Social Work, Vol. 19, no. 1, February 1966, pp. 7-10.

Lambert, H. P. "The Medical Social Worker's Participation in Medical Student Teaching: A Doctor's View". Medical Social Work (London), Vol. 20, no. 6, October 1967, pp. 214-16.

Leon, Robert L. and Jane P. Friedman. "Method of Orienting Medical Students in Community Social Services". Public Health Reports, Vol. 77, no. 9, September 1962, pp. 752-54.

Liverman, Lonis and Nathalie Kennedy. "Social Work Participation in Medical Training". Children, Vol. 7, no. 6, November-December 1960, pp. 229-34.

Loeb, Eleanor. "Some Concepts for Interdisciplinary Practice". Social Work, Vol. 5, no. 4, October 1960, pp. 83-90.

McGann, Leona M. and Margie Lutzker. "A New Dimension in Medical Training". Journal of Rehabilitation, Vol. 41, no. 2, March-April 1975, pp. 35-36.

McGann, Leona M., Margie Lutzker and Count D. Gibson, Jr. "Primary Responsibility for the Pscyhosocial Aspects of Care: The Role of the Medical Student". Journal of Medical Education, Vol. 48, no. 6, June 1973, pp. 594-95.

Moses, Mabel Benzion. "Role of Medical Social Workers in Medical Education". Indian Journal of Social Work, Vol. 33, no. 4, January 1973, pp. 307-15.

Muras, H. "The Medical Social Worker's Participation in Medical Student Teaching: A Social Worker's View". Medical Social Work (London), Vol. 20, no. 6, October 1967, pp. 216-20.

National Association of Social Workers. The Psychiatric Social Worker Teaches Medical Students; Papers presented by the Committee on Participation in Medical Education. New York, The Association, 1957.

_____. Joint Committee on Participation in Medical Education. Participation of Social Workers in Medical Education. New York, The Association, 1961.

Prins, Herschel A. and Marion B. H. Whyte. Social Work and Medical Practice . Oxford, Pergamon Press, 1972.

Rehr, Helen, ed. Medicine and Social Work: An Exploration in Interprofessionalism . New York, published for the Doris Siegel Memorial Fund of the Mount Sinai Medical Center by Prodist, 1974.

Smith, David M. "The Social Work Externship". Journal of the Royal College of General Practitioners, Vol. 23, no. 135, October 1973, pp. 692-96.

Tanner, Libby A. and Lynn P. Carmichael. "The Role of the Social Worker in Family Medicine Training". Journal of Medical Education, Vol. 45, no. 11, November 1970, Part I, pp. 859-65.

Thomson, Ruth. "Can the Social Worker Teach the Physician?" Journal of Medical Education, Vol. 58, no. 6, June 1973, pp. 585-87.

Ullmann, Alice. "A Reappraisal of Social Work Participation in Medical Education". Medical Social Work (London), Vol. 18, no. 6, October 1965, pp. 175-79.

_____. "The Role of the Social Worker in Teaching Fourth-year Medical Students". Journal of Medical Education, Vol. 34, no. 3, March 1959, pp. 239-46.

_____. "Teaching Medical Students to Understand Stress in Illness". Social Casework, Vol. 57, no. 9, November 1976, pp. 568-74.

D. Nursing

Benedikt, Lucie. "The Social Worker in Practical Nurse Education". Nursing Outlook, Vol. 13, no. 1, January 1965, pp. 60-62.

Bergman, Rebecca, Tamar Krulik, and Itzhak Ditzian. "Opinion on Nursing. part III: Social Work Students". International Nursing Review, Vol. 23, no. 1, January-February 1976, pp. 15-24.

Dammann, Gloria L. A. "Interprofessional Aspects of Nursing and Social Work Curricula". Nursing Research, Vol. 21, no. 2, March-April 1972, pp. 160-63.

Gordon, Eckka. "Medical Social Work Looks at Nursing Education". New York, American Association of Medical Social Workers, 1954.

Guttmann, David, Frances L. Eyster, and Garland Lewis. "Improving the Care of the Aged Through Interdisciplinary Effort". Gerontologist, Vol. 15, part 1, October 1975, pp. 387-92.

Helper, Kathryn E. "The Formal Contribution of Social Work to a Nursing Education Program". Journal of Nursing Education, Vol. 3, no. 4, November 1964, pp. 23-27.

Leiniger, Madelein. "This I Believe -- About Interdisciplinary Health Education for the Future". Nursing Outlook, Vol. 19, no. 12, December 1971, pp. 789-91.

Mahar, Irene R. "Where There's a Will". Nursing Outlook, Vol. 17, no. 10, October 1969, pp. 55-57.

Prock, Valencia. "A Joint Approach to Education for the Health Professions". Nursing Outlook, Vol. 9, no. 8, August 1961, pp. 472-74.

Quartaro, Emma Giordano and Ruth Reagan Hutchison. "Interdisciplinary Education for Community Health: The Case for Nursing and Social Work Collaboration". Social Work in Health Care, Vol. 1, no. 3, Spring 1976, pp. 347-56.

Tanner, Libby A. and Ethel J. Soulary. "Interprofessional Student Health Teams". Nursing Outlook, Vol. 20, no. 2, February 1972, pp. 111-15.

E. Pharmacy

Kilwein, John, William T. Hall, and Gerald C. St.Denis. "Social Science, Social Work and Pharmacy". Social Work in Health Care, Vol. 2, no. 1, Fall 1976, pp. 95-100.

F. Mental Health: Psychiatry

Bandler, Bernard. "Interprofessional Collaboration in Training in Mental Health". American Journal of Orthopsychiatry, Vol. 43, no. 1, January 1973, pp. 97-107.

Committee on Psychiatry and Social Work. "Psychiatrists as Teachers in Schools of Social Work". Group for the Advancement of Psychiatry, Report no. 53, May 1962, pp. 675-817.

Firestein, Stephen K. "Teaching Dynamic Psychiatry to Social Work Students". Social Casework, Vol. 57, no. 4, April 1976, pp.265-71.

Graham, Norman and Sheldon I. Miller. "The Social Worker in Undergraduate Medical Education". International Journal of Social Psychiatry, Vol. 20, no. 304, Autumn-Winter 1974, pp. 265-68.

Ireland, Eleanor. "The Social Worker's Contribution to Training in Child Psychiatry". Journal of Child Psychology and Psychiatry and Allied Disciplines, Vol. 8, no. 2, November 1967, pp. 99-104.

"On Psychotherapy and Casework". Group for the Advancement of Psychiatry, Vol. 7, no. 71, March 1969, pp. 27-42.

Prince G. Stewart. "The Teaching of Mental Health in Schools of Social

Work". International Social Service Review, No. 8, March 1961, pp. 31-35.

Reece, Shirley A. "Social Work Participation in Psychiatric Training Related to Intake Work". American Journal of Psychiatry, Vol. 121, no. 12, June 1965, pp. 1183-89.

Sacks, Helen L., Marian Henderson, and Elizabeth C. Bellis. "Social Work Participation in Training Residents in Psychiatry". American Journal of Orthopsychiatry, Vol. 38, no. 1, January 1968, pp. 25-30.

Smith, Neilson F. "Interdisciplinary Training for Community Mental Health Service". Journal of Education for Social Work, Vol. 10, no. 2, Spring 1974, pp. 106-13.

Thomson, Hope and Dorothea Lane. "Teaching of Psychotherapy: The Social Worker". International Psychiatry Clinics, Vol. 1, no. 2, April 1964, pp. 319-29

G. Health and Medical Care

American Association of Medical Social Workers. Education for Medical Social Work, the Curriculum Content. Washington, D.C., The Association, 1951.

American Public Health Association. Committee on Professional Education. "Educational Qualifications of Social Workers in Public Health Programs". American Journal of Public Health, Vol. 52, no. 2, February 1962, pp. 317-24.

Anthony, Helen. "Training for Medical Social Work". Medical Social Work: A Career in Hospital and Community. Reading, England, Educational Explorers, 1968, pp. 100-107.

Assessment Conference on Social Work Education in Neurological and Sensory Disease. Proceedings of the Conference, State University of New York at Buffalo, 1967. Buffalo, New York, School of Social Welfare, State University of New York at Buffalo, 1967.

Bartlett, Harriett M. "Frontiers of Medical Social Work". Social Work, Vol. 7, no. 2, April 1962, pp. 75-83.

_____. "Social Work Practice in the Health Field". New York, National Association of Social Workers, 1961.

Bracht, Neil F. "Health Maintenance Organizations: Legislative and Training Implications". Journal of Education for Social Work, Vol. 11, no. 1, Winter 1975, pp. 36-44.

Butrym, Zofia T. "Some Implications for Education and Practice I." Medical Social Work (London), Vol. 19, no. 3, June 1966, pp. 16-27.

Hartshorn, Alma E. "Social Work and the Hospital: Changing Concepts of Training, Generic and Specialized". Australian Journal of Social Work, Vol. 16, no. 1, February 1963, pp. 2-9.

Health and Disability Concepts in Social Work Education; Proceedings of a Workshop Conference Sponsored by the School of Social Work, University of Minnesota, 1964.

Hookey, Peter. "Education for Social Work in Health Care Organizations". Social Work in Health Care, Vol. 1, no. 3, Spring 1976, pp. 337-45.

Jones, Kathleen. "Society as the Client". Medical Social Work (London), Vol. 19, no. 3, June 1966, pp. 2-8.

Kindelsperger, Walter L. et al. Responsibility of Schools of Social Work to Help Meet the Changing Needs of Medical Care. New York, United Hospital Fund of New York, 1968.

Kurtz, Richard A. and David J. Giacopassi. "Medical and Social Work Students' Perceptions of Deviant Conditions and Sick Role Incumbency". Social Science and Medicine, Vol. 9, no. 405, April-May 1975, 249-56.

Lustman, Claire R. "Development of Social Work Education in the Veterans Administration: Current Trends and Future Plans". Social Work Education Reporter, Vol. 17, no. 3, September 1969, pp. 54-56, 60.

Marshall, David B. "A Doctor's Reaction to 'The First Two Years'". Medical Social Work (London), Vol. 19, no. 3, June 1966, pp.34-38.

Mitchell, Florence. "'The First Two Years': Review Article". Medical Social Work (London), Vol. 18, no. 7, November 1965, pp. 209-12.

Moon, Marjorie and Kathleen Slack. "The First Two Years: A Study of Work Experience of Some Newly Qualified Medical Social Workers". London, Institute of Medical Social Workers, 1965.

Myers, Ruth Fey and Richard W. Soldo. "Program Upgrades Students' Skills". Hospitals, Vol. 48, no. 2, 16 January 1974, pp. 50-52.

Newton, George. "The Impact of the First Two Years: A Comparison with Social Work in Other Settings". Medical Social Work (London), Vol. 19, no. 3, June 1966, pp. 9-15.

Parlow, J. and . Rothman. "Attitudes Towards Social Issues in Medicine of Five Health Science Faculties (Dentistry, Medicine, Nursing, Pharmacy, and Social Work)". Social Science and Medicine, Vol. 8, no. 6, June 1974, pp. 351-58.

Perretz, Edgar A. "Social Work Education for the Field of Health". Social Work in Health Care, Vol. 1, no. 3, Spring 1976, pp. 357-65.

Richards, Kay. "Comparison Between a Student's and a Worker's Caseload". Medical Social Work (London), Vol. 19, no. 8, January 1967, pp. 259-66.

Seminar on Public Health for Schools of Social Work. Public Health Concepts in Social Work Education; Proceedings of the Seminar, Princeton University 1962. New York, Council on Social Work Education, 1962.

Smith, Esther B., et al. "Social Work Education". Community Services and Education: The Heart and Circulation, Vol. 2; Proceedings of the National Conference on Cardiovascular Diseases, Washington, D.C. 1964. Edited by E. Cowles Andrus. Bethesda, Maryland, Federation of American Societies for Experimental Biology, 1965, pp. 916-26.

Snelling, Jean M. "The Contribution of the Institute of Medical Social Workers to Education for Social Work". Bradford, England, Association of Social Work Teachers, 1970, unpaged.

Spencer, Ethel. "Some Implications for Education and Practice II". Medical Social Work (London), Vol. 19, no. 3, June 1966, pp. 28-33.

Spencer, Sue W. Education for Social Work Practice in Changing Health Programs. Boston, School of Social Work, Simmons College, 1969.

Stamm, Isabel. "Social Work Education for Practice in the Health Field". Education for Social Work; Proceedings of the 1963 Annual Program Meeting, Council on Social Work Education. New York, The Council, 1963, pp. 115-22.

Stites, Mary A. "History of the American Association of Medical Social Workers". Washington, D.C., American Association of Medical Social Workers, 1955.

Wittman, Milton. "Social Work Manpower in the Health Services". American Journal of Public Health, Vol. 55, no. 3, March 1965, pp. 393-99.

H. Curriculum

Acker, Joan. "Content For Methods Courses in Undergraduate Curricula for the Helping Services". Developing Programs in the Helping Services; Field Experience, Methods Courses, Employment Implications. Edited by Dutton Teague and Dorothy P. Buck. Boulder, Colorado, Western Interstate Commission for Higher Education, 1968, pp. 25-35.

Andrew, Gwen. "Associate and Baccalaureate Degree Education for Social Work: A Tentative Proposal". Journal of Education for Social Work, Vol. 9, no. 1, Winter 1973, pp. 3-10.

Bisno, Herbert. "Projections of Curricular Trends". Undergraduate Education and Manpower Utilization in the Helping Services. Compiled by the Western Interstate Commission for Higher Education. Boulder, Colorado, The Commission, 1967, pp. 13-23.

Brennan, E. Clifford and Morton L. Arkava. "Students View the Undergraduate Curriculum". Journal of Education for Social Work, Vol. 10, no. 3, Fall 1974, pp. 9-16.

Dea, Kay L. "Issues, Problems, and Approaches to Curriculum Development". Essentials for Undergraduate Social Welfare Teachers. Edited by Frank M. Loewenberg. New York, Council on Social Work Education, 1969, pp. 7-13.

Galaway, Burt, compiler. An Annotated Bibliograph of Text Books Suitable for Undergraduate Social Welfare courses. Minneapolis, Minnesota Resource Center for Social Work Education, 1972. Unpaged.

Geis, Gerbert. "Liberal Education and Social Welfare: Educational Choices and Their Consequences". Journal of Education for Social Work, Vol. 1, no. 1, Spring 1965, pp. 26-32.

Glick, Lester J., editor. Undergraduate Social Work Education for Practice: A Report on Curriculum Content and Issues. Washington, D.C., Government Printing Office, 1972.

Grosser, Shirley. "Educating the 'holistic' Social Worker: A Perspective and Approach for Practice". Canadian Journal of Social Work Education, Vol. 1, no. 2, Spring 1975, pp. 28-37.

Guzzetta, Charles. "Curriculum Alternatives". Journal of Education for Social Work, Winter 1972, pp. 24-30.

Jaffe, Lester D. "Building an Undergraduate Social Work Research Sequence: An Experiment and its Implications". Journal of Jewish Communal Service, Vol. 42, no.1, Fall 1965, pp. 99-108.

_____. "Developing an Educational Sequence in Social Work Research". International Social Work, Vol. 6, no. 1, 1963, pp. 21-26.

Johnson , H. Wayne. "Electives and Undergraduate Social Work Education in a State University". Journal of Sociology and Social Welfare, Vol. 1, no. 4, Summer 1974, pp. 225-32.

Katz, Arnold. "Problem Oriented Education: An Alternative Social Work Curriculum". Canadian Journal of Social Work Education, Vol. 1, no. 2, Spring 1975, pp. 48-56.

Koprowski, Eugene J. "A Dynamic Role-Centered Approach for Developing a Generic Baccalaureate Curriculum in the Helping Services". Undergraduate Education and Manpower Utilization in the Helping Services. Compiled by the Western Interstate Commission for Higher Education. Boulder, Colorado, The Commission, 1967, pp. 1-11.

Lafferty, Sr. Nancy Ann. "A Multidimensional Curriculum Innovation Model Developed in an Undergraduate Social Work Program". Doctoral dissertation, Washington University, 1974.

Lawrence, Richard G., Lawrence K. Northwood and Robert Peterson. "Study of Undergraduate Courses in Social Work and Social Welfare in 55 Schools". Social Work Education, Vol. 10, no. 4, August-September 1962, pp. 9-11.

Levin, Lester I., editor. 'Student Participation in Social Welfare Education; Report of a Conference". Atlanta, Southern Regional Education Board, 1972.

_____. Teaching Social Welfare, Vol. 1: Course Content and Teaching Methodology. Atlanta, Southern Regional Education Board, 1971.

_____. Teaching Social Welfare, Vol. 3: Issues and Trends in Curriculum Development. Atlanta, Southern Regional Education Board, 1971.

Loewenberg, Frank M. "Designing an Undergraduate Social Welfare Program for the Nineteen Seventies". Continuities in Undergraduate Social Welfare Education. Compiled by the Council on Social Work Education. New York, The Council, 1969, pp. 51-59.

_____. "Questions About Curriculum Content and Organization". Essentials for Undergraduate Social Welfare Teachers. Edited by Frank M. Loewenberg. New York, Council on Social Work Education, 1969, pp. 1-6.

_____ and Ralph Dolgoff. Teaching of Practice Skills in Undergraduate Programs in Social Welfare and Other Helping Services. New York, Council on Social Work Education, 1971.

Macarov, David. "Developing an Educational Sequence in Social Group Work". International Social Work, Vol. 6, no. 1, January 1963, pp. 13-20.

McLean, Ann L. and Joan F. Robertson. "Systematic Integration of Consumer Input Into Curriculum Revision". Journal of Education for Social Work, Vol. 11, no. 2, Spring 1975, pp. 84-90.

McPheeters, Harold L. and Robert M. Ryan. A Core of Competence for Baccalaureate Social Welfare and Curriculum Implications. Atlanta, Georgia, Southern Regional Education Board, 1971.

Marks, Rachel Bryant. "The Place of the Undergraduate Curriculum in Social Work Education, by Herbert Bison: Review". Social Service Review, Vol. 33, no. 4, December 1959, pp. 387-92.

Mendes, Richard H. P. "An Approach to the Basic Undergraduate Course". Education for Social Work: Proceedings of the 1963 Annual Program Meeting, Council on Social Work Education. New York, The Council, 1963 pp. 183-96. Discussions by Eveline M. Burns, Katherine Handley and Herman Piven, pp. 196-202.

Mendes, Richard H. P., et al. "Social Welfare as a Social Institution; Illustrative Syllabi for the Basic Course in Undergraduate Social Welfare". New York, Council on Social Work Education, 1963.

Mossman, Mereb E. "Social Welfare Content in Undergraduate Education". Education for Social Work; Proceedings of the 1963 Annual Program Meeting, Council on Social Work Education. New York, The Council, 1963, pp. 37-47.

Pilcher, Donald M. and Irving B. Tebor. "Interim Report of NIMH-funded Research on Undergraduate Social Welfare Education: San Diego State College". Social Work Education Reporter, Vol. 17, no. 1, March 1969, pp. 56-58.

Romanyshyn, John M. "The Basic Social Welfare Course on the Undergraduate Level: Some Principles and Some Problems". Education For Social Work; Proceedings of the 1961 Annual Program Meeting, Council on Social Work Education. New York, The Council, 1961, pp. 109-22.

Scheurell, Robert P. and Robert A. Holzhauer. "A Model of an Undergraduate Program in Social Work". Iowa Journal of Social Work, Vol. 5, no. 2, pring 1973, pp. 8-16.

I. The Learning Process

Belzile, Louise, et al. "Teaching and Learning--Conference Groups in a Bachelor's Program". Social Worker-Travailleur Social, Vol. 40, no. 1, February 1972, pp. 43-49.

Bisno, Herbert. "A Theoretical Framework for Teaching Social Work Methods and Skills, With Particular Reference to Undergraduate Social Welfare Education". Journal of Education for Social Work, Vol. 5, no. 2, Fall 1969, pp. 5-17.

Carol, John B. Language and Thought, New York: Halsted Press, 1972, pp. 1-589.

Chapin, Rosemary and Nancy Waldman. The Helping Process. Minneapolis, Minnesota Resource Center for Social Work Education, 1972.

Constable, Robert T. "Preparing for Practice: Field Experience and Course Work in the Undergraduate Social Work Program". Teaching for Competence in the Delivery of Direct Services. Compiled by the Council on Social Work Education. New York, The Council, 1976, pp. 9-17.

Crider, Charles ., editor. Report of the Institute for College Faculty on Teaching a Social Welfare Course, Michigan State University, 1964. New York, Council on Social Work Education, 1966.

Dea, Kay L. The Instructional Module: Its Use for Beginning Teachers in Undergraduate Programs in Social Welfare. New York, Council on Social Work Education, 1971.

Ehlers, Walter H. and John C. Prothero. "Performances and Attitudes of Social Work Students Using Programmed Instruction Texts". Programmed Learning and Educational Technology, Vol. 8, no. 4, October 1971, pp. 225-34.

Freedle, R. O. and J. B. Carroll, editors. Language Comprehension and the Acquisition of Knowledge, New York: Halsted Press, 1972, pp. 1-592.

Melton, Arthur W. and Edwin Martin, editors. The Coding Processes in Human Memory. New York: Halsted Press, 1972, pp. 1-470.

Tulving, E. and Wayne Donaldson, editors. Organization of Memory. Boston: Academic Press, 1972, pp. 1-650.

J. Professional Education: the Reorganization of Educational Resources

Abels, Paul. "Terra Incognita: The Future of the Professions". Social Work, Vol. 20, 1 January 1975, pp. 25-32.

Bandler, Bernard. "Interprofessional Collaboration in Training in Mental Health". Amer. J. Orthopsychiatry, Vol. 43, 1 January, 1973, pp. 97-107.

Banta, David H. and Renee C. Fox. "Role Strains of a Health Care Team in a Poverty Community". Social Science and Medicine, Vol. 6, 1972, printed in Great Britain, pp. 697-722.

Beck, James D. and John C. Cassell. "Role Inconsistency and Health Status". Social Science and Medicine, Vol. 6, 1972, printed in Great Britain, pp. 737-51.

Benedikt, Lucie. "The Social Worker in Practical Nurse Education". Nursing Outlook, Vol. 13, 1 January, 1965, pp. 60-62.

Bennis, W. A. "A Funny Thing Happened on the Way to the Future". American Psychologist, Vol. 25, November 1970, pp. 595-608.

Block, Alvan. "The Dilemma of Social Work Education: Restructuring the Curriculum". Journal of Education for Social Work. Winter 1972, pp. 19-23.

Bloom, Samuel W. "Growth of the Behavioral Science in Medical Education: Some Implications for Social Workers". Journal of Medical Education, Vol. 39, 9 September, 1964, pp. 820-27.

Bracht, Neil F. "The Contribution of Public Health Social Work in Academic Departments of Community Medicine". Milbank Memorial Fund Quarterly, Vol. 47, January 1969, pp. 73-89.

Burns, Eveline M. "Tomorrow's Social Needs and Social Work Education". Journal of Education of Social Work, Spring 1965, pp. 10-21.

Christ, Jacob. "Social Influences and Professional Care". Smith College Studies in Social Work, Vol. XL, 3 June, 1970, pp. 179-87.

Dammann, Gloria L. A. "Interprofessional Aspects of Nursing and Social Work Curricular". Nursing Research, Vol. 21, March-April 1972, pp. 160-63.

Dana, Bess and Cecil G. Sheps. "Trends and Issues in Interprofessional Education: Pride, Prejudice, and Progress". Journal of Education for Social Work, No.4, Fall 1968, pp.35-41.

De Rosis, Louis E. "Self-Esteem or The Sense of Being". American Journal of Psychoanalysis, Vol. 33, 1 January, 1975, pp. 1-29.

Edelson, S. Eric. "The Changing Role of the Social Worker in Medical Education". Social Work, Vol. 10, January 1965, pp. 81-86.

Elliot, Valerie. "Social Work and Medical Education". Social Worker Travailleur Social, Vol. 40, 3 September, 1972, pp. 163-68.

Evans, Lester. "Can University Health Professional Education Meet the Challenge of Society's Future Health Needs?" Medical Care No. 5, 3 May-June 1967, pp. 184-93.

Friedman, John and Barclay Hudson. "Knowledge and Action: A Guide to Planning Theory". American Institute of Planners Journal, January 1974, pp. 2-16.

Gang, Stephen and Mary Brueton. "Social Worker and General Practitioner: An Experiment in Combined Learning". Practitioner, Vol. 206, no. 1233, March 1971, pp. 305-98.

Gruber, Murray. "Policy Planning Models: Heuristics for Education". Journal of Education for Social Work, Fall 1972, pp. 30-39.

Jackson, Elton and Peter Burke. "Status and Symptoms of Stress: Additive and Interactive Effects". American Sociological Review 30, 1965, pp. 556-64.

_____. "Status Inconsistency and Symptoms of Stress". American Sociological Review, Vol. 27, 1962, pp. 469-80.

Lenski, Gerhard. "Social Participation and Status Crystallization". American Sociological Review 21, 1956, pp. 458-64.

Liverman, Louis and Nathalie Kennedy. "Social Work Participation in Medical Training". Children 7, November-December 1960, pp. 229-34.

Loeb, Eleanor. "Some Concepts for Interdisciplinary Practice". Social Work, Vol. 5, October 1960, pp. 83-90.

Magraw, Richard. "Interdisciplinary Teamwork for Medical Care and Health Services - Components and Organization". Annals of Internal Medicine, Vol. 69, October 1968, pp. 821-35.

Maslach, George J. "The Reorganization of Educational Resources". Daedalus, Vol. 96, no. 4, Fall 1967, pp. 1200-09.

Mott, Basil. "The Future of Schools of Public Health: Managing for Survival". American Journal of Public Health, Vol. 64, June 1974, pp. 643-48.

Odhner, Fred. "Group Dynamics of the Interdisciplinary Team". American Journal of Occupational Therapy, Vol. 24, no. 7, October 1970, pp. 484-87.

Rae-Grant, Quentin and Donald Marcuse. "The Hazards of Teamwork". American Journal of Orthopsychiatry, Vol. 38, January 1968, pp. 4-8.

Reece, Shirley A. "Social Work Participation in Psychiatric Training, Related to Intake Work". American Journal of Psychiatry, Vol. 121, June 1965, pp. 1183-89.

Robertson, Alexander. "Health Services and Education for the Health Professions". Medical Care, Vol. 2, March-April 1967, pp.75-77.

Rokeach, Milton. "A Theory of Organization and Change Within Value-Attitude Systems". Journal of Social Issues, Vol. 24, no. 1, 1968, pp. 13-33.

Silver, George A. "Beyond General Practice: The Health Team". Yale Journal of Biology, Vol. 31, September 1958, pp. 29-39.

Smith, Neilson F. "Interdisciplinary Training for Community Mental Health Service". Journal of Education for Social Work, No. 10, Spring 1974, pp. 106-13.

Tanner, Libby and Lynn Carmichael. "The Role of the Social Worker in Family Medicine Training". Journal of Medical Education, Vol. 45, November 1970, pp. 859-65.

Terrberry, Shirley. "Evolution of Organizational Environments". Administrative Quarterly, March 1968, pp. 590-613.

Towle, Charlotte. "Notes on Interdisciplinary Collaboration". Helping: Charlotte Towle on Social Work and Social Casework. Helen Harris Perlman, ed., Chicago: University of Chicago Press, 1969, 138-48.

White, Grace. "Preparation of Social Workers for Interprofessional and Interagency Collaboration". Education for Social Work: Proceedings of the 1960 Annual Program Meeting. New York: Council on Social Work Education, 1960, pp. 131-38.

Wise, Harold. "The Primary Care Health Team". Archives of Internal Medicine, Vol. 130, September 1970, pp. 438-44.

_____. "Making Health Teams Work". American Journal Disturbed Children, Vol. 27, April 1974, pp. 537-42.

BOOKS

Andrews, Kenneth. The Effectiveness of University Management Development Programs. Boston, MA: Division of Research Graduate School of Business Administration, Harvard University, 1966.

Bartlett, Harriet M. The Participation of Medical Social Workers in the Teaching of Medical Students. Chicago: American Association of Medical Social Workers, 1939.

_____. Social Work Practice in the Health Fields. New York: National Association of Social Workers, 1961.

Berman, Louis. New Priorities in the Curriculum. Columbus, Ohio: Charles E. Merrill, 1968.

Bertino, Laura and Robert C. Jackson, eds. Social Workers as Trainers in Health Programs. Berkeley: University of California Program in Public Health Social Work, 1972.

Brill, Naomi. Teamwork: Working Together in the Human Services. Philadelphia: Lippincott & Co. 1976.

Boehm, Werner. Objectives of the Social Work Curriculum of the Future. New York: Council on Social Work Education, 1959.

Coe, Rodney M. Sociology of Medicine. New York: McGraw-Hill, 1970.

Demone, Harold W. and Dwight Harshbarger, eds. A Handbook of Human Service Organizations. New York: Behavioral Publications, 1974.

Ebel, Robert, ed. Encyclopedia of Educational Research. New York: MacMillan, 1969.

Eble, Kenneth. Professors as Teachers. San Francisco, Calif: Jossey-Bass, 1972.

Elling, Ray H. ed. National Health Care: Issues and Problems in Socialized Medicine. New York: Liber-Atherton, 1973.

Fein, Rashi and Gerald I. Weber. Financing Medical Education: A General Report Prepared for the Carnegie Commission on Higher Education and the Commonwealth Fund. New York: McGraw-Hill, 1971

Festinger, Leon. A Theory of Cognitive Dissonance. Stanford, Calif.: Stanford University Press, 1957.

Frey, Louise ed. Use of Groups in the Health Field: Report of the Committee on the Utilization of Group Methods in the Health Fields. New York: National Association Social Workers, 1966.

Friedson, Elliot. Professional Dominance. Chicago: Aldine Publishing Company, 1970.

Greenlick, Merwyn R. ed. Proceedings of a Conference on Conceptual Issues in the Analysis of Medical Care Utilization Behavior. Portland, Oregon: Department of Health Education and Welfare, Health Service Administration, 1969.

Hollingshead, A. B. and F. C. Redlich. Social Class and Mental Illness: A Community Study. New York: Wiley and Sons, 1958.

Horwitz, John. Team Practice and the Specialist: An Introduction to Interdisciplinary Teamwork. Springfield, Illinois. Charles C. Thomas, Publisher, 1970.

Kane, Robert L. and Rosalie A. Kane. Federal Health Care (With Reservations). New York: Springer Publishing Company, 1972.

Katz, Alfred and Jean Spencer Felton. Health and the Community. New York: Free Press, 1965.

Kerlinger, F. N. Foundations of Behavioral Research: Educational and Psychological Inquiry. New York: Holt, Rinehard and Winston, Inc., 1962.

Lowy, Louis, Leonard M. Bloksberg, and Herbert J. Wallberg. Integrative Learning and Teaching in Schools of Social Work: A Study of Organizational Development in Professional Education. New York: Association Press, 1971.

McKinlay, John B. ed. Research Methods in Health Care: A Selection of Articles from the Milbank Memorial Fund Quarterly. New York: Prodist, 1973.

Mechanic, David. Medical Sociology: A Selective View. New York: The Free Press, 1968.

Merton, Robert, et al. The Student Physician. Cambridge: Harvard University Press, 1957

Myers, Jerome. Fundamentals of Experimental Design. Boston: Allyn-Bacon, Inc., 1972.

Newall, Allen and Herbert Simon. Human Problem Solving. Englewood Cliff, New Jersey: Prentice Hall, 1972.

Prins, Herschel A. and Marian B. H. Whyte. Social Work and Medical Practice. London: Pergamon Press, 1972.

Rehr, Helen. Medicine and Social Work: An Exploration in Interprofessionalism. New York: Prodist, 1974.

Roe, Anne. The Psychology of Occupations. New York: John Wiley and Sons, 1956.

Rossi, Peter H. and Walter Williams, eds. Evaluating Social Theory, Practice, and Politics. New York: Seminar Press, 1972.

Sarason, Seymour. The Creation of Settings and the Future Societies. San Francisco: Jossey-Bass Publishers, 1972.

Suchman, Edward A. Evaluative Research: Principles and Practices. New York: Russell Sage Foundation, 1976.

Thompson, James D., gen. ed. Organizational Design and Research. (two volumes) Pittsburgh: University of Pittsburgh Press, 1971, Vol. 2, Vroom, Victor. Methods of Organizational Research.

_____. Organizations in Action. New York: McGraw Hill Company, 1967.

Tichy, Monique K. ed. Health Care Teams: An Annotated Bibliography. New York: Praeger Publishers, 1974.

REPORTS AND UNPUBLISHED MATERIAL

American Psychological Association Task Force on Health Research. "Newsletter" Washington, D. C. December 1974 (mimeographed).

Committee on Psychiatry and Social Work. Psychiatrists as Teachers in Schools of Social Work. Group for the Advancement of Psychiatry. Report 53 (May 1962) pp. 765-817.

Dravecky, Evelyn. "Utilization of Paraprofessionals in Private Practice". Paper presented at APHA, Fall 1974 (mimeographed).

Gurin, Arnold. "Report on the Council on Social Work Education Community Organization Curriculum Development Project". (Prepared for a NASW workshop) Cleveland, Ohio, 1968.

Institute for Health Team Development. "Annual Report". Washington and New York Offices. June 1974 (mimeographed).

Joint Committee of the Association of American Medical Colleges and the American Association of Social Work. Widening Horizons in Medical Education: A Study of the Teaching of Social and Environmental Factors in Medicine: 1945-46. New York: Commonwealth Fund, 1948.

Lundberg, Horace. "Some Distinctive Characteristics of Students Entering Social Work Education". Ph.D. dissertation, University of Minnesota, 1957.

Manpower Implications of the Inter-Relationship Between Social Work and Public Health Nursing Practice. Proceedings of a Conference Co-sponsored by Connecticut State Department of Health and the Connecticut School of Social Work, and NIMH. Niantic, Connecticut: Department of Health, 1965.

National Association of Social Workers Joint Committee on Participation in Medical Education. Participation of Social Workers in Medical Education. New York: NASW, 1961.

_____. "The Psychiatric Social Worker Teaches Medical Students". Papers presented by the Committee on Participation in Medical Education. New York: NASW, 1957.

Rehr, Helen. "Comparison of Health Care Professions in Predicted Outlook on Patient Compliance and in General Attitudes Regarding Collaboration and Health Care". Ph.D. dissertation. Columbia University, 1970.

Weinbach, Robert. "Identification with the Social Work and Mental Health Professions as Factors Relating to Social Worker Job Satisfaction and Job Performance: An Inquiry Into the Value of the Interprofessional Model". Ph.D. dissertation, Ohio State University, 1972.