

INTERDISCIPLINARY HEALTH CARE TEAMS
IN
TEACHING AND PRACTICE

Proceedings of the First Annual Conference
on
Interdisciplinary Teams in Primary Care

May 3-5, 1979
Seattle, Washington

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Published by
New Health Perspectives, Inc.
and
The School of Medicine
University of Nevada, Reno

1980

SOME CONSIDERATIONS IN DEVELOPING
A CLINICAL PRACTICUM FOR
INTERDISCIPLINARY STUDENT HEALTH TEAMS

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Introduction

The current interest in primary health care teams has brought into focus some of the difficulties that health care providers experience in working effectively together. Students in medicine, nursing and the other health professions and occupations traditionally have little contact with each other during their professional education and still less planned, collaborative learning experience designed to promote interdisciplinary teamwork. Yet, upon graduation, they are expected to work effectively with one another in the community.

The University of Nevada, Reno, has addressed this issue by developing an interdisciplinary educational program for all students in the health sciences, starting at college entry and continuing throughout pre-professional and professional education. The underlying assumption is that by enabling students to share common learning experiences, they will develop more understanding and respect for each other's roles, which ultimately will result in better health care delivery. In 1973, a major grant from the Robert Wood Johnson Foundation gave impetus to this program by adding an interdisciplinary faculty team of health professionals which

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This project was supported by Grant No. MBD-0019 from the Office of Interdisciplinary Programs, Bureau of Health Manpower, Department of Health, Education and Welfare.

provided a common core curriculum for all students in the health field, as well as a functioning role model of a primary health care team. Details of this curriculum have been described elsewhere (Baldwin, D., 1974; Baldwin, M., 1976), except for the clinical component, which has developed at a slower pace and is the focus of this paper.

Some Basic Assumptions

The first assumption on which the clinical team practicum is based is that there is a need for interdisciplinary clinical training before professional education is completed. This assumption is not shared by all educators, many of whom argue that health professionals should not function on interdisciplinary teams before achieving a firm role identity. On the other hand, the program at Nevada has emphasized an early start in shared learning and clinical experiences. We believe that role identity which is developed in isolation, without contact between disciplines, tends to lead to territoriality and protectionism, thus endangering the development of the skills necessary for effective team work. Our own experience, described below, indicates that, although difficult to structure, teams can function even with pre-professional students.

The second assumption is that students have insufficient experience with the principles and practice of teamwork and cooperation. Pre-professional and professional education usually are highly competitive. Thus, the knowledge, skills and attitudes basic to teamwork need to be learned systematically.

A third assumption is that learning about teams occurs best by integrating theory and practice. A clinical experience is deemed essential so that students will have an opportunity to discover what working on a team is like and to receive direct feedback on their teamwork skills.

The fourth assumption of our program is that effective role models for teamwork must be provided. Inasmuch as values, attitudes and skills can be learned through modeling in an educational setting (Bandura and Walters, 1963), interdisciplinary collaboration should be enhanced by having an interdisciplinary faculty team working alongside the students.

Conceptual and Curricular Issues

Although many conceptual issues need to be resolved before undertaking operational decisions such as curriculum design and implementation, one seldom has sufficient time for planning and discussion. However, it is our observation that teams also can err on the side of too much planning and discussion before taking action. The essence of teamwork is learning to work together. We have found that a grounded theory approach (Glaser and Strauss, 1967)--using the data from each experience to improve succeeding experiences--may be preferable to a traditional "once and for all time" planning approach.

Course or clinical experience? The first issue which arose was whether the clinical practicum should be a formal course or simply a clinical experience and whether it should be required or optional. Since we were functioning in a university environment and were committed to the assumptions stated above, it would seem that these issues could be quickly and easily resolved. In fact, they were not. Curricular changes take time, especially innovative and experiential ones. Nor could student interest and response be known in advance. Accordingly, the clinical practicum was first offered as a non-graded, optional, clinical experience given at night by a volunteer faculty. It was only after a successful experience and the subsequent funding of a full-time faculty by a HMEIA* grant in 1975 that a formal course was constituted with explicit objectives and required student attendance.

What gets taught? A second issue that arose in planning and teaching the clinical practicum was the focus of the course. Should more attention be paid to content or to process, to the "important" messages the faculty wanted to convey about teams or to what students wanted to learn? As stated above, one of our assumptions was that the learning should be experiential. We were also aware that such an experience needed a theoretical framework and an opportunity for reflection. The question then arose of how much of each and in what sequence.

*HMEIA Grant No. MBD-0019 from the Office of Interdisciplinary Programs, Bureau of Health Manpower, HRA, DHEW.

When the course was started in the fall of 1974, the faculty lacked appropriate theoretical background and working experience on teams. This lack of expertise was compensated for by a heavy emphasis on the clinical task, most of the time being spent on health assessment of families. Students were enthusiastic about participating in such a program, but the faculty realized that they were not learning about team function, although students were getting exposure to and an opportunity to communicate with other disciplines. The involvement of full-time faculty with small group, task group and team experience led to substantive changes in course structure. The format of the course was revised to include a didactic or theoretical component, as well as practical learning.

We quickly found out that didactic teaching around team issues appeared irrelevant to student teams unless they had experienced that issue. For example, the topic of conflict resolution seemed abstract and meaningless if a team had not experienced difficulty in making a decision. We later minimized the amount of structured didactic information given to the whole group and attempted to tailor-make specific information for each team, based on their observed and expressed needs.

After two years, the course began to look much like the original, optional experience. However, the faculty had become full-time, experienced in team delivery of care, and was able to model team process, as well as deal with it when needed. Thus, learning about team work would take place at the moment when the issues were most salient. To summarize, we started out student and task oriented, then moved to a more rigid faculty and content focus, and ended up developing a model in which the faculty's didactic input was largely in response to student team tasks and issues.

Who should be on the team? The third issue which arose in developing the clinical practicum was that of membership--deciding who should be on an interdisciplinary team aimed at delivering primary health care. We started out with a fixed idea that each "core" team should include students in medicine, nursing, social work and medical technology. The difficulties in finding equal numbers and levels of students from each discipline forced us to move away from our original model.

Several successful experiences with other combinations of disciplines and numbers have convinced us not to worry as much about size and team composition. This more relaxed stance seems more in line with the real world, where there are many different possible makeups of teams (Kane, 1976). Within certain limits, we have not found team learning and performance to be significantly affected by team size and composition. If a required skill is lacking, the student team can always negotiate with other teams or with the faculty for help. One problem is how should students be assigned to teams. We started out by having elaborate, time consuming methods of self-selection and ended up by assigning them arbitrarily. Surprisingly, the latter method appeared to work more satisfactorily.

An intensive or periodic experience? Another issue which arose in developing the clinical experience was the decision on a time framework. Since the students who were eligible for participation were not professionally ready to work full-time on a team, we were left with two choices: a non-intensive, periodic model, following the time structure of other courses given at the University (a model adopted by several other HMEIA grantees), or an intensive, time-limited experience, as described by Eichhorn (1973).

One advantage of the periodic, non-intensive model is that, as a course, it becomes integrated as a regular part of the curriculum, thus giving the subject of team training an official stamp of recognition that it belongs in the mainstream of education. Indeed, the clinical practicum at Nevada was officially designated as a course, Medical Sciences 480-481, "Team Approach to Health Care", and met for approximately four hours a week in the afternoon, incorporating both didactic and clinical components. An early experiment with a separate two hour didactic component on Monday evenings, combined with a four hour clinical experience on another day, appeared to demand more time than students were willing to expend.

The intensive experience seems to hold more promise for long-term learning about teamwork. The students have more energy and time to invest in the team experience when there is no competition with other courses. Also, when they are totally immersed in a team experience--often requiring the sharing of living quarters--team process becomes very real, with a burning need to settle issues.

Although we had more experience with the periodic model, in 1976 the faculty team decided to provide an additional intensive team experience in collaboration with the Health Careers for American Indians Summer Preceptorship Program. This program featured health screening teams composed of Indian and non-Indian Health Science students, who visited and worked on various Indian reservations and colonies in Nevada under faculty supervision. Such teams were well received and student reactions were very favorable (Baldwin, et al, 1979). Teams also achieved relatively high cohesion in a short period of time. This experience has confirmed the value of a continuous, intensive team training experience, where students live and learn together on a 24-hour a day basis.

How long should the clinical experience be? In part, the effectiveness of the clinical course was constrained by the time limits on the experience. Because of conflicting student schedules and curricula, we were only able to offer a 12 week course each semester. Although there were differences of opinion among faculty, such a period appeared too short to enable students to learn both team and clinical skills and to function effectively as team members. Ideally, we believe such a course should cover at least two semesters, the first semester involving a "getting the feet wet", clinical team experience, with the second semester introducing more theoretical material, combined with more independent, advanced clinical team practice. Where more curriculum time is available, a sequential format is desirable, with earlier courses featuring some didactic knowledge about teams, together with development of basic team skills through exercises and simulations (Baldwin, 1976).

Team or Task? Another issue revolved around the type of involvement that student teams should have with patients. In the first year of the course, the focus was on task, with student teams assigned to do a complete health assessment of selected families under faculty supervision. Although the majority of students felt comfortable with their assignment, there was concern on the part of students, as well as faculty, about the thoroughness of the workups, as well as the followup of the families. Students also felt frustrated at not being able to go beyond the assessment phase. As expected, one of the problems which concerned the faculty was that student skill levels tended to be fairly low, leading to high demands on

faculty to teach basic clinical skills, as well as lengthy assessment procedures. Furthermore, there was a high level of anxiety of medical and nursing students around the area of physical assessment skills, so that they had little energy left for "processing" team activities.

Several changes were introduced in the course during the following year. Some teams became involved in an extended care facility where they were not the sole primary care providers, while other teams were assigned specific tasks in a clinic staffed by the faculty (the Team Health Center, UNR). We later moved towards a "shared responsibility" model, where student teams worked with more advanced professionals (though not at the same time) and were integrated into the activities of the clinic. By clearly delineating student tasks and trying to match tasks with student skills, we found that role ambiguity and anxiety decreased.

Faculty participation: what kind? Baldwin and Edinberg (1976) have presented four models of faculty involvement with student teams, ranging from a didactic teaching role to having student teams work in the clinic alongside the faculty team. At various times in our experience, we have tried all four models. We ended up utilizing a mix of the models; selecting the one which best fit the situation and setting.

Student perceptions on this issue varied considerably. Feedback was often contradictory. The same faculty person was criticized by one student for giving too much input, and by another for not contributing enough. Although we still think that the team process would be "cleaner" with limited faculty input, there was usually a faculty member present in most team activities. There was also a conflict for faculty caught in the dual role of facilitator and evaluator, especially in the area of team processing, with the students trying to make their team appear "perfect" in order to get a better grade.

Other Problems

Recruitment: A number of problems arose in developing the clinical course. One of the major difficulties we faced was recruitment. While students expressed interest in the course, crowded curricula and conflicting class schedules across

disciplines left little time available for sequential commitment and regular interaction. An additional recruitment problem was that the course was not required for disciplines other than medicine. For example, as an upper division program, nursing students at Nevada were locked into a very tight curriculum which did not give them much free time for optional experiences. Another factor was that students had to pay for each credit they took, so that many students shied away from taking additional credits unless they absolutely needed them.

As mentioned above, we became more relaxed about recruitment by not insisting that each team have the same composition or number of participants. Also, as we moved from a didactic "course" concept towards a more clinical experience, we discovered that dealing with many students at once was not practical, as student teams needed far more supervision in clinical than in didactic experiences. This led us to conduct the clinical practicum three times a week, with several faculty present at each session.

The difficulty in recruitment also illustrated the fact that although interdisciplinary concepts may be fashionable, they rank low on the list of priorities of the separate disciplines and professional schools. There is still a sense that each discipline wants their students to learn from them first and interdisciplinary work comes only if there is some energy and time left. We countered this by emphasizing the "clinical" aspect to prospective students.

Grading: Another issue we had to struggle with was that of grades. To meet university requirements, students needed to receive letter grades. We found this to be extremely cumbersome, requiring an elaborate evaluative system. Some faculty also found it difficult to be in both a participatory and evaluative role with the students. Grading also interfered in some instances with the spontaneity with which students reported team process. In spite of our assurance that they were not graded on how well their team handled process, students appeared programmed to please the faculty. In our opinion, grading in a team course taught in a clinical setting probably should be on a pass/fail basis.

The Problem of the Match: Another problem we had to deal with was the inequality of skills which students brought to the situation. Some medical and nursing

students had had extensive previous experience with physical assessment, while students from other disciplines had not. Some of the social work students (pre-baccalaureate) had had less interviewing skills and experience than medical students and some nutrition students had never had any clinical or community contact. This placed severe constraints on our activities as long as we insisted that all teams should have the same clinical experience. With time, we became more comfortable with letting each team work with the level of skills at its disposal, which meant that some teams need more faculty participation than some others.

Clinical Setting: It must be obvious that most of the issues mentioned above had profound implications for the choice of the site, or sites, for the clinical team experience. Some of these have been discussed in previous papers (Baldwin and Edinberg, 1976 and Edinberg and Baldwin, 1976), which outline a range of potential faculty and student team models, including their implications for clinical training. While these issues may be simplified by choice of a single model and site, the faculty at Nevada both deliberately (and serendipitously) experimented with a variety of such models and sites for training student teams. The basic model involved creation of the Team Health Center, located on the campus, where faculty and students practiced team health care side by side in the same facility. Clinical and team supervision were carried on simultaneously and by the same supervisors. Because of its location and faculty control over patient flow, student teams were able to function with a full complement of team members.

Because of considerable student and faculty interest in gerontology, a different clinical team experience was provided in a local extended care facility (Edinberg, et al., 1978). While faculty had no direct patient responsibility at this site, they were able to provide team processing and some clinical teaching of student teams by arrangement with the hospital and local physicians. Still another kind of team and clinical experience was provided at a local drug rehabilitation center, or "half-way" house, as well as a rape crisis center, where there were obvious unmet health needs and student teams were able to function fairly independently, providing counseling, health assessment, nutritional and primary care services to residents. In addition, the Summer Preceptorship Program mentioned above provided still another,

more intensive, student team experience (Baldwin, et al., 1979). Finally, several local practitioners (one of whom had participated earlier as a member of a faculty team) became interested in setting up team practice and invited students to learn and participate in the private practice of team care. Evidence of the acceptability and cost effectiveness of team care in the private sector provided an exemplary learning experience for students, a number of whom have asserted that this model is one they hope to implement in the future.

Findings

All in all, the clinical practicum has been a success. Over a four year period (1974-1978) a total of 259 health professional students have participated: including 72 from medicine, 72 from nursing, 19 from social work, 20 from nutrition, 9 from health education, 16 from medical technology, 15 from communications, and 17 from other fields. In addition, 19 pre-professional (pre-medical, pre-dental, pre-pharmacy and pre-physical therapy) students have been able to participate in the clinical team experience. (See Table I.) Adoption of a "health", rather than "medical", model has enabled students with varying kinds and levels of clinical and non-clinical skills to participate meaningfully in team interaction and task performance. Considerable ingenuity as well as specific skills training has been called for at times, but the experience seems to have been well received by nearly all students.

While many of the research data remain to be analyzed and understood, several discrete studies have been completed. One recent report (Edinberg, et al., 1978) demonstrated clearly that there was significant learning in the area of team skills and processes and the knowledge of and abilities in provider/patient communication among student members of three teams during a 12 week semester course. Fourteen students from seven disciplines participated on these teams. All were in early stages of their professional training. Results of this limited, preliminary study would appear to indicate that interdisciplinary health team training experiences do produce measureable changes in student attitudes and behaviors.

At the end of 1976, a survey of patient response to student team care was conducted (Baldwin, et al., 1979). Families indicated that their experience was highly

TABLE I
UNIVERSITY OF NEVADA, RENO
STUDENT HEALTH TEAMS

	1974-1978				
	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>	<u>TOTALS</u>
Medicine	14	24	17	17	72
Nursing	14	21	27	10	72
Social Services	6	4	5	4	19
Medical Technology	13	3	-	-	16
Communications	-	6	8	1	15
Clinical Psychology	-	1	-	1	2
Nutrition	-	10	5	5	20
Health Education	-	-	5	4	9
Pre-Dental	-	3	1	1	5
Pre-Med	-	4	6	3	13
Physical Therapy	-	1	-	-	1
Speech Pathology & Audiology	1	2	-	-	3
Other	<u>-</u>	<u>6</u>	<u>2</u>	<u>4</u>	<u>12</u>
Total	48	85	76	50	259

GRAND TOTAL: 259

satisfactory. They seemed aware of the interdisciplinary intent of the project and felt they had gotten a more thorough health assessment from the student teams than they would have gotten elsewhere. Many believed that they had learned things about their family that they would not have learned in any other setting. A majority indicated that if a real choice were available locally, they would prefer team practice to their previous forms of care and nearly all indicated willingness to continue in the program. Patient compliance with recommended referrals and regimens was significantly higher than would have been expected--approaching 100%. In rating student teams on a five point scale from poor to excellent, all scores were above 3.6, with the highest mean scores being for concern for the person, enthusiasm for the task, and confidentiality. Lowest mean scores were for organization and planning, and health education. At an anecdotal level, the most frequently mentioned comments about the student teams were the availability of a variety of opinions and the quality of personal care, interest, friendliness, and concern.

In the final analysis, the effect of such a program must be assessed in terms of changes in professional behaviors and attitudes. In particular, the research group is interested in exploring the eventual career choice and practice location of graduates of the program, as well as its effect on forms of practice, professional and patient behaviors, etc. Interim data in this regard are currently being analyzed and would appear to indicate that an extremely high proportion (over 90%) of sophomore medical students who participated in the interdisciplinary team training and curriculum (Team TRAC) experience have entered primary care residency training, although the factor of self-selection cannot be discounted. A number of these students have sought or even created team experiences in subsequent training or work settings. There also appears to be a significantly higher proportion of these graduates who are involved in or currently indicate an interest in serving in rural and other underserved practice sites, although these data will not be complete for several years. Despite the many inconsistencies of the team training program itself, students generally have found the experience to be a positive one, would recommend it to their fellow students and feel that it has been one of the most significant clinical (and frequently only team-oriented) experiences of their subsequent professional schooling and lives.

Faculty Learnings

Many pitfalls needed to be avoided in developing such a program. The most dangerous one is the tendency of the faculty to develop a "messianic" attitude about teams. Because it conveys an attitude of superiority, such an attitude is defensive and anti-collaborative--a sure way to turn off students and to discourage other health professionals from finding out more about teams.

Another pitfall is to be too ambitious about what teams can accomplish. Teams may not always be the most effective method of delivering care. More needs to be known about the settings in which teams seem to be best suited for delivering health care as compared to settings where teams do not seem to be a good idea.

It is also important to realize that some health professionals are ill-suited for working on a team. Some personalities do not seem to fit into the collaborative mode. A person who needs a lot of individual "strokes" is likely to be frustrated, as is the individual who needs to tightly control the work space.

One of our learnings has been that it is important for the faculty to remain loose and flexible, since so many factors are independent of their control. In our experience, the unexpected was to be expected! Emergent solutions frequently had to be reached. Also, once the commitment was made to allow students to make decisions as teams, the faculty had to live with the unpredictable solutions which sometimes resulted from the process.

The ideas and values behind teamwork represent a fundamental change from traditional educational norms. Task achievement (e.g., good health care) depends on cooperation rather than competition. Cross disciplinary sharing is encouraged as opposed to unidiscipline learning. Consensual decision-making is valued over decision by authority. Talking about what is happening (processing) is as valued as is getting the job done (a task orientation). The overall health team model is a collaborative one, rather than the currently existing, competitive (frequently exploitative) model that exists in much of education and health care. Many educators (and students) do not accept these "new" values or act in ways that facilitate their implementation. Despite the fact that students appeared to like and learn from the experience at Nevada, it remained an elective (a required selective for medical students). Little

cooperation was found for rearranging class schedules so that students from several disciplines could meet together for a team experience.

Inasmuch as teams represent a change in the value system of higher education it is not surprising that we frequently found ourselves feeling like "strangers in a strange land". Conceptualizing the team experience as fundamentally different from existing educational training also suggests that the intensive, 24 hour a day, summer experience mentioned above may initially make more impact, as the two value systems are not in temporal proximity. Integration of team learning remains a problem and can lead to student frustrations with the rest of their educational experience.

However, our goals as teachers are long-term. We hope to have impact on the next generation of care providers and teachers so that they can, in turn, change their systems to more adequately teach and reflect cooperative and collaborative interdisciplinary skills.

Conclusion

After four years of development, the goals of the clinical practicum course, designed as the capstone of our interdisciplinary core curriculum, were more modest than when we started and probably more realistic! We rediscovered the important educational principle that learning takes place best when the learner is receptive to the message and that didactic information about teams only has meaning after students have had an opportunity to experiment with working on a team. Although students probably received less theoretical information about teams than initially planned, the benefit of simply working together with students of other disciplines cannot be over-estimated. Developing knowledge, understanding and respect about other health professionals will benefit the future health professional in most settings. At the same time, becoming aware of the difficulties of working with others and having some knowledge about skills which can be used for more effective team work gives to students a sophistication lacking to people who have only been socialized in their own disciplines.

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