Conceptual Basis for Interprofessional Education at the University of Minnesota

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The Institute of Medicine report entitled *Crossing the Quality Chasm: A New Health System for the 21st Century* calls for improvement of the quality of healthcare in the U.S. and advocates for practices that are patient-centered, interprofessional, evidence-based, quality-improvement focused, with emphases on the use of technology and informatics. Subsequently, in 2002 the IOM convened a Health Professions Education Summit of health care experts and thought leaders in health care quality and education. The report that was generated *Health Professions Education: A Bridge to Quality* makes ten major recommendations for reforming health professions education to enhance quality and better meet the needs of patients. Key among those recommendations are teaching students to work in interprofessional practice teams and establishing exemplary practice sites where students can be educated in the reformed model of practice.

The University of Minnesota Academic Health Center is perfectly positioned to develop interprofessional team education and exemplary practice sites. We have committed leadership, multiple health professional schools under one roof (both administrative and physical), several initial experiments in providing interprofessional experiences to our students, and a student body that is calling for this kind of training. Yet to this point, efforts to promote interprofessional education have been less than totally successful. At Minnesota and most other academic health centers, the approach has been to identify courses and/or experiences in which students could participate jointly, e.g., classes on anatomy, pharmacology, ethics – and then proceed as though teams result from students sitting in the same classroom together.

For several reasons, this approach has been unsuccessful:

- Students from different disciplines differ in the content they need to practice so sitting together in a lecture is not usually appropriate
- Scheduling classes for students from the different disciplines is a major challenge
- Competencies in team based practice and practice improvement for students graduating from the health professional schools have not been developed
- Perhaps of most importance, the exercises and learning experiences associated with the educational sessions have failed to help students reflect and synthesize what they have learned together and how this affects their individual practice, as well as identify what the implications for teamwork are.

We are proposing a new way to think about interprofessional education.
Our **goal** is to structure the educational experience of our students to create effective teams of well-prepared health care professionals.
Our **approach** is to develop educational modules and activities for students to experience as they progress through their programs. Some of these are mandatory; for others,

students choose those which best fit their interests and schedule from a menu of opportunities. We are calling this the Interprofessional Team Curriculum.

Our curriculum model for creating interprofessional teams incorporates a progressive set of didactic and experiential learning opportunities for medical, pharmacy and nursing students (and perhaps other health professionals) interspersed throughout individual health professional curricula. These interprofessional learning opportunities would occur at various points throughout each curriculum and would result in a common set of outcomes and competencies in team-based practice for all health professions. In preparation for each of these cross-cutting modules, each curriculum would incorporate some professional specific learning relevant to evidence-based medicine, informatics, and methodology for quality improvement. These topics would then be reinforced in the interprofessional learning experiences as well. A model of such curricula might look like the following:

A core course (web based) would be developed with faculty from across the University (and possibly outside the University) on the topics of team dynamics, creation of high functioning teams, why teams work well or poorly, etc. There is a rich literature from social science and from business in this field of study. This should be considered the base or entry level course, expected of all students. There are a number of "survival" type games or exercises which could be used in conjunction with this course in small interprofessional groups of students during this first module. These exercises and course materials would not be specifically related to healthcare but would serve as a mechanism for "leveling the playing field" and assuring that all students have a fundamental knowledge and understanding of how teams function optimally in any environment. This first module might also be supplemented by early experiential educational experiences with students from all three professions. These would provide students with observational opportunities of interprofessional teams in action and could include experiences that provide the context of health care; e.g., how do different cultural backgrounds affect the patient's approach to health and disease; talking to elderly patients about their attitudes and access to health care, etc.

The second module would build on the first and would be specifically related to the subject of interprofessional healthcare teams. This module would utilize a variety of experiences including case studies, standardized patients, and simulations. Clarion could be included as one of the possible pathways to completing this module. An important goal of the module would be to create an understanding of the knowledge base, skills, and attitudes that each separate health profession brings to the care and decision-making for and with a specific patient and a population of patients. i.e. a ward, nursing home, a clinic, an operating room, etc. A didactic (again web based) portion of this module would also include fundamental concepts of quality improvement, developed in concert with faculty from various professional schools, the business school and community, and the hospitals.

The final module or section would consist of a selection of interprofessional experiences, working as part of teams in a variety of settings. These could include hospitals, nursing

homes and transitional care settings, clinics (including rural clinics such as Rural Physician Associate Program sites), etc. The experiences could also include teams of students working together on a project, i.e. the Clarion case competition, an improvement team project for a hospital, health plan or clinic, or developing a team exercise in the virtual reality/simulation development lab. Students should by the third module be able to reflect in a mature fashion on the contributions of each professional and on the properties of a functional team. They also should be able to discuss how to design and implement change in other (non-interprofessional) sites to make them exemplary interprofessional sites.

Assessment of modules will utilize the Simulation Center and the Clinical Skills Lab with Objective Structured Clinical Exams specifically designed to test the learning developed in the modules.

The interprofessional team curriculum would be overlaid on each of the other school specific curricula. Analysis of each current curriculum to identify the appropriate points for the cross-cutting learning experiences would have to be done, but it is possible that it can be done without complete overhaul of the current curricula. Many of the existing experimental courses and experiential sites could be used, but rather than being taken piecemeal as they are now, each would be taken to develop a defined set of objectives on the way to accomplishing the overall objectives for each student. Since each student will not have the same set of courses or experiences for their interprofessional curriculum, each student would be expected to maintain a portfolio to document their accomplishment of the required learning experiences and their attainment of the learning outcomes and competencies.

Implementation of this interprofessional team curriculum will require faculty education, since most faculty do not know the principles and practices we are describing, as well as development of coursework and exemplary practice sites. It is the latter that may be the greatest barrier to implementation. However, if we are to have an impact on realizing the IOM vision, we must begin.

To summarize, the key elements of the proposed interprofessional team curriculum are:

1. It would be systematic and progressive through the development of each health professional, starting with preclinical experiences in concepts of team dynamics and the context of health care, and progressing through clinical case studies of healthcare and patient safety/quality improvement exercises and interprofessional OSCEs, and ending with experiential clinical education in exemplary practice sites.

2. It would be required of all students, but all students would not have the same set of learning experiences. They would reach common outcomes and competencies and would document their learning with a portfolio.

3. The outcomes would include competency in team skills, understanding the roles of the various health professionals, an ability to recognize and practice patient-centered care, an ability to understand and participate in quality improvement and patient safety initiatives, and an ability to obtain and use evidence in support of practice.

4. Some of the education in support of the outcomes could be partially taught within the individual professional curricula and then reinforced in cross-cutting interprofessional learning experiences that would occur periodically during each student's academic career.

5. The interprofessional learning opportunities that are already developed can be incorporated into the new systemic interprofessional team curriculum.

In summary, the University of Minnesota Academic Health Center is perfectly positioned to lead the nation in implementing a curriculum to educate our graduates so that they are able to function in the highest quality interprofessional practices and to implement changes to improve healthcare quality. It will require developing a set of progressive didactic and experiential modules that result in a defined set of outcomes for every health professional student. Furthermore it will require partnering with the health care systems to develop the exemplary sites where high quality patient-centered, interprofessional, evidence-based healthcare is practiced, so we can educate our students in those sites. Meeting these challenges clearly will place us among the leaders of health professional education, will attract students who want to be educated in this fashion, and will result in important improvements in the delivery of health care.