Title: Challenges of Implementing Interprofessional Education
Combined Sections Meeting
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Description
Implementation of interprofessional education (IPE) in the healthcare curriculum has substantial challenges in many institutions. The purpose of this presentation is to describe the successful development and implementation of an IPE program to enhance the students’ educational experience at a university academic medical center. The program, called Convergence, brings first year students from the university’s medical, graduate, and health professions schools together in learning communities that explore a focused science of medicine annual theme. In addition, School of Health Professions’ active learning groups, including physical therapy, meet biweekly for facilitated peer learning of common topics. The educational objectives of the Convergence program are to: improve students understanding of and respect for the roles of other health and biomedical professionals, enhance effective IP communication, and increase knowledge of effective teamwork. Course evaluations and outcome measures of IPE readiness are completed by students to gauge student achievement of program objectives and perceived value of the experience. Data analysis for the first five years of program implementation indicates significant changes in student’s IP competence. Feedback from student course evaluations confirms that the IP learning community model is an effective way to prepare the next generation of health care providers.

Objectives
1) Explain the importance of IPE in the preparation of students in health and medical professions.
2) Define the competences needed by health professions students for effective IP collaboration.
3) Describe a model for implementing an IPE program that includes students from programs in the health and medical sciences.
4) Discuss how outcome measures can be used to gauge the effectiveness of a curriculum to promote IP collaboration among health and medical professionals in the real world.

Note: The following outline contains additional detail and resources to supplement the presentation and discussion during the two hour session.

Opening Discussion:
1) Audience experience with IPE
2) Identify challenges
3) Top down or bottom up?

I. What is interprofessional education?
   A. Define IPE
      1. Interdisciplinary Education → Interprofessional Education → Interprofessional Practice and Education → Interprofessional Education and Collaborative Practice (IPECP)
      2. “Interprofessional education occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes. Once students understand how to work interprofessionally, they are ready to enter the workplace as a member of the collaborative practice team. This is a key step in moving health systems from fragmentation to a position of strength.” (WHO 2010)
         a) Intentional
b) Collaboration-ready
3. Interdisciplinary – two of more health care professionals representing expertise from various health care disciplines participate in the support of clients and their families in health care delivery (Interprofessional Professionalism Collaborative)
   a) Shared learning – team members do not learn together or explicitly educate each other on their roles and responsibilities
   b) Participation vs Collaboration – all team members contribute to patient care with collaborative interaction

B. Background and historical perspective
1. 1948: Martin Cherkasky at the Montefiore Hospital in New York City
   a) Health care team developed to serve home care patients
   b) Physicians, nurses, social workers
2. 1980s collaborative care emphasis:
   a) Interprofessional Team Training and Development program, US Department of Veterans’ Affairs
   b) Geriatric Education Centers, Federal Bureau of Health Professions
3. 1990s private foundation initiatives:
   a) Collaborative Interprofessional Team Education program, funded by Robert Wood Johnson Foundation
   b) Geriatrics Interdisciplinary Team Training Initiative framework, funded by the Hartford Foundation
4. 2003 Institute of Medicine report *Health Professions Education: A Bridge to Quality*
   a) Recommended that all health professionals be educated to deliver patient-centered care as members of an interdisciplinary team.
5. 2010: WHO published *Framework for Action on Interprofessional Education and Collaborative Practice*
   a) Identified global need for interprofessional collaboration to deliver healthcare in a cost-effective and efficient way.
6. 2011: Interprofessional Educational Collaborative (IPEC)
   a) Members
      (1) American Association of Colleges of Nursing
      (2) American Association of Colleges of Osteopathic Medicine
      (3) American Association of Colleges of Pharmacy
      (4) American Dental Education Association
      (5) Association of American Medical Colleges
      (6) Association of Schools of Public Health
   b) Published competencies (discussed below with program examples)
7. 2012: National Center for IPE (Interprofessional Practice and Education)
   a) Purpose: demonstrate that interprofessional practice and education can and will contribute to improved health care delivery. “Over time it will be key to our ultimate goal of contributing to the Triple Aim of improving the patient experience, improving the health of populations and reducing per-capita costs of health care.”
   b) Designated by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services as the sole center to provide leadership, scholarship, evidence, coordination and national visibility to advance interprofessional education and practice as a viable and efficient health care delivery model.
   c) Housed at the University of Minnesota, public-private partnership created in October 2012 through a cooperative agreement with HRSA and four private foundations: the Josiah Macy Jr. Foundation, the Robert Wood Johnson Foundation, the Gordon and Betty Moore Foundation and the John A. Hartford Foundation.
C. Brief overview of literature

   a) Three themes emerged:
      i. Nature of IPE Programs
         (a) Different combinations of professional groups, yet medicine and nursing were the core participants
         (b) Pre-and post-licensed learners (educational and work-place settings)
         (c) Variety of acute, primary, and community settings
         (d) Duration of programs ranged from 1-2 hours to months, primarily 1-5 days
         (e) Variety of interactive learning methods (seminar-based discussions, group problem-solving, role play activities)
         (f) Most programs were voluntary (elective)
         (g) Formative assessments of learning (individual written assignments and/or joint presentations)
      ii. Nature of the Evidence for IPE
         (a) Methodological weaknesses in many studies (limited description of program, limited discussion of weaknesses, little to no attention to sampling techniques and attrition, widespread use of non-validated instruments, behavior change limited to self-report, primarily short-term impact reported)
         (b) Common research methods (Quasi-experimental research design (pre-post), two or more forms of data (survey and interview), growing use of longitudinal designs)
      iii. Reported outcomes
         (a) Pre-licensure: positive outcomes in relation to changes in attitudes, beliefs, knowledge and collaborative skills
         (b) Post-licensure reported similar range of learner-oriented changes with addition of positive changes to organizational practice and patient care

   a) 6 themes emerged
      i. Teamwork
      ii. Roles/Responsibilities
      iii. Communication
      iv. Learning/Reflection
      v. The Patient
      vi. Ethics/Attitudes

   a) Restricted to studies that measured patient outcomes or healthcare processes.
   b) Compared IPE to educational interventions when different professional groups learned separately from one another or no IPE offered to comparison group
   c) Not possible to draw generalizable inferences for effects of IPE due to heterogeneity of IPE interventions
   d) More rigorous research needed using randomized controlled trials, controlled before and after, or interrupted time series designs

4. Research has yet to provide guidance for educators:
   a) What are we (educators) supposed to do?
   b) When to start?
   c) What dose?
   d) Does it carry over into practice?
D. Health professions IPE initiatives
5. 15 model programs in US and Canada (Cochran, 2013 See resource list)
   a) 11 member state

E. Why is IPE more important than ever?
7. Changes in the provision of health care
   a) Drivers for change in health care delivery (Thistlethwaite, 2012)
      i. Demographic changes, in particular the ageing population
      ii. Increased incidence of long-term conditions and complex care requirements
      iii. New models of care
      iv. Technological advances
      v. Increasing specialization of health professional practice
      vi. The patient safety and quality agenda
      vii. Workforce pressures

8. Patient outcomes and satisfaction (Part of the Institute for Healthcare Improvement Triple Aim)
   a) Improving the patient experience of care
   b) Improving the health of populations
   c) Reducing the per capita cost of health care

9. CAPTE proposed standards and required elements for accreditation of physical therapist education programs, Draft 3 – September 2014
   a) 6K: The curriculum plan includes clinical education experiences for each student that encompass, but are not limited to:
      i. 6K3: Involvement in interprofessional practice
         (a) Describe the program’s expectation for opportunities for involvement in interprofessional practice during clinical experiences.
         (b) Provide evidence that students have opportunities for interprofessional practice.
   b) 7D: The physical therapist professional curriculum includes content and learning experiences designed to prepare students to achieve educational outcomes required for initial practice of physical therapy. Courses within the curriculum include content designed to prepare program students to:
      i. 7D38: Participate in the provision of patient-centered interprofessional collaborative care.

II. What are the competencies needed by health professions students for effective IP collaboration?
A. Values & Ethics
1. “Consistent demonstration of core values evidenced by professionals working together, aspiring to and wisely applying principles of altruism, excellence, caring, ethics, respect, communication, accountability, to achieve optimal health and wellness in individuals and communities” (IPEC, 2010)
   a) Similar to PT core values
2. Development of interprofessional competencies centered around values and ethics
   a) May be integrated into education and accreditation requirements
3. The perspective adopted by the IPEC
   a) Mutual trust and respect – Key goal of IPE
   b) Learning about each other’s education and qualifications – IPE
   c) Case studies are used to demonstrate how IPE teams collaborate in the care of a patient
B. Roles & Responsibilities – Who are we and what do we do?
   1. Understanding scope of practice of each team member is the basis of IP collaboration.
      a) Educational background, and professional expertise and boundaries
   2. How do team members’ roles and responsibilities “complement” each other in patient care?
      a) Students make presentations about roles and responsibilities of members of the healthcare team
      b) Students meet several times for IP educational activities that includes team work and patient scenarios (simulated patient care conference)

C. Interprofessional Communication- We need to speak the same language, reduce professional jargon, and when communicating with patients be aware of reading and health literacy.
   1. Health professions education includes instruction on written and more recently electronic communication, but not interprofessional communication
   2. Effective communication with IP teams includes active listening, being knowledgeable, receptive, and available
   3. Students work in IP teams on health literacy exercises, and complete a learning module on communication in an electronic health environment.

D. Team & Teamwork – Establishing competency in the first three domains makes a strong contribution to effective IP teamwork.
   1. Based on the value (professional knowledge) each team member adds to the outcomes of patient care.
   2. Collaboration in IP teams is marked by joint problem solving and decision making
   3. Team behaviors include coordination of patient care with other health professionals to prevent redundancies, gaps, and errors

III. IPE at UT Southwestern Medical Center
A. Development of Convergence program
   1. 2009: university-wide quality enhancement program (SACs accreditation)
   2. Incorporates the two educational missions of the medical center: excellent patient care and innovative biomedical science.
   3. Convergence Implementation Advisory Group (CIAG) meets monthly
   4. Each school divided into small groups with faculty facilitators
      a) Medical School: Academic Colleges (AC)
      b) Graduate School: Responsible Conduct of Research Groups (RCR)
      c) School of Health Professions: Interdisciplinary Education and Active Learning teams (IDEAL)
   5. Educational objectives of the Convergence program
      a) Improve students understanding of and respect for the roles of other health and biomedical professionals
      b) Enhance effective IP communication
      c) Increase knowledge of effective teamwork
   6. Activities designed around science in medicine themes
      a) Cancer
      b) Obesity
      c) Aging
      d) Medical genetics
      e) Innate Immunity
   7. Sample Calendar Sessions related to the theme-based case study are indicated by gray shading. Joint sessions are shown in blue.
8. Faculty Development
   a) Annual Convergence faculty development sessions scheduled at noon.
   b) Topics included: facilitation techniques for small, interprofessional groups, DISC behavioral styles, building effective teams, IPEC Core Competencies, and facilitator self-assessment scoring.

B. School of Health Professions IDEAL program
1. 10-12 students per group representing all programs from the SHP: clinical nutrition, physician assistant studies, physical therapy, prosthetics and orthotics, radiation therapy, and rehabilitation counseling.
2. Biweekly, 1.5 hour sessions during 2 semesters within first year of program: lecture, discussion and small group activities
3. Faculty facilitators meet monthly at noon
   a) Developed curricula of topics considered important to all health professions
   b) Discussed common issues and upcoming sessions
4. IDEAL educational objectives:
   a) Acquire a set of defined communication skill competencies to include, but not be limited to, giving and receiving feedback, negotiation, and cross-cultural interactions.
   b) Demonstrate communication skills through awareness of patient-centered interventions by respecting patients’ clients’ beliefs and values in self-determination.
   c) Develop improved confidence in behavioral interactions through enhanced communication skills.
   d) Recognize the complementary roles in patient care across disciplines.
e) Demonstrate increased knowledge of basic science, diagnosis, treatment, and prevention of disease related to current topics through multi-disciplinary and interschool small group learning activities.

IV. Outcomes assessment – A fundamental component of any educational program. Vital to gauging the effectiveness of IPE. Outcomes assessed used for both the SHPs IDEAL groups and university-wide Convergence program. Tools were used to target attitudes on professional and interprofessional identity, teamwork, collaboration, roles and responsibilities, communication skills and knowledge of the science-of-medicine theme.

A. Convergence Assessment Tools

1. Knowledge and Attitude Probe. Sent to all students by e-mail at the beginning of the Fall semester and at the end of the Spring semester.
   a) Attitude section - based on the Readiness for Interprofessional Learning Scale (RIPLS) (Reid et al 2006) Examples:
      I. Relationships across professions should be included in the educational programs
      II. Communication skills are enhanced in an academic environment with other healthcare and research students
      III. When working with a team or workgroup, I clearly understand my own strengths and how I can best contribute to the team or workgroup.
      IV. I am confident asking questions in a team or workgroup setting if I don’t clearly understand something that was said.
   b) Knowledge section included questions about the annual science-of-medicine theme to determine what students learned about the topic by participating in IPE activities

B. IDEAL Assessment Tools

1. Communication Skills Survey Instrument – developed in-house
   a) Examples:
      - I am comfortable asking questions in a team or workgroup setting if I don’t clearly understand something that was said.
      - When working with a team or workgroup, I clearly understand my own strengths and how I can best contribute to the team or workgroup.

2. Understanding professional roles and responsibilities
   a) Students are asked whether they understood the roles and responsibilities of other IP team members. The specific team members included in this survey is on the professions students are exposed to through IDEAL and Convergence activities
   Example:
      - I have a good understanding of the role and responsibilities of the physical assistant
   b) Professional Identity Scale (Adams et al 2006)– Assesses student’s knowledge of the roles and responsibilities of IP team members.
   Examples:
      - I can identify positively with members of this profession
      - Being a member of this profession is important to me

3. Questionnaire
   a) Open-ended questions used to gather student feedback on topics covered in small group discussions and Lecture Series topics is solicited at the end of the fall and spring semesters.

C. Feedback

1. Faculty provide feedback at scheduled monthly meetings and by e-mail following Convergence activities
2. Students provide feedback by completing a form about their faculty Facilitator

- My facilitator did a consistently outstanding job! She really helped our class become enthusiastic about IDEAL and Convergence. Her excitement is contagious! – Health Profession Student
- It was good to learn about what other health professionals there are and what they do. Much of that information was new for me. – Medical Student

D. Results
1. Most consistent change was an increase in students’ knowledge of IP team members roles and responsibilities.

<table>
<thead>
<tr>
<th>Assessments</th>
<th>2009-2010 p values for increase in attitudes</th>
<th>2010-2011 p values for increase in attitudes</th>
<th>2011-2012 p values for increase in attitudes</th>
<th>2012-2013 p values for increase in attitudes</th>
<th>2013-2014 p values for increase in attitudes</th>
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<tbody>
<tr>
<td>Professional Identity Scale (PIS)</td>
<td>MS: 0.001 HP: 0.006 GS: 0.001</td>
<td>MS: 0.001 HP: 0.006 GS: 0.018</td>
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<td>MS: 0.001 HP: 0.006 GS: 0.018</td>
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<tr>
<td>Readiness for Interprofessional Learning Scale (RIPLS)</td>
<td>Teamwork and collaboration: 0.005 MS: 0.013 HP: 0.022 GS: 0.022</td>
<td>Teamwork and collaboration: 0.022 MS: 0.013 HP: 0.022 GS: 0.022</td>
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<td>Interprofessional identity: 0.022 MS: 0.006 HP: 0.013 GS: 0.018</td>
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<td>Roles and responsibilities: 0.001 MS: 0.028 HP: 0.013 GS: 0.018</td>
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Attitude gains were assessed by two scales as indicated. In the first two years, graduate students took only a truncated version of the RIPLS, after which they participated in the standard probe. School abbreviations: MS, medical school; HP, health professions school; GS, graduate school. ● No significant gain in attitudes, however pre-scores were high and remained high in post-scores (>4 on 5 point Likert scale); ○ No significant gain in attitude scores; ◯ Decrease in attitude scores to <4 on a 5 point Likert scale.

2. Outcome information was used to make changes in all components of the IPE initiative
- It’s a difficult task to arrange interdisciplinary learning activities like this, but this has steadily improved from year to year. Medical School Facilitator
3. Greatest changes made in Convergence Day IP small group program – changed from strictly discussion, to limited discussion with activities.

E. IPE Assessment Tools Resources
1. National Center for Interprofessional Practice and Education http://nexuisipe.org/

V. Where do we go from here?
A. Key Factors to Support Large IPECP (Shanedling, Natl Ctr for PPE, 2014)
1. C-Suite approval (CEO)
2. Administration and leadership support
3. Faculty support
4. IPECP vision
5. Dedicated resources
6. Data collection
7. Part of strategic plan
8. Evaluation (look at program)
9. External funding
B. Taking IPE from the classroom to clinic
   1. PT MACS skill pilot
   2. Skill developed from core competencies (IPEC): 8 elements, 2 from each domain
   3. Clinical education experiences after completion of the didactic curriculum
   4. Special skill: record setting, any CI narrative comments, student perception
   5. Correlate student’s completion of this skill with:
      a) Interprofessional learning surveys
      b) Integration of IPE in clinical education survey
      c) Integration of IPE in clinical practice – graduate survey

C. Student IP teams in the community
   1. ALF Activity
      a) MS 2 and HP student team
      b) Brief, activity, debrief
      c) Activity
         (1) Interview: social history, ADL/iADLs
         (2) Brief physical exam
         (3) Mini cog
         (4) TUG
   2. United to Serve
      a) Health fair near university
      b) Recruitment during Convergence Day

Collaborative resources

National Center for Interprofessional Education and Practice, Resource Exchange
https://nexusipe.org/resource-exchange
Interprofessional Education Collaborative
https://ipecollaborative.org/
National Academies of Practice
National Interprofessional Education Consortium
(Consortium under American Council of Academic Physical Therapy)
http://acapt.org/index.php/about#consortia
Institute of Medicine Global Forum on Innovation in Health Professional Education
http://www.iom.edu/Activities/Global/InnovationHealthProfEducation.aspx
Alliance for Continuing Health Professions Education
http://www.acehp.org/imis15/acme/
Institute for Healthcare Improvement Open School
http://www.ihi.org/education/ihiopenschool/Pages/default.aspx
Health Resources and Services Administration, Bureau of Health Professions
http://bhpr.hrsa.gov/
Geriatric Interdisciplinary Team Training Program
http://www.jhartfound.org/grants-strategy/geriatric-interdisciplinary-team-training-program-resource-center-nyu/
Collaborating Across Borders Conferences I, II, III and IV
http://www.cabiv.ca/
Interprofessional Professionalism Collaborative
http://interprofessionalprofessionalism.weebly.com/
Model Programs

East Carolina University
   http://libguides.ecu.edu/c.php?g=17459&p=97516
Medical University of South Carolina
   http://academicdepartments.musc.edu/c3/
Rosalind Franklin University of Medicine and Science
   http://www.rosalindfranklin.edu/pi/Home.aspx
St. Louis University
   http://ipe.slu.edu/
Thomas Jefferson University
   http://www.jefferson.edu/university/interprofessional_education.html
University of Minnesota
University of New England
   http://www.une.edu/wchp/ipec
University of Pittsburgh
   http://www.omed.pitt.edu/curriculum/interprofessional.php
University of Washington
   http://collaborate.uw.edu/
Western University of Health Sciences
   http://www.westernu.edu/interprofessional/interprofessional-about/interprofessional-overview/
Dalhousie University
   http://www.dal.ca/faculty/interprofessional-health-education.html
University of Alberta
University of British Columbia
   http://www.interprofessional.ubc.ca/
University of Toronto
   http://ipe.utoronto.ca/

References


