Transforming Health Disparities through Interprofessional Education, Research & Service

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SPRING SERIES on INTERPROFESSIONAL EDUCATION
Disclosures

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  • Josiah Macy Jr. Foundation – Macy Scholar Award
  • Health Resources and Services Administration (HRSA)

• No financial conflict of interest
Learning Objectives

• Analyze priority concerns in health care to contextualize background & rationale for addressing the topic

• Discuss key concepts related to health disparities

• Discuss the role of interprofessional teamwork in optimizing care and reducing health disparities

• Discuss UIC’s “Interprofessional Approaches to Health Disparities (IAHD) Program” as an applied example of training interprofessional student teams using CBPR to understand and address special needs of vulnerable patients and reducing health disparities
Background & Rationale

### Racial and Ethnic Minorities Will Comprise Almost Half of the Total Population by 2050

**Figure 2**

Distribution of the U.S. population by race/ethnicity, 2000 and 2050

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2000 PERCENT</th>
<th>2050 PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMERICAN INDIAN</td>
<td>0.7</td>
<td>0.9</td>
</tr>
<tr>
<td>ALASKA NATIVE</td>
<td>3.7</td>
<td>8.2</td>
</tr>
<tr>
<td>OTHER</td>
<td>12.1</td>
<td>13.6</td>
</tr>
<tr>
<td>ASIAN/PACIFIC ISLANDER</td>
<td>12.5</td>
<td>24.5</td>
</tr>
<tr>
<td>AFRICAN AMERICAN, NON-LATINO</td>
<td>59.1</td>
<td>52.8</td>
</tr>
<tr>
<td>LATINO</td>
<td>7.0</td>
<td>5.5</td>
</tr>
<tr>
<td>WHITE, NON-LATINO</td>
<td>2.8</td>
<td>2.7</td>
</tr>
</tbody>
</table>

**NOTE:** "Other" includes non-Latino individuals who reported "Same other race" or "Two or more races." Data for 2050 do not include estimates for the "Other" category.

**SOURCES:**
GDP refers to gross domestic product. 

Source: OECD Health Data 2014.
### Mirror, Mirror on the Wall, 2014 Update:
How the U.S. Health Care System Compares Internationally

**EXHIBIT ES-1. OVERALL RANKING**

<table>
<thead>
<tr>
<th>COUNTRY RANKINGS</th>
<th>AUS</th>
<th>CAN</th>
<th>FRA</th>
<th>GER</th>
<th>NETH</th>
<th>NZ</th>
<th>NOR</th>
<th>SWE</th>
<th>SWIZ</th>
<th>UK</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Ranking (2013)</strong></td>
<td>4</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Quality Care</td>
<td>2</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>11</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Effective Care</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>11</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Safe Care</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Coordinated Care</td>
<td>4</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Patient-Centered Care</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>11</td>
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<td>2</td>
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<td>4</td>
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<tr>
<td>Access</td>
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<td>6</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Cost-Related Problem</td>
<td>9</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Timeliness of Care</td>
<td>6</td>
<td>11</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Efficiency</td>
<td>4</td>
<td>10</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Equity</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Healthy Lives</td>
<td>4</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Health Expenditures/ Capita, 2011**</td>
<td><strong>3,800</strong></td>
<td><strong>4,522</strong></td>
<td><strong>4,118</strong></td>
<td><strong>4,495</strong></td>
<td><strong>5,099</strong></td>
<td><strong>3,182</strong></td>
<td><strong>5,669</strong></td>
<td><strong>3,925</strong></td>
<td><strong>5,643</strong></td>
<td><strong>3,405</strong></td>
<td><strong>8,508</strong></td>
</tr>
</tbody>
</table>

Notes: * Includes ties; ** Expenditures shown in $US PPP (purchasing power parity); Australian $ data are from 2010.
Social Determinants of Health

The circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness.

These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.

--World Health Organization
Determinants of Health

Policies and Interventions

Individual

Biology

Socio-Economic Environment

Behaviors

Physical Environment

Access to Quality Health Care

Healthy People 2010
Health Disparities

• Gaps in the quality of health and health care across racial, ethnic, and socioeconomic groups.

• "population-specific differences in the presence of disease, health outcomes, or access to health care." HRSA
Sources of Unequal Healthcare Quality and Outcomes

Need for care
Clinical Appropriateness
Patient Preferences/Choices

The Operation of Health Care Systems and the Legal and Regulatory Climate

Discrimination: Biases, Prejudices, Stereotyping; Uncertainly; Pt. Trust

Source: Gomes and McGuire (2001) Model of Difference, Disparities and Discrimination
Health Disparities in Chicago

A Profile of Health and Health Resources within Chicago’s 77 Community Areas

The map shows the distribution of Chicago’s hospitals by health system and region. Hospitals were categorized as general acute care, long-term care, psychiatric, children’s specialty rehabilitation, and research.

The spatial distribution of hospitals is unevenly distributed across the city. The greater concentration of general acute care facilities is found in the north, west, and south regions of the city. In contrast, the northwest, southwest, and far south regions each have fewer than three general acute care hospitals.
IOM’s Quality Chasm Report

Six aims: care should be: safe, effective, patient-centered, timely, efficient and equitable.

Numerous calls to reform the health care system and health professions education.

Emphasis on the need for integrating medical education with public health training.
# Changing Needs for Health Professions Training

<table>
<thead>
<tr>
<th><strong>Revisiting the Medical School Mission at a Time of Expansion</strong></th>
<th><strong>Educating Physicians: A Call for Reform of Medical School and Residency</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Josiah Macy Jr. Foundation – 2008</td>
<td>Carnegie Foundation - 2010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need for...</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Acceleration in the pace of change in order to prepare future physicians to meet the public’s increasingly demanding needs and expectations;</td>
</tr>
<tr>
<td>▪ Medical educators to ensure that physicians have more backgrounds in population health and the role social factors play in effecting health change; and</td>
</tr>
<tr>
<td>▪ More frequent use of community-based settings as learning environments and less frequent use of hospital settings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need for...</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Standardization of learning outcomes and individualization of the learning process</td>
</tr>
<tr>
<td>▪ Integration of formal knowledge and clinical experience</td>
</tr>
<tr>
<td>▪ Development of habits of inquiry and innovation</td>
</tr>
<tr>
<td>▪ Focus on professional identity formation</td>
</tr>
<tr>
<td><strong>Our Journey in Program Development</strong></td>
</tr>
<tr>
<td>---------------------------------------</td>
</tr>
<tr>
<td><strong>Training Culturally Responsive Physicians (2005-2007)</strong></td>
</tr>
<tr>
<td><strong>An Interdisciplinary Service Learning Experience to Prepare Tomorrow’s Health Care Professionals (2007-2008)</strong></td>
</tr>
<tr>
<td><strong>A Longitudinal Continuity of Care Predoctoral Curriculum to Promote Patient-centered Medicine (2007-2010)</strong></td>
</tr>
<tr>
<td><strong>Longitudinal Team-based Interprofessional Education to Care for Special Needs Populations (2013-2015)</strong></td>
</tr>
</tbody>
</table>
New Beginnings in Education, Service & Research

• Service Learning...a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.
Patient-centered Care

...health care that establishes a partnership among practitioners, patients and their families (when appropriate) to ensure that decisions respect patients’ wants, needs and preferences...IOM

Model for Patient-centered Delivery of Care

- Relationship Building
- Collaborative Decision Making
- Coordination & Integration of Care
- Communication & Education

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Patient-centered Medicine Scholars Program

M1: Foundations of PCC
M2: PCC for Vulnerable Populations
M3: Patient’s Role in PCC
M4: Reflections on PCC

Continuity of Care

1 Domestic Violence, Geriatrics, HIV/AIDS, Homelessness, Immigrant & Refugee Health
2 Chronic Disease Self-management, Home visits, Group Visits, Special Topics in PCM

PCM Scholars who successfully complete Program Years 1 through 3, or 2 through 4 receive a certificate of accomplishment.
Theoretical Foundation

Education in Action Philosophy

*Drawing from the wisdom of...*

*John Dewey, Earnest Boyer, David Kolb and other educators and philosophers*

- Active-experiential learning
- Reflection
- Application
- Integration

**Kolb’s Model**
Time to Pause & Reflect

Framework for Interprofessional Education & Collaborative Practice – WHO 2010

Interprofessional Education Collaborative 2011
Recommendations

“All health professionals should be educated to deliver patient-centered care as members of an interprofessional team, emphasizing evidence-based practice, quality improvement approaches and informatics.”

IOM Report

“If we acknowledge the growing body of evidence that healthcare delivered by well-functioning teams produces better results, there is a serious disconnect with the educational system that is still structured in silos”

George Thibault, MD
President Macy Foundation
2012
Accreditation Requirements

The core curriculum of a medical education program must prepare medical students to function collaboratively on healthcare teams that include other health professionals.

LCME: Standard 19
Pilot Work

Training Future Health Providers to Care for the Underserved: A Pilot Interprofessional Experience

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¹Department of Family Medicine, College of Medicine, University of Illinois at Chicago, USA
²Department of Pharmacy Practice, College of Pharmacy, University of Illinois at Chicago, USA

ABSTRACT

Introduction: Interprofessional teamwork is essential for effective delivery of health care to all patients, particularly the vulnerable and underserved. This brief communication describes a pilot interprofessional learning experience designed to introduce medicine and pharmacy students to critical health issues affecting at-risk, vulnerable patients and helping students learn the value of functioning effectively in interprofessional teams. Methods: With reflective practice as an overarching principle, readings, writing assignments, a community-based immersion experience, discussion seminars, and presentations were organized to cultivate students’ insights into key issues impacting the health and well-being of vulnerable patients. A written program evaluation form was used to gather students’ feedback about this learning experience. Results: Participating students evaluated this learning experience positively. Both quantitative and qualitative input indicated the usefulness of this learning experience in stimulating learners’ thinking and helping them learn to work collaboratively with peers from another discipline to understand and address health issues for at-risk, vulnerable patients within their community. Discussion: This pilot educational activity helped medicine and pharmacy students learn the value of functioning effectively in interprofessional teams. Given the importance of interprofessional teamwork and the increasing need to respond to the health needs of underserved populations, integrating interprofessional learning experiences in health professions training is highly relevant, feasible, and critically needed.

Keywords: Interprofessional care, interprofessional education, interprofessional learning, underserved populations
Interprofessional Approaches to Health Disparities (IAHD)

**Goal**: To equip learners with essential skills to improve health care for underserved populations and transform health disparities through interprofessional education, research and collaborative practice.

- Reduce Health Disparities, Realize Triple Aim
- Train health professions students in interdisciplinary teams to acquire core competencies for interprofessional collaborative, Pt-centered practice
Learning Objectives

Participation in the IAHD will enable trainees to:

- Effectively engage in identifying and addressing social determinants of health impacting vulnerable populations;
- Acquire working knowledge and hands-on experience with community-based participatory research (CBPR) and quality improvement (QI) methods;
- Develop an interprofessional community-based research project designed to improve health care access, communication, care coordination, or additional priority issues for vulnerable populations;
- Develop skills for functioning as effective members of interprofessional teams; and
- Develop skills for leadership, advocacy and scholarship.
Key Learning Activities

• CBPR & QI Training

• CBPR & QI Research

Learning activities are grounded in reflection, self-awareness, collaborative learning and applied practice to successfully promote student acquisition of core competencies to address health needs of vulnerable populations.
Educational Methods

• Orientation, student, faculty and staff development
• Community-based immersion activities
• Monthly seminars
• Online tutorials
• Team-based learning
• Reflections
• Final showcase presentations
# Nuts & Bolts: Course Participation - Credit

<table>
<thead>
<tr>
<th>Student Level</th>
<th>Medicine</th>
<th>Nursing</th>
<th>Pharmacy</th>
<th>Social Work</th>
<th>Public Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4</td>
<td>Graduate level students (e.g. ANPs)</td>
<td>P4</td>
<td>2nd year MSW students</td>
<td>2nd year CHS MPH students</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>2nd year MSW students</td>
<td>Practicum coursework</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Place in Curriculum</th>
<th>Medicine</th>
<th>Nursing</th>
<th>Pharmacy</th>
<th>Social Work</th>
<th>Public Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM Scholars Program</td>
<td>Independent study</td>
<td>Module embedded in Advanced Pharmacy Practice Experience</td>
<td>Part or all of the field practicum requirements or independent study</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessment

• Assessment of Learning versus Assessment for Learning

• Balance between formative and summative assessment

• Mixed methods – opportunity for open ended feedback
Kirkpatrick’s Four-step Evaluation

Step 1:
**Reaction** - How well did the learners like the learning process?

Step 2:
**Learning** - What did they learn? (the extent to which the learners gain knowledge and skills)

Step 3:
**Behavior** - (What changes in job performance resulted from the learning process? (capability to perform the newly learned skills while on the job)

Step 4: **Results** - What are the tangible results of the learning process in terms of reduced cost, improved quality, increased production, efficiency, patient outcomes?
A systematic review of the effectiveness of interprofessional education in health professional programs

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b School of Medicine and Public Health, The University of Newcastle, Callaghan, NSW 2308, Australia

ARTICLE INFO

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Accepted 9 November 2011

Keywords:
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Collaborative learning
Health professional education
Systematic review

SUMMARY

Objective: The objective of this systematic review was to identify the best available evidence for the effectiveness of university-based interprofessional education for health students.

Background: Currently, most health professional education is delivered in a traditional, discipline specific way. This approach is limited in its ability to equip graduates with the necessary knowledge, skills and attitudes for effective interprofessional collaboration and for working as part of a complex health care team. Interprofessional education is widely seen as a way to improve communication between health professionals, ultimately leading to improved patient outcomes.

Inclusion criteria: The review included all randomised controlled trials and quasi-experimental studies in which two or more undergraduate or post-graduate health professional groups are engaged in interprofessional education.

Review methods: A three-stage comprehensive search of ten electronic databases as well as grey literature was conducted. Two independent reviewers assessed each paper prior to inclusion using the standardised critical appraisal instruments for evidence of effectiveness developed by the Joanna Briggs Institute.

Results: Nine published studies consisting of three randomised controlled trials, five controlled before and after studies and one controlled longitudinal study were included in the review.

Conclusion: Student’s attitudes and perceptions towards interprofessional collaboration and clinical decision-making can be potentially enhanced through interprofessional education. However, the evidence for using interprofessional education to teach communication skills and clinical skills is inconclusive and requires further investigation.

Implications for research: Future randomised controlled studies explicitly focused on interprofessional education with rigorous randomisation procedures, allocation concealment, larger sample sizes, and control groups, would improve the evidence base for interprofessional education.

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Program Outcomes - thus far

• Baseline

• Mid-year formative evaluation

• Reflections

• CBPR projects
Basic Recipe

- Nurture passions – learner centered

- Help clarify feasible goals

- Link learners with the right resources and support – collaborative linkages

- Provide guidance to plan and progress systematically

- Foster self-directed inquiry and commitment – encourage learners to spend time and energy to appropriately do the ground work
Challenges & Discoveries

• Understanding change, getting buy-in – Kotter 8 steps
• Curricular transformation
• Coordination, organization, time management
• Staying true to CBPR process – training new researchers/mentors
• Avoiding hierarchal roles, developing & maintaining trust and respect for all team members
• Maintaining motivation – intrinsic versus extrinsic
• Unanticipated benefits
• Vision - big picture
Next Steps

- Program evaluation to learn for process and outcomes
- Program refinement
- Linking UGME, GME and Faculty development
- Develop ongoing program of interprofessional education, service and research/scholarship
Key Take Home Lessons

Utilize a systems approach

Integrate educational theory and principles

Optimize the change process

CQI - Build on incremental blocks

Do everything with love, joy and gratitude

Don’t be paralyzed by perfection

Don’t be paralyzed by perfection
Class of 2015

“Together we can do so much.” Hellen Keller
Acknowledgements

• This work is the result of a large number of individuals – students, staff, faculty, UIC Health Professional Colleges & CEIPE, Community Partners - including agency staff & clients
  • Connections for Abused Women and their Children (CAWC)
  • Project Vida; EdgeAlliance/ AIDSCare Progressive Services
  • Heartland Alliance
  • Housing Opportunities and Maintenance for the Elderly (H.O.M.E.)
  • Lincoln Park Community Shelter; Cathedral Shelter (now Revive)

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Interprofessional Approaches to Health Disparities

Patient-centered Medicine Scholars Program