

Interdisciplinary Education Program: An Overview

Working Document - last update 8/8/18

What is Interdisciplinary Education?

While many definitions explore the distinction between discipline and profession, research and education, our goal is to equally consider each with an emphasis on all learners focusing on collaboration from, with, and about each other. Two of the more widely utilized definitions are provided here for reference.

- The National Academies of Science, and National Science Foundation have an established definition of interdisciplinary research:
"Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice."¹
- The World Health Organization has established a definition of interprofessional education:
"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."²

Why is Interdisciplinary Education important?

It is important because research has demonstrated that a key element to achieve the quadruple aim in healthcare is collaboration. This has been shown to reduce medical errors, improve quality of care and meet the needs of diverse populations. It will also lead to higher job satisfaction and health of team members.

Challenges

- All academic health centers are navigating the challenges of implementing required interprofessional education opportunities while supporting interdisciplinary and team science.
- Infrastructure challenges include:
 - Providing enough practical applications of the didactic skills to gain experience in working in an interdisciplinary manner relevant and pertinent to all learners.
 - Working with current practitioners to support the core competencies of IPE: values, ethics, roles/responsibilities, interprofessional communication, teams and teamwork.
 - Practical matters related to program delivery such as schedule coordination, curriculum alignment, facility space, and engaging clinical opportunities supporting the needs of a diverse academic health center.

¹ Committee on Facilitating Interdisciplinary Research, Committee on Science, Engineering, and Public Policy (2004). *Facilitating interdisciplinary research*. National Academies. Washington: National Academy Press, p. 2 and the published full report: *Facilitating Interdisciplinary Research*, 2005, National Academies of Sciences, Chapter 2, p 26.

² World Health Organization (WHO). (2010). *Framework for action on Interprofessional education & collaborative practice*. Geneva: World Health Organization. See http://whqlibdoc.who.int/hq/2010/WHO_HRH_HPN_10.3_eng.pdf.

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A brief history of the Interdisciplinary Education Program/IEPA:

- The OUHSC College Deans, Senior Officers and Provost have supported the development and implementation of interdisciplinary and interprofessional programs for over twenty-five years. Examples include:
 - OUHSC Faculty Leadership Program which brings faculty together from across the HSC colleges for interprofessional early career development.
 - Oklahoma-LEND Program (Leadership Education in Neurodevelopmental Disabilities) which trains a selected group of leadership students from the HSC colleges about best practices for working with and advocating on behalf of children with special health needs.
 - The Center for Learning and Leadership/UCEDD programs (CLL/UCEDD) which prepare and integrate the patient and family perspective into teaching and learning experiences and create teaching/learning partnerships between OUHSC and community agencies.
 - The Center for Child Abuse and Neglect (CCAN) educational programs focused on training the team of professionals from health, social services and law who intervene to address child abuse and neglect and child advocacy.
 - The OU-Tulsa Bedlam clinic, a long-standing and successful multi-professional clinic that delivers acute and primary care services to uninsured patients, offers interprofessional briefings between students from medicine, nursing, pharmacy, and social work.
 - The Early Lifestyle Intervention Clinic at OU-Tulsa offers a multidisciplinary approach for the treatment of childhood obesity.
 - The Reynolds Oklahoma Center on Aging, a research division of the Department of Geriatrics in the College of Medicine, provides a team-based approach to scientific research including an interdisciplinary staff of medical, nursing, public health, research professionals, and graduate students.
 - The OU-Tulsa Food Pharmacy has a direct impact on the community of northeastern Oklahoma by partnering the OU-University of Tulsa School of Community Medicine and the OU College of Public Health to address challenges of balancing health and prescription purchases for patients with chronic disease.
 - The Professional ACEs Training for Health (PATH) program at OU-Tulsa brings and interdisciplinary research team together to discuss the effects Adverse Childhood Experiences (ACE).

These are a few of the many faculty directed initiatives and programs at the Health Sciences Center. HSC faculty are and continue to drive, create and engage in individual interdisciplinary and multi-disciplinary activities, and to affiliate with broader offerings hosted at the enterprise level or created to serve specific clinical populations or address complex problems in health care, teaching or research.

- In 2012 Dr. Peggy Wisdom with the Wisdom Family Foundation provided support to evaluate the need and the feasibility of OUHSC developing a formal interprofessional education program for health professions students. A core group of faculty volunteered to engage in this initiative and became known as the OUHSC Interprofessional Education Collaborative (IPEC). National and international references regarding the development and implementation of such programs were reviewed (see references). This initial investment of time, effort, and resources were pivotal to the creation of current interdisciplinary initiatives

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created to provide systematic, engaged and interdisciplinary learning opportunities for all HSC students.

- The initial pilot clinically-focused program was called EPIC (Empowering Patients Through Interprofessional Collaboration) which allowed 80 students from the 6 OUHSC Colleges and the OU Anne and Henry Zarrow School of Social Work to participate in four active learning sessions that helped them to build team relationships and also introduced them to the competencies adopted by the national Interprofessional Educational Collaborative. The initial didactic experience was followed by monthly supervised student-provided patient care at the Good Shepherd Community Clinic in Oklahoma City. EPIC programming continues to be available to approximately 80 students per year.
- On the Tulsa Campus where HSC colleges are also located, the interprofessional clinical experience is provided through shared simulation experiences, programs such as the Early Lifestyle Clinic, and through the long-running and successful Bedlam Clinic.
- In order to expand the interprofessional educational opportunity to more students, the concept of All Professions Day (APD) was rolled out in 2015. The team building concept and interprofessional competencies were again the focus of APD. APD programming is available to approximately 800 students per year.
- In 2016, this initiative was offered a home in the Office of Interdisciplinary Programs within the Office of the Vice Provost for Academic Affairs & Faculty Development.
- By 2017, following a Retreat hosted by the Vice Provost, the loosely formed Core Faculty reorganized and named the group the Interprofessional Educators & Practitioners Association (IEPA). IEPA established three working committees: Curriculum, Faculty Development, and Research, under the mission: The IEPA's mission is to organize, recognize, and advocate for faculty, staff, and students to pursue interprofessional collaboration in all aspects of healthcare at the University of Oklahoma Health Sciences Center. The IEPA's core purpose is transforming how we work together to improve people's health. The increased work within the IEPA committees, and results of event evaluations and research protocol assessing interprofessional attitudes, showed that the HSC campus is on the right track yet has areas for improvement and expansion.
- In 2018, the IEPA adopted a new, two-year curriculum plan including core experiences committed to the development and expansion of a comprehensive, cohesive, competency-driven menu of interdisciplinary learning experiences for every student at every level (well beyond the 800 students per year who participate in the All Professions Day sessions). Currently, the work includes "the advancement of curricular and co-curricular offerings producing distinctive, practice-ready, collaborative health care professionals who deliver patient-centered care."
- As part of the OUHSC Academic Strategic Plan, there is a campus-wide initiative to enhance related faculty capacity building for interdisciplinary/interprofessional education. In July 2017, a Regents approved mandatory university fee was instituted to provide budgetary support for the continued development, implementation and evaluation of interdisciplinary learning opportunities for HSC students.

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Role of Accreditation

- Twenty-four participating degree programs across 8 colleges (including Social Work at OU-Norman) include 16 different accreditation standards, each requiring interprofessional education and practice experiences for learners prior to graduation.
- Accreditation requirements necessitate program expansion to deliver programming to every student at every level.

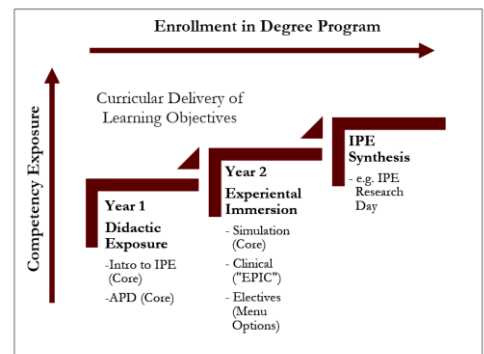
Program Expansion

- Learning from past successes, IEPA will deploy a two-year curricular model supported by competency-based objectives tested in piloted programming. The result will be a flexible curricular “menu” allowing opportunities for degree programs to meet their accreditation needs and student interests – including additional opportunities for interprofessional clinical experiences.
- The OUHSC Academic Strategic Plan implementation team is formulating strategies, benchmarks and metrics to meet campus-wide goals supporting interprofessional/interdisciplinary programming and to measure results.
- Support from the Office of Interdisciplinary Programs will introduce additional interdisciplinary programming through the 2018-2019 Pilot Interprofessional Mini-Course. As a template to be tested for short-term intensive and interesting sessions that can accommodate student and faculty participation in IPE-relevant reading, video-based, and discussion based learning, the mini-course approach should prove promising for near-term fairly rapid expansion of highly portable didactic opportunities for small learning groups.
- Wisdom Family Foundation Interprofessional Education Research Seed Grants will be used to support an annual request for proposals describing faculty designed pilot learning programs. These pilot projects will enable continued support for faculty innovation while adding new curriculum relevant to the IPE and team science competencies/principles.

IEPA Program Proposal

First Year Programming

- Beginning in FY2018, the new two-year IPE curriculum includes first year programming that includes both online and in-person didactic modules introducing the IPEC Core Competencies for Interprofessional Collaborative Practice. Participating students will more consistently become “first-year” students in OUHSC and OU-Norman Social Work academic programs. This revises the mixed approach that had been in place where students from very different stages along their academic degree pathway participated in All Professions Day (APD). The purpose of this revision is to introduce the principles of interdisciplinary collaboration to early career learners at the earliest possible stage of their learning to lay a foundation for subsequent didactic, clinical, community, or research experiences.
 - The online modules introduce the concept of interprofessional teams.
 - The in-person activity, referred to as All Professions Day, includes a series of two, 2-hour interprofessional training sessions engaging students in education related to the IPEC



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competencies. Students are assigned to an interprofessional student team and participate in a variety of learning activities under the guidance of a trained faculty facilitator. Year one programming will concentrate on content (e.g., foundational knowledge) exposure.

Year-Two Programming

- Year two programming will promote student immersion and competence building. This will include a core simulation case study and expansion of clinical/practicum experiences.
 - As part of the core experience, learners will complete a series of two simulation courses providing hands-on, interprofessional team experience in a simulated environment to foster investigation and (guided) reflection on interprofessional team issues.
 - The clinical course will provide hands-on, direct-patient care experience to students performing in an interprofessional team facilitated by a faculty team leader and supervised by a medical attending and/or respective specialists. The program will specifically focus on the IPEC competencies among health professionals as an important aspect to the delivery of high-quality patient care.
 - The synthesis course will explore concepts necessary for team members to evaluate interprofessional concepts in the changing health care environment. The application of research to will be emphasized. Student teams will work with a faculty facilitator.

Next Steps: Opportunities for Interdisciplinary Collaboration

- While previous campus initiatives were crafted to address specific accreditation or departmental needs, our mission as an academic health center provides opportunities for unique and distinctive collaboration across, and with, all disciplines.
- The Office of Interdisciplinary Education Programs is committed to supporting initiatives in team science addressing every student at every level while producing graduates with the collaborative skills to influence health from the bench to the bedside.
- Inclusion of additional disciplines allows our work to find true depth: “Learning in each discipline can go deep, but true depth of learning is in our ability to go wide and beyond our discipline.” Opportunities for inclusion embrace the continuum of professions from science, to practice, to the real world and community – including patients and families. Our goal is to purposefully increase representation from additional student cohorts across all campus sites.
- Student engagement opportunities will allow us to build programming with the user in mind both as partner and recipient. This includes the creation of a Student-Faculty Advisory Committee with student representatives from each college, each IEPA committee, and the Office of Interdisciplinary Education Programs.

Annotated References and Resources

- NSF Interdisciplinary Research:
https://www.nsf.gov/od/oia/additional_resources/interdisciplinary_research/
 - “NSF also understands that the integration of research and education through interdisciplinary training prepares a workforce that undertakes scientific challenges in innovative ways. Thus, NSF gives high priority to promoting interdisciplinary research and supports it through a number of specific solicitations.”
 - Cites the National Academies’ 2005 report definition, below.

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- National Academies: Facilitating Interdisciplinary Research
<https://www.nap.edu/read/11153/chapter/4>
 - The 2005 report, cited by NSF above, providing the industry definition for Interdisciplinary research (IDR)
"Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice."

- IHI Triple Aim Initiative:
<http://www.ihl.org/Engage/Initiatives/TripleAim/Pages/default.aspx>
 - Institute for Healthcare Improvement (IHI) 2008 report.
 - Improve safety and quality
 - Improve health of populations
 - Reduce costs
 - Updated in 2016 to include “attaining joy in work” or also referred to as caregiver wellness: <http://www.ihl.org/communities/blogs/the-triple-aim-or-the-quadruple-aim-four-points-to-help-set-your-strategy>

- WHO Framework for Action on Interprofessional Education and Collaborative Practice:
http://www.who.int/hrh/resources/framework_action/en/
 - World Health Organization (WHO) 2010 publication on “innovative strategies . . . to bolster the global health workforce.”
 - Provides commonly cited definition of interprofessional education as:
 - “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.”

- IPEC Core Competencies for Interprofessional Collaborative Practice:
<https://nebula.wsimg.com/2f68a39520b03336b41038c370497473?AccessKeyId=DC06780E69ED19E2B3A5&disposition=0&alloworigin=1>
 - Interprofessional Education Collaborative (IPEC) 2011 report by sponsor accrediting associations of health education programs
 - Established the four key concepts that guide national IPE initiatives:
 - Collaborative practices as supported by:
 - Values/Ethics for Interprofessional Practice
 - Roles/Responsibilities
 - Interprofessional Communication
 - Teams and Teamwork
 - [Updated in 2016](#) with clarification the domain and topics and better address the Triple Aim

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- National Academies- Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes: <https://www.nap.edu/read/21726/chapter/1>
 - National Academies of Sciences Engineering Medicine (National Academies Press-NAP) 2015 Report
- “In 2013, the Institute of Medicine’s (IOM) Global Forum on Innovation in Health Professional Education held two workshops on IPE. At these workshops, a number of questions were raised, the most important of which was “What data and metrics are needed to evaluate the impact of IPE on individual, population, and system outcomes?”
- Follow-up to previous IOM reports since 1972, including:
 - Institute of Medicine. 2000. *To Err is Human: Building a Safer Health System*. Washington, DC: The National Academies Press. <https://dx.doi.org/10.17226/9728>
 - Institute of Medicine. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10027>.
 - Institute of Medicine. 2003. *Health Professions Education: A Bridge to Quality*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10681>.
 - Institute of Medicine. 2015. *Building Health Workforce Capacity Through Community-Based Health Professional Education: Workshop Summary*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18973>.
- National Academies- Exploring the Role of Accreditation in Enhancing Quality and Innovation in Health Professions Education: <https://www.nap.edu/catalog/23636/exploring-the-role-of-accreditation-in-enhancing-quality-and-innovation-in-health-professions-education>
 - National Academies of Sciences Engineering Medicine (National Academies Press-NAP) 2017 Workshop Proceedings
 - Challenges interprofessional education to consider continuing education and focus on life in practice.
- NIH Collaboration and Team Sciences: A Field Guide: <https://www.cancer.gov/about-nci/organization/crs/research-initiatives/team-science-field-guide>
 - National Cancer Institute at the National Institutes of Health (NIH) 2010 providing institutions guidance regarding shifting research cultures.
 - Updated second edition in 2018
 - Great resource as the definition of healthcare team and focus on team science evolves.
 - Provides “Top Ten Take Aways” for teams including: 1) Trust, 2) Vision, 3) Self-Awareness and Emotional Intelligence, 4) Leadership, 5) Mentoring, 6) Team Evolution and Dynamics, 7) Communication, 8) Recognition and Sharing Success, 9) Conflict and Disagreement, and 10) Navigating and Leveraging Networks and Systems.