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Introduction

Addressing complex health issues and unmet health needs within current and future healthcare systems requires a collaborative-practice ready workforce. The World Health Organization (WHO) defines a collaborative-practice ready workforce as “healthcare workers who have received effective training in interprofessional education (IPE).”¹ IPE is the educational practice in which students from different professions or disciplines “learn about, from, and with each other” with the expressed goal of engendering collaborative efforts and improving health outcomes.¹⁻² IPE empowers students and healthcare providers to work collaboratively through an understanding of team dynamics, leadership, and patient centered management that promotes better health services and improved health outcomes.

In 1972, the Institute of Medicine (IOM) called for academic health centers to “recognize an obligation to engage in interdisciplinary education and patient care” and to “relate interdisciplinary education to the practical requirements of health care.”⁴ Following this report, some medical schools across the US voluntarily implemented IPE opportunities within their curriculum. Interest in interdisciplinary teams within healthcare spiked in the mid-1990s following rapid increases in healthcare spending.^{3,5} In addition to efforts to decrease national spending on healthcare, IOM identified IPE and collaboration as a means to address patient safety concerns.⁶⁻⁸ In 2010, WHO described interprofessional collaboration in education and practice as an essential strategy in addressing current and future crisis in global health care.¹ In 2011, the Interprofessional Education Collaborative (IPEC) identified core competencies that prepared healthcare students to enter the workforce ready to work as effective members of interprofessional teams.⁹

Following the call for increased interprofessional collaboration within medical school curricula, numerous health profession accreditation organizations introduced and adopted accreditation standards for interprofessional education and collaboration.¹⁰⁻¹⁶

In recognition of the importance of IPE and to meet standards by multiple accrediting organizations, the University of Arkansas for Medical Sciences (UAMS) created the Office of IPE¹⁷ with a dual focus on meeting the Triple Aim (defined below) and expanding IPE infrastructure. The only academic health center in Arkansas, UAMS offers 73 degree and certificate programs through classes offered at the main campus in Little Rock, Arkansas. The UAMS Northwest Regional Campus was established in 2007 in Fayetteville, Arkansas and is located more than 200 miles from the main campus. The regional campus has undergraduate radiological imaging sciences students (RIS), graduate level genetic counseling students, doctorate level physical therapy students, masters and doctoral level nursing students, third and fourth year medical students, and third and fourth year pharmacy students (see Table 1). In addition to current program offerings, a doctorate level occupational therapy program is in development. Approximately 300 students are trained on the UAMS Northwest Regional Campus each year. There are hundreds of regional medical campuses through the US and Canada.¹⁸ Regional campuses are required to meet the same accreditation standards as main campuses, but often struggle to offer all opportunities to students. However, regional campuses also present opportunities to provide regional campus students with unique and rewarding IPE experiences. On the main campus the student population presents several degree programs, which provides multiple combinations of healthcare students within interprofessional

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education experiences. The regional campus must work to include the small amount of healthcare disciplines to ensure the learning experiences are meaningful to all students. In addition to the decreased student census, the amount of available faculty to facilitate IPE learning experiences on a regional campus is also a challenge. In this paper we discuss the development and implementation of an IPE curriculum on a regional medical campus.

IPE Program Model¹⁹

The UAMS Office of IPE supports IPE and collaboration on campus through a 5-pillar approach that includes curriculum, collaborative practice, development, faculty development, and research/scholarship. For the purpose of this paper, we will focus on curriculum and the impact on the regional campus student experience. The student curriculum includes approximately 25 contact hours of IPE coursework required for graduation for all degree seeking students at UAMS on both the main campus and regional campus. Each learning experience has a different time devoted to the activity based on the objectives of each phase. The curriculum was designed to address the Triple Aim, a framework developed by the Institute for Healthcare Improvement, that offers a 3 dimensional approach to improving overall health system performance through improving the patient experience, improving population health, and reducing the overall cost of health care.²⁰ The UAMS student curriculum includes a 3-phase Triple Aim framework (see Figure 1) that provides instruction and collaborative activity for students at the novice, intermediate, and advanced levels.²¹ The UAMS IPE curriculum works in 3 phases of educational development: exposure, immersion, and competence.

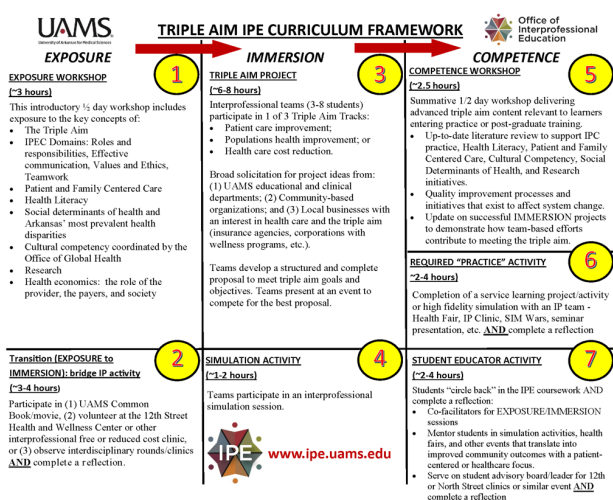
Regional Campus Approach

Program	College	Accrediting Agency	IPE Accreditation Standard
Medicine – MD	COM	Liaison Committee for Medical Education of the AAMC ¹	Standard: ED-19: There must be specific instruction in communication skills as they relate to physician responsibilities, including communication with patients, families, colleagues, and other health professionals. Element 7.9: Interprofessional Collaborative Skills: The faculty of a medical school ensure that the core curriculum of the medical education program prepares medical students to function collaboratively on health care teams that include health professionals from other disciplines as they provide coordinated services to patients. These curricular experiences include practitioners and/or students from the other health professions.
Nursing – BSN, MNSC, DNP	CON	Commission on Collegiate Nursing Education ²	Standard III: The curriculum is developed in accordance with the program’s mission, goals, and expected student outcomes. The curriculum reflects professional nursing standards and guidelines and the needs and expectations of the community of interest. Teaching-learning practices are congruent with expected student outcomes. The environment for teaching-learning fosters achievement of expected student outcomes. Key Element III-H: The curriculum includes planned clinical practice experiences that: • enable students to integrate new knowledge and demonstrate attainment of program outcomes; • foster interprofessional collaborative practice; and • are evaluated by faculty.
Pharmacy – PharmD	COP	Accreditation Council for Pharmacy Education ³	Standard 11: Interprofessional Education (IPE) The curriculum prepares all students to provide entry-level, patient-centered care in a variety of practice settings as a contributing member of an interprofessional team. In the aggregate, team exposure includes prescribers as well as other healthcare professionals.
Physical Therapy – DPT	CHP	Commission on Accreditation in Physical Therapy Education ⁴	Standard 6L: The curriculum plan includes clinical education experiences for each student that encompass, but are not limited to: 6L.3: involvement in interprofessional practice
Genetic Counseling – MS	CHP	Accreditation Council for Genetic Counseling ⁵⁻¹⁶	Standard B1.3: Practice-Based Competencies An entry-level genetic counselor must demonstrate the Practice-Based Competencies as defined by the ACGC to manage a genetic counseling case before, during, and after the clinic: • Interpersonal, Psychosocial, and Counseling Skills • Education • Professional Development & Practice Practice Based Competency 22: Establish and maintain professional interdisciplinary relationships in both team and one-on-one settings, and recognize one’s role in the larger healthcare system.
Radiologic Imaging Sciences – BS	CHP	Joint Review Committee on Education in Radiologic Technology ⁷	

Table 1: UAMS Northwest Campus Programs and IPE Accreditation Standards

Developing Innovative IPE Opportunities for Regional Campus Students

By May 2015, all 5 UAMS colleges and the graduate school approved the IPE Triple Aim framework, requiring students who entered UAMS programs in fall 2015 or later to participate in IPE activities. May 2019 graduates were the first cohort required to fulfill all IPE core activities as a requirement for graduation. Regional campus students complete the same 3-phase framework and 7 core activities as shown in Figure 1. Some students complete their first 2 years of didactic coursework on the main campus (medicine and pharmacy); these students complete the first phase of the IPE framework on main campus, with the remaining requirements fulfilled on the Regional Campus. The development and implementation process for IPE on the UAMS Northwest Regional Campus has differed significantly from that on the UAMS main campus. Prior to the approval of the overarching UAMS IPE curriculum in 2015, an interprofessional team began plans for a student led free clinic (SLFC) on the Northwest campus in 2013.²³⁻²⁴ Following an extensive series of community needs assessments, the North Street Clinic was established as a SLFC focused on chronic disease management within the Marshallese population in northwest Arkansas. Patient care



and clinic administration are provided by interprofessional healthcare teams.²⁴ The North Street clinic was approved by the UAMS Office of IPE to fulfill IPE requirements in the competency phase as it incorporates all dimensions of the triple aim into student education, clinic administration, patient care, and research.

On the UAMS main campus, IPE events that fulfill each of the 7 core activities are facilitated at least once per month during the spring and fall academic semesters. Students self-select and enroll in these activities through online registration. Due to the smaller faculty staff and student population unique to the Northwest campus, these methods of scheduling and enrollment are not used on the regional campus. Scheduling of the IPE events on the Northwest campus are confirmed by an Interprofessional committee to ensure that all students' schedules can accommodate the IPE learning experiences. Because of the small student census, students are enrolled by the administration of their academic program or college and assigned event dates and times. The number and types of events are also reduced on the Northwest campus to support the needs of the regional campus students and maximize resources of faculty and staff.

Student Level	Triple Aim Element	Core Activity	Northwest Campus Events
Novice	Exposure	Exposure Workshop	<ul style="list-style-type: none"> Exposure Workshop*
		Bridge Activity	<ul style="list-style-type: none"> Cultural Training
Intermediate	Immersion	Triple Aim Simulation	<ul style="list-style-type: none"> Triple Aim Team Projects Medical Error Disclosure specific to NW Campus student disciplines
Advanced	Competency	Competency Workshop	<ul style="list-style-type: none"> Emotional Intelligence Culinary Medicine Medical Humanities
		Practice Activity	<ul style="list-style-type: none"> North Street Clinic Community Health Screenings Activities built into academic curriculum
		Student Educator	<ul style="list-style-type: none"> North Street Clinic Student Board of Directors Student Grand Rounds Event Co-Facilitator Events built into academic program curriculum Interprofessional Continuing Education activities
<small>* Students complete an online exposure workshop that is the same for all UAMS students. An in-person workshop may be completed by medical or pharmacy students in their first year while on the UAMS main campus.</small>			
<small>Table 2: UAMS Northwest Regional Campus IPE Events</small>			

Regional Campus Events

IPE student events on the Northwest campus are designed to fulfill the requirements of the Triple Aim framework while also meeting the unique needs of the regional campus. Due to smaller student census and limited faculty size of the Northwest campus, many of the following activities are offered a maximum of once per fall and spring academic semester. Student learning experiences have been developed to provide regional campus students with unique and rewarding IPE experiences (see Table 2).

- Cultural Training:** The Cultural Training Workshop fulfills the Transition Bridge Activity component of the Triple Aim Framework. During this 2-hour workshop, students on the Northwest campus are exposed to key concepts

of working with individuals from different cultural backgrounds.

- Triple Aim Team Projects:** The Triple Aim Team Projects require students to work in interprofessional teams of 4-6 to address a quality improvement topic submitted by UAMS faculty, staff, or community partners. This 4-hour workshop event has student teams work with a faculty/staff advisor to develop a proposal to address the goals and objectives of the triple aim for their chosen topic. At the conclusion of the event, students give a final presentation of the team proposal to a panel of judges. The interprofessional teams included students from all programs on the Northwest Campus.
- Medical Error Disclosure Simulation:** Students are required to participate in one, 2-hour interprofessional simulation event to fulfill the simulation activity component of the Triple Aim framework. On the Northwest Campus, students from all programs complete a medical error disclosure simulation in interprofessional teams of 4-6. The simulation is facilitated by faculty and staff and the UAMS Simulation Center. The simulation case was written specifically to include roles for each healthcare discipline represented on the Northwest campus. Students work together to formulate and execute a plan for disclosing medical errors to a patient family member played by a trained, professional actor. Teams are monitored by IPE facilitators who debrief with the teams on their performances following the simulation.
- Emotional Intelligence Competency Workshop:** The emotional intelligence competency workshop fulfills the 2.5 hour Competence Workshop component of the triple aim framework. Students attend an interprofessional workshop facilitated by faculty in which they learn about components of emotional intelligence and team dynamics. Students are assigned to interprofessional teams and participate in team building and plan of care development activities with a focus on patient care.
- Culinary Medicine Competence Workshop:** The Culinary Medicine Workshop is an optional event that fulfills the 2.5 hour Competence Workshop component of the Triple Aim framework. UAMS Northwest partnered with Northwest Arkansas Community College (NWACC) Brightwater: A Center for the Study of Food to develop a student event that incorporates culinary medicine into the triple

aim framework. Students learn the importance of healthy food choices and potential substitutions to improve patient health within an IPE team environment.

- Medical Humanities Competence Workshop: The Medical Humanities Workshop is an optional event that fulfills the 2.5 hour Competence Workshop component of the Triple Aim framework. UAMS Northwest partnered with Crystal Bridges Museum of American Art to develop and facilitate a medical humanities workshop that incorporates concepts of empathy, emotional intelligence art, and the humanities into the triple aim curriculum. Utilizing discussion, personal reflection, artful thinking routines, and inquiry-based pedagogy, museum educators at Crystal Bridges engage healthcare students through facilitated experiences and encourage deeper connections with works of art among diverse clinicians and students.
- North Street Clinic Practice Activity: Participation in the North Street Clinic fulfills the 3-4 hour practice activity component of the triple aim framework. Interprofessional teams include students from medicine, pharmacy, physical therapy, and nursing. Students collaborate to complete patient intake, examination, treatment, counseling, and follow-up care. Following patient care, student teams work together to determine the best treatment plan for the patient. Interprofessional collaborative practice is modeled in the clinic when the student teams then present the case to an interprofessional group of faculty preceptors who review and approve the care plan.
- Community Health Screening: Participation in community health screenings fulfills the 3-4 hour practice activity component of the triple aim framework. Students work on interprofessional teams facilitated by faculty and staff to provide health screenings to underserved populations in the community. Health screenings are organized by IPE faculty and staff in conjunction with UAMS Office of Community Health and Research and College of Pharmacy. Students who have completed at least one health screening opportunity and return to train other students in completing screenings can receive credit for the student educator component of the triple aim framework.
- North Street Clinic Student Board of Directors: The board of directors is an interprofessional

student group that provides insight into the form and function of the North Street Clinic. Medical, pharmacy, and physical therapy students submit an application to serve on the board. The current board of directors votes on the new members for each academic year. Members serve on the board for a term of 1-2 academic years, before graduation. As part of his or her role as a board member, each member serves as director-on-duty (DOD) for the North Street Clinic on a rotating basis. In their role as DOD, students receive credit for the student educator component of the triple aim framework.

Challenges and Solutions

Although the characteristics of a regional campus offer unique benefits for the development and implementation of an IPE program, regional campuses also have some unique challenges. Successful implementation of an IPE program requires transparent communication, flexibility, buy-in, and support across the regional campus. IPE on the UAMS Northwest Regional Campus falls under the authority of the Office of IPE, located on the UAMS main campus. Each IPE office is supported financially by the respective campus budget. At the onset of IPE development and the creation of the Office of IPE on the main campus, there was not an IPE office or dedicated IPE staff or faculty member on the UAMS Northwest Regional Campus. Regional campus students were connected to events via video technology or had to attend events on the main campus 3 hours away. Events were not designed to meet the unique needs of students on the regional campus. The additional burden and confusion created by the trans-campus model resulted in a lack of student and faculty buy-in to the IPE curriculum on the regional campus. The lack of a specified IPE leadership position on the Northwest Regional Campus created confusion, duplicated efforts, and limited open and transparent communication between the 2 campuses in regard to IPE requirements and effort. In response to these challenges, an IPE leadership team was developed that included the academic heads on the Northwest Regional Campus, the Director of Student Services, and representatives from the Office of Community Health and Research and the North Street Clinic. In addition to the leadership team, academic leaders on the campus requested the development of an IPE leadership position for the Northwest Campus to improve communication with the main campus and to develop an IPE program specific to the regional campus students. The position of Associate Director for IPE on the Northwest Campus was created and filled by an existing faculty member in spring 2017. The addition of the IPE leadership position on the Northwest campus created a partnership between the main campus IPE office and the

regional campus IPE office. The following year, an IPE coordinator was added to the Northwest Regional Campus Staff to support the Associate Director of IPE for the regional campus and to coordinate learning events and tracking. This position ensures the students on the regional campus meet all IPE requirements to successfully graduate from UAMS.

Conclusion

IPE is important in training the next generation of health care professionals. Regional medical campus often have reduced IPE activities due to limited resources and their distance from their main campuses. However, regional campuses can also provide opportunities for innovative solutions to provide IPE learning experiences. UAMS Northwest has created a thriving IPE program by creating innovative learning experiences to meet the needs of all healthcare students on the regional campus.

References

1. World Health Organization: Framework for Action on Interprofessional Education and Collaborative Practice. Geneva, WHO, 2010. Available at: http://www.who.int/hrh/resources/framework_action/en/.
2. Center for the Advancement of Interprofessional Education. (1997) Interprofessional Education: What, How, & When? <file:///C:/Users/ButlerAudra/Downloads/CAIPE-Bulletin-no-13-1997.pdf>
3. Baldwin, D.C. Jr., (1996). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *Journal of Interprofessional Care*, 1996; 10(2): 173-187
4. Institute of Medicine. *Educating for the Health Team*
5. Catlin, AC, Cowan, CA. (2015) *History of Health Spending in the United States, 1960-2013*. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/HistoricalNHESummary.pdf>
6. Davis, B. *Teaching the teachers: Faculty development in inter-professional education*
7. Institute of Medicine (US) Committee on Quality of Health Care in America; Kohn LT, Corrigan JM, Donaldson MS, editors. *To Err is Human: Building a Safer Health System*. Washington (DC): National Academies Press (US); 2000. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK225182/> doi: 10.17226/
8. Institute of Medicine (US) *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington (DC): National Academies Press (US); 2001.
9. Interprofessional Education Collaborative Expert Panel. *Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel*. Washington, D.C. https://www.aacom.org/docs/default-source/insideome/ccrpt05-10-11.pdf?sfvrsn=77937f97_2
10. Alexandraki I, Hernandez CA, Torre DM, Chretien KC. Interprofessional Education in the Internal Medicine Clerkship Post-LCME Standard Issuance: Results of a National Survey. *J Gen Intern Med*. 2017;32(8):871–876. doi:10.1007/s11606-017-4004-3
11. Liaison Committee on Medical Education. *Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree*. Washington, DC: Liaison Committee on Medical Education; 2015. Available at http://lcme.org/wp-content/uploads/filebase/standards/2016-17_Functions-and-Structure_2016-09-20.docx.
12. Commission on Collegiate Nursing Education. *Standards for Accreditation of Baccalaureate and Graduate Nursing Programs*. Washington, DC: Commission on Collegiate Nursing Education; 2013. Available at <http://www.aacn.nche.edu/ccne-accreditation/Standards-Amended-2013.pdf>.
13. Accreditation Council for Pharmacy Education. *Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree*. Chicago, IL: Accreditation Council for Pharmacy Education; 2015. Available at <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>.
14. Commission on Accreditation in Physical Therapy Education. *Standards and Required Elements for Accreditation of Physical Therapist Education Programs*. Alexandria, VA: American Physical Therapy Association; 2015. Available at http://www.captionline.org/uploadedfiles/capteorg/about_capte/resources/accreditation_handbook/capte_ptst_andardsevidence.pdf
15. Accreditation Council for Genetic Counseling. *Standards of Accreditation for Graduate Programs in Genetic Counseling*. McLean, VA: Accreditation Council for Genetic Counseling; 2013. Available at <https://www.gceducation.org/wp-content/uploads/2018/12/Standards-Final-approved-Feb-2013.pdf>
16. Accreditation Council for Genetic Counseling. *Practice-Based Competencies for Genetic Counselors*. McLean, VA: Accreditation Council for Genetic Counseling; 2015. Available at https://www.gceducation.org/wp-content/uploads/2019/02/ACGC-Core-Competencies-Brochure_15_Web.pdf
17. Association of American Medical Colleges. *About the AAMC*. <https://www.aamc.org/about>. Accessed May 6, 2019.

18. Neil K and Ward W. Structure and Implementation of a Longitudinal Triple Aim-Focused Interprofessional Curriculum.
19. Ward, W, Zagoloff A, Reick, C, Robiner, W. Interprofessional Education: Opportunities and Challenges for Psychology. *Journal of Clinical Psychology in Medical Settings*, 2018; 25:250–266.
<https://doi.org/10.1007/s10880-017-9538-3>
20. Institute for Healthcare Improvement (IHI). (2010). IHI triple aim initiative: Better care for individuals, better health for populations, and lower per capita costs Retrieved from <http://www.ihl.org/Engage/Initiatives/Triple Aim/Pages/default.aspx>.
21. Interprofessional Education-Curriculum Framework. UAMS Office of IPE website.
<https://ipe.uams.edu/student-curriculum/>
22. RIS Standards
23. McElfish PA, Kohler P, Smith C, et al. Community-Driven Research Agenda to Reduce Health Disparities. *Clin Transl Sci*. 2015;8(6):690–695. doi:10.1111/cts.12350
24. McElfish, P. A., Hudson, J., Schulz, T., Warmack, T., Moore, R., Purvis, R., Dalke, M., & Buron, B. (2017). Developing an Interprofessional Student-Led Clinic to Address Health Disparities in a Pacific Islander Migrant Community. *Journal of Student-Run Clinics*, 3(1). Retrieved from <https://journalsrc.org/index.php/jsrc/article/view/41>