



ANNUAL *report* 2016

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The AHEC program was developed by Congress in 1971 and there are 56 AHEC programs and 235 centers in 48 U.S. states and territories. Arizona's first regional center opened in Nogales in 1984. Today, five regional centers are serving Arizona by supporting health professions education, providing continuing education for health professionals, and addressing health disparities and local health workforce issues. Our programs support development of our children, our health professions students and our health professions workforce as well as recruitment and retention of a highly skilled health professions workforce. The regional centers also support many health careers programs including students in medicine (both allopathic and osteopathic medical students), nursing, pharmacy, public health, dentistry and allied health.

Arizona AHEC Program Mission Statement

To enhance access to quality health care, particularly primary and preventive care, by improving the supply and distribution of health-care professionals through academic-community educational partnerships in rural and urban medically-underserved areas.

Program Highlights

During the period July 1, 2015–June 30, 2016, the Arizona Area Health Education Centers (AzAHEC) system supported the following:

Rural and Urban Underserved Field Experiences for Health Professions Trainees

Academic Discipline/Program	# Field Experiences
Dentistry and dental hygiene	43
Medical residency	43
Medical school	472
Nurse practitioner	193
Nursing or medical assistant	71
Pharmacy school	226
Physical and occupational therapy	22
Physician assistant	74
Public health	186
Registered nurse, nurse anesthetist, or nurse midwife	66
Social work and behavioral health	7
Other allied health	68
Other undergraduate health-related disciplines	3
TOTAL*	1,474

**Of this total, 735 field experiences were reported by the Rural Health Professions Programs—at the University of Arizona (UA), Arizona State University and Northern Arizona University—and other supported UA health professions training programs.*

Health Career Preparation Programs for grades K–12 in Rural and Urban Underserved Areas

Total of 7,334 K–12 students and adult participants*

**Adult participants included parents, teachers and interested community members. The adults represented joint participation. See the regional centers' reports for example activities.*

Continuing Education for Health Professionals

Total of 8,683 participants

Participants included physicians, dentists, public health professionals, pharmacists, nurse practitioners, registered nurses, physician assistants and allied health professionals.

Research and Project Grants for Students, Faculty and Community Organizations

- ▶ Nine new grants
- ▶ Two continuing grants
- ▶ Nine completed grants

AzAHEC is a sponsored project of the University of Arizona. The AzAHEC program office is located at the University of Arizona Health Sciences (pictured).



I couldn't be more proud of the work in our UA Area Health Education Centers (AHEC). These centers are building the kind of vital academic/community partnerships we need to improve access to culturally competent, high quality health care throughout our state. With their extensive community-engaged work, these centers are addressing our most pressing health disparities. They connect students to careers in health care, professionals to communities in need, and our people to improved health.

– Joe G.N. “Skip” Garcia, MD
Senior Vice President for UA Health Sciences



Message from the Director



Sally J. Reel, PhD, RN, FNP, FAAN

Associate Vice President for Interprofessional Education, Collaborative Practice & Community Engagement

Director, Arizona Area Health Education Centers

University Distinguished Outreach Professor

Clinical Professor of Nursing

I am pleased to present the Arizona Area Health Education Centers (AzaAHEC) program 2016 Annual Report. The accomplishments of our regional centers and supported academic programs are outstanding! The report provides a snapshot of how academic-community partnerships work to prepare Arizona's health-care workforce. From federal inception of the AHEC programs in 1971, the mission of AHEC's work has historically focused on improving access to quality health care for rural and urban medically-underserved populations and communities through health workforce preparation. AHEC has also historically embraced improving diversity of the health workforce, interdisciplinary and interprofessional education, and strengthening geographic dispersion of the health workforce. AzaAHEC programs

create exposure and educational opportunities for our youth, engage our health professions students through community-based training programs in our rural and urban underserved communities with an emphasis on primary care, and assure educational innovation, such as leading interprofessional education (IPE) for our health professions students. AzaAHEC also supports our faculty through professional development opportunities as well as grant programs that foster research and innovative projects and/or career development awards.

Fundamentally, these collective efforts address unique challenges that compound the health of our residents as well as the diversity of populations and contexts ranging from the border to the frontier. We provide brief snapshots of the rural, border and tribal rotations that our trainees experienced as well as snapshots about diversity and border health. Border communities experience complex, unique challenges that compound health, and these challenges often reflect the high disparities and complexities of social determinants of health that must be eliminated. When Arizona's rural, border, and diverse communities are considered collectively, too many Arizona residents experience higher rates of disease and disability, increased mortality rates, years of life lost and higher rates of chronic illness. What is more, geography matters as geography alone impacts health. Fundamentally, the social determinants of health—those circumstances in which people are born, grow up, live, work and age, coupled with the systems put in place to deal with illness, and all shaped by a wider set of forces including economics, social policies and politics—play out among Arizona's residents.¹ AzaAHEC's strategies are embedded in some of our most underserved communities—AzaAHEC is located in the heart of rural, frontier, and border communities, and our strategies engage our diverse populations and high disparity populations as demonstrated throughout this report. Throughout this report, our colleges and regional centers describe many programs that underscore the impact of the AzaAHEC program. Training areas specially highlighted are our IPE programs, rural and border training programs, and K–12 career preparation programs.

The AzaAHEC program is proud of our accomplishments in 2016. I am pleased to present this report for your review.

¹World Health Organization. Social Determinants of Health. Available: http://www.who.int/topics/social_determinants/en/.

Program Overview

About the Arizona AHEC Program

1. Started in 1984 with the formation of the first regional center in the border town of Nogales, 13 years after the United States Congress developed the nationwide AHEC system to recruit, train and retain a health professions workforce committed to helping underserved populations.
2. Expanded statewide by 1989 to include five regional centers serving all 15 Arizona counties.
3. Is a sponsored project of the University of Arizona.
4. Is cited in Arizona Revised Statutes (ARS) § 15-1643, § 15-1644, § 15-1645 and § 5-572(C).
5. Operates with funds from federal and state sources.

Structure

The Arizona AHEC Program comprises five regional centers located strategically statewide and an administering “home” office based at the University of Arizona (UA). The centers carry out the program’s mission by creating, coordinating and implementing a scope of work designed to address the health professions education and training needs within their service regions.

The Arizona AHEC Program director consults regularly with two advisory committees: the Arizona Health Sciences AHEC Advisory Committee, whose members represent the UA Colleges of Medicine – Tucson and Phoenix, Nursing, Pharmacy and Zuckerman College of Public Health; and the Arizona AHEC Advisory Commission, whose members represent health educators, health professionals and community members serving and/or living in rural and urban medically-underserved communities throughout Arizona.

In addition to these two advisory bodies, each regional center has its own governing board, comprised of health-care providers and consumers who reflect the ethnic representation of the center’s geographic area.

Focus Areas 2015–2016

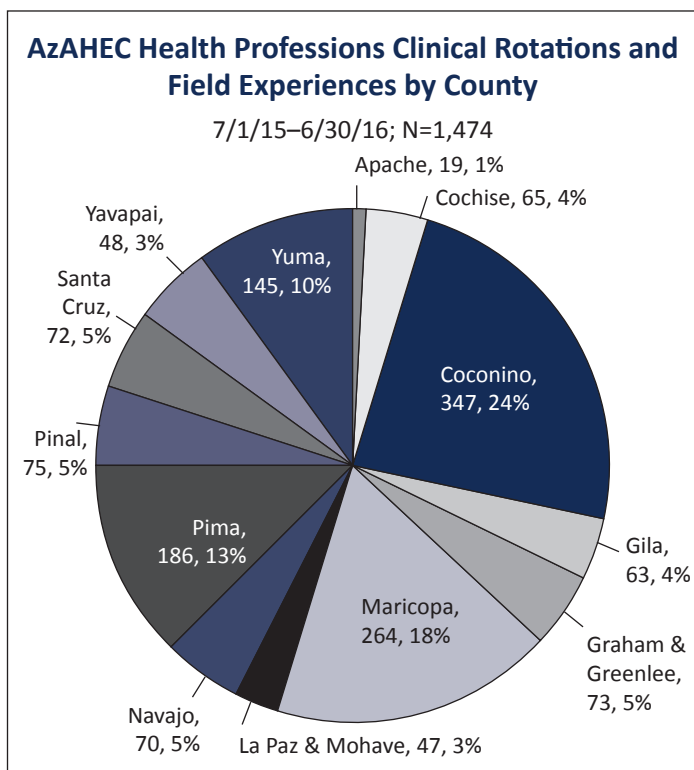
During the past year, the Arizona AHEC Program’s regional centers sustained and improved their statewide efforts to strengthen Arizona’s health professions workforce through a variety of activities targeting K–12 and post-secondary health professions students as well as health professionals across a wide range of disciplines. In addition, the regional centers supported many educational activities designed to promote health awareness throughout their communities.

Health Professions Trainee Education: Trainees pursuing careers in the health professions benefited from AzAHEC-supported clinical rotations and internships. The regional centers helped these trainees by providing them with in-depth orientations to the local communities. Some trainees also received funding support for housing, travel and related expenses. These training opportunities are possible because of the guidance of dedicated and experienced preceptors and other health-care providers as well as strong academic partnerships with Arizona’s colleges and universities.

Youth (K–12) Health Career Programs: The regional centers supported numerous activities throughout the year to introduce Arizona’s rural and underserved youth to health careers. Personnel at each center worked with local high schools to support health career clubs and Health Occupations Students of America (HOSA) chapters.

Continuing Education for Health Professionals: The regional centers sponsored numerous continuing education opportunities throughout the year for health professionals statewide.

Community Health Promotion: In addition to helping build and support a culturally-competent health professions workforce, the regional centers coordinated and supported health education activities and events for their local communities. Each center maintains a list of collaborators.



Percentages are rounded to the nearest whole percent.

Interprofessional Education (IPE) and Training of Arizona's Health-Care Workforce: *Rural Health Professions Program, Academic IPE, Research and Practice*

Health-care providers of the future must be ready for team practice regardless of context. AzAHEC supports IPE on many levels, including rural health practice settings, classroom learning and research. Rural and medically-underserved settings are rich contexts for IPE. Fundamentally, rural health settings have supported interdisciplinary training and practice for many years. Access to care for rural and underserved communities, health professional workforce shortages, and populations that need comprehensive care and prevention approaches have underpinned calls for team-based care for many years. Today, many of those initial drivers for team-based, interdisciplinary care underscore the need for a collaborative-practice-ready health-care workforce that provides quality, patient-centered care and integrated, comprehensive care coordination; ensures patient safety; achieves care value; manages population health and addresses health-care workforce shortages.

Preparation of the Arizona health-care workforce must emphasize rural, border and diversity issues as well as health disparities and social determinants of health. This context demands ensuring that medical, nursing, pharmacy, public health, allied health and other health-care professionals have educational experiences that prepare them for rural and urban medically-underserved practice. Our participating colleges and programs have successful strategies to recruit students into rural practice preparation programs. Through the AzAHEC-supported Rural Health Professions Program (RHPP), our students are educated and trained in rural and urban medically-underserved communities. Greater integration and formalization underpins current IPE strategies essential to preparing rural health providers to practice collaboratively in teams. Through partnership with our AzAHEC regional centers, we are piloting team-based rotations as well as using telehealth technologies to deliver real-time virtual simulation learning for students who are geographically dispersed. Through an all-program interprofessional approach, students learn how to practice culturally sensitive and competent care.

In the following sections, participating colleges provide reports of their RHPPs. Additional highlights include our annual interprofessional RHPP conference; rural training tracks threaded across multiple opportunities, including medical residency training; and AzAHEC-supported IPE events and research projects.



Interprofessional education (IPE) is foundational to improving health-care practice and patient care. IPE involves educators and learners from two or more health professions and their foundational disciplines who jointly create and foster a collaborative learning environment. In this environment, learners develop the competencies core to effective, collaborative, patient-centered practice that is focused on improving patient outcomes through evidence-based, quality-driven and technology-enabled methods. IPE aims to develop mutual understanding of and respect for the contributions of various professions and disciplines, thus, socializing health-care providers to work together as a team; share problem-solving and decision-making responsibilities; and improve health care for patients, families and communities. The University of Arizona Health Sciences (UAHS) seeks to become a nationally-recognized premier institution for IPE by 2020, and AzAHEC is proud to serve as a partner in developing interprofessional education and practice models that effectively train our students to practice in teams within our communities.

Arizona Rural Health Professions Program (RHPP)

The Arizona Rural Health Professions Program (RHPP) is a core program supported by AzaAHEC since FY 2007. The Arizona State Legislature created the RHPP in 1997 (ARS § 15-1754) to address shortages of health professionals in Arizona's rural communities. The RHPP provides rural training experiences for students from the University of Arizona (UA), Arizona State University (ASU) and Northern Arizona University (NAU). Under legislation each year, the participating schools select 15 medical students from the UA College of Medicine, four pharmacy students from the UA College of Pharmacy and 10 nurse practitioner students—four from the UA, four from ASU and two from NAU—to participate in the RHPP. The RHPP is voluntary for student participation but mandatory for the three participating state universities. Beyond the statute, AzaAHEC also supports training experiences for public health students at the UA Mel and Enid Zuckerman College of Public Health.

The RHPP is central to the mission of AzaAHEC to help prepare the health-care workforce for practice in rural and urban underserved communities. While the RHPP statute addresses rural Arizona communities, AzaAHEC also supports training experiences in Arizona's urban medically-underserved communities in order to address primary care provider shortages in both rural and urban areas. Since AzaAHEC initiated financial support of the RHPP, the number of participating students has significantly increased above the statutory requirement, thus exposing a greater number of health professions students to the importance, unique challenges and professional rewards of rural and underserved practice. In 2015–2016, the RHPPs at the UA, ASU and NAU reported a total of 663 training experiences.

The University of Arizona College of Medicine – Tucson Rural Health Professions Program

Carlos R. Gonzales, MD, FAAFP

RHPP Director

Assistant Dean, Medical Student Education

Associate Professor, Family and Community Medicine

The UA College of Medicine – Tucson RHPP continues to offer rural and urban underserved clinical rotations in family medicine, general surgery, internal medicine, obstetrics/gynecology and pediatrics, thanks to a dedicated network of volunteer physician preceptors throughout Arizona. Students have the opportunity to participate in these community-based rotations during the summer after their first year of medical school as well as during their third and fourth years of medical school. An objective of the RHPP is for students to have a minimum of ten weeks of rural clinical training during their medical education at the college. The college strives to place each RHPP student such that she/he will have an opportunity for a longitudinal experience in the same rural location with the same preceptor, patients and community. By doing so, the student gets to know the community, its benefits and attractions, as well as its socioeconomic and medical issues, while developing their clinical skills.

The RHPP is a competitive program and admitted 23 new first-year medical students in fall 2015. Combined with the second-, third- and fourth-year classes, there were 76 RHPP students participating in the longitudinal program. In addition to supporting these RHPP students, AzaAHEC funding also allows non-RHPP students, who are interested in rural and urban underserved medicine, to participate in clinical rotations in rural and underserved communities. During 2015–2016, the RHPP supported 128 clinical rotations for RHPP and non-RHPP

students, totaling more than 26,000 hours of community-based training. Among these students (n=95), 38.9% have lived in a rural area, 24.2% are from underrepresented ethnic/racial groups, and 38.9% come from a disadvantaged background. The class of 2016 included 18 RHPP graduates, of whom four are remaining in Arizona for residency, 12 are entering primary care residency programs, and one is starting a general surgery residency.

Last year, the UA College of Medicine – Tucson Educational Policy Council approved the establishment of a rural health distinction track (RHDT). This is an opportunity to expand and enhance RHPP by ensuring that those students who are dedicated to the provision of health care in rural Arizona have the option



UA College of Medicine – Tucson RHPP student, Danielle Correia (left), completed a family and community medicine clerkship with preceptor, Peggy Avina, MD (right), at Copper Queen Medical Associates in Bisbee, Ariz.

to more fully explore this reality. These students are recognized for their rural health commitment with a certificate of distinction upon graduation, which includes a medallion and documentation on their official transcript. The RHDT requires an additional six weeks of rural clinical rotations during the third and/or fourth year of medical school and a researched capstone paper. Twelve students in the class of 2016 were the first to earn this certificate of distinction.

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UA College of Medicine – Tucson RHPP

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Examples of capstone research projects included *Diabetes in American Indian Populations: Prevalence, Causes, and Efforts for Prevention*; *Gallbladder Carcinoma: Examining the Risk Factors among Southwest American Indians*; *Training Rural Health Providers: Evidenced-Based Strategies through which Colleges of Medicine can Decrease Rural Physician Shortages*; *United States-Mexico: Mosquito-borne Diseases and Concerns for Future Outbreaks*; and *Disparities in Health Care Access and Outcomes in Rural America*.

Students are encouraged to get involved in the community during their rotations. For example, four of the college’s RHPP students participated in a health fair program in Nogales, Ariz. organized by the Southeast Arizona AHEC. In conjunction with Mariposa Community Health Center and students from Icahn School of Medicine at Mount Sinai, RHPP students assisted with

screenings for hypertension, diabetes and hypercholesterolemia, and they discussed elderly fall prevention with community members.

The UA College of Medicine – Tucson is proud that many RHPP graduates now work in rural and urban underserved areas of Arizona, which contributes to AzaAHEC’s mission to increase and retain the health-care workforce in these communities. In addition, several RHPP graduates now serve as preceptors, helping prepare today’s medical students for future practice in underserved communities. Last year, the college welcomed six new preceptors who were RHPP graduates. These young physicians practice in Tuba City, Show Low, Fort Mohave, Bullhead City, Fort Defiance and Safford, Ariz. In 2016, two more RHPP graduates, practicing in Winslow and Fort Defiance, Ariz., will become preceptors. This demonstrates the continued success of RHPP. In total, the college’s RHPP graduates have included 47 physicians in rural Arizona and 41 physicians in Arizona’s urban underserved locales.

The University of Arizona College of Medicine – Tucson: Rural Health Professions Program Outcomes

Year	Total Graduates ¹	All Grads Entering Primary Care Residency		Total RHPP Graduates	RHPP Grads Entering Primary Care Residency ²		RHPP Grads Entering Residency in AZ		Activity of RHPP Grads ³			
		Number	Percent		Number	Percent	Number	Percent	Still Training	Rural AZ Practice	Urban Under-served AZ Practice	Other state
2000	100	56	56%	13	8	62%	8	62%	0	4	3	6
2001	102	55	54%	14	12	86%	8	57%	0	6	3	3
2002	101	62	61%	15	12	80%	9	60%	0	4	3	3
2003	91	46	51%	13	9	69%	8	62%	0	4	2	4
2004	104	60	58%	14	11	79%	7	50%	0	3	5	5
2005	90	50	56%	14	11	79%	11	79%	0	2	4	4
2006	86	51	59%	11	9	82%	3	27%	0	2	3	6
2007	114	56	49%	12	8	67%	5	42%	0	4	5	3
2008	100	51	51%	19	11	58%	10	53%	0	3	4	7
2009	119	61	51%	19	17	89%	8	42%	0	2	1	10
2010	106	63	59%	13	10	77%	8	62%	0	5	3	3
2011	100	50	50%	12	10	83%	5	42%	1	3	1	7
2012	141	80	57%	15	9	60%	5	33%	3	3	2	7
2013	157	79	50%	20	15	75%	8	40%	12	2	2	12
2014	146	90	62%	18	12	67%	7	39%	17			
2015	119	52	44%	11	6	55%	6	55%	11			
2016	103	40	39%	18	13	72%	4	22%	18			
TOTAL	1,879	1,002	53%	251	183	73%	120	48%	62	47	41	80

¹Graduates include UA College of Medicine – Phoenix 2011 through 2014, due to one RHPP for both colleges during that period.

²RHPP specialties for primary care include family medicine, internal medicine, OB/GYN, general surgery and pediatrics.

³Residency lengths vary from three to seven years.



UA College of Medicine – Phoenix RHPP student, Patrick Kishi (left), completed an internal medicine clerkship with preceptor, Husnu Evren Kaynak, MD, FACC (right), at Yuma Cardiac Center in Yuma, Ariz.

The University of Arizona College of Medicine – Phoenix Rural Health Professions Program

Jonathan Cartsonis, MD
RHPP Director

Since our program’s inception three years ago, the UA College of Medicine – Phoenix RHPP has continued its mission to promote rural medical practice to medical students through a variety of activities, including rural clerkships, electives and the Rural Certificate of Distinction (COD). During 2015–2016, rural clerkships were offered in the specialties of internal medicine, family medicine and pediatrics. Our program also coordinates a rural health seminar series, campus community building activities, scholarly project support for rural topics, ultrasound training and career counseling for students interested in rural and underserved practice.

Medical students have the opportunity to complete rural clinical training through a variety of pathways: 1) Rural COD participation, which requires 23 weeks of rural placement in one community and concludes with this COD honor at graduation; 2) One or two rural clerkships in the third year of medical school; 3) First-year clinical placement in a rural setting during a personalized active learning block and 4) Rural electives offered in the fourth year of medical school.

The 2015–2016 academic year was a period of expansion, with increases in the number of weeks students spent in rural clinical experiences and in the number of rural Arizona training sites. Students embraced these clinical training opportunities, some returning to their hometowns and others experiencing life in a rural community for the first time. Caitlin Williams, class of 2018, expressed her enthusiasm for her internal medicine (IM) rotation in Yuma, Ariz. as well as the excellence of the physician preceptors: “I feel like I won the IM lottery by getting to be in Yuma. The training and exposure there is really exceptional.”

During 2015–2016, the RHPP supported 78 rotations in rural and urban underserved settings, totaling 18,120 hours of community-based training. Among these students (n=76), half are from Arizona, and 14% have lived in a rural area. Students spent a total of 123 weeks in rural clinical training, which was an increase from 115 weeks in 2014–2015.

Our program emphasizes longitudinal placements, because research supports the idea that longer rural medical experience increases the likelihood a student will eventually practice in a rural setting. However, this strategy alone will not sufficiently address the scarcity of rural physicians. Other strategies we are pursuing include the engagement of talented rural youth in medical activities while in middle and high school. Under development and in partnership with the UA College of Medicine – Phoenix Summer Scrubs program, medical

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Clinical Practice Intentions of the RHPP Class of 2016									
RHPP	# RHPP Graduates	Intend to practice in a medically underserved community		Intend to practice in a rural community		Intend to practice primary care		Intend to practice in Arizona	
		#	%	#	%	#	%	#	%
ASU College of Nursing & Health Innovation	7	6	85.7%	3	42.9%	7	100.0%	6	85.7%
NAU School of Nursing	35	23	65.7%	25	71.4%	34	97.1%	33	94.3%
UA College of Medicine – Phoenix*	1	0	0.0%	1	100.0%	0	0.0%	1	100.0%
UA College of Medicine – Tucson	18	18	100.0%	13	72.2%	14	77.8%	12	66.7%
UA College of Nursing	5	5	100.0%	5	100.0%	5	100.0%	4	80.0%
UA College of Pharmacy	15	14	93.3%	12	80.0%	8	53.3%	11	73.3%
TOTAL	81	66	81.5%	59	72.8%	68	84.0%	67	82.7%

*The UA College of Medicine – Phoenix class of 2016 RHPP graduate began the program under UA College of Medicine – Tucson administration. The first RHPP class from the independent UA College of Medicine – Phoenix RHPP will graduate in 2017.

UA College of Medicine – Phoenix RHPP

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education curricula will go on the road to rural schools across the state to inspire students to pursue medical careers. For decades, communities across the rural southwest have endured greater risk for chronic disease and poverty partly perpetuated by primary care provider shortages. We believe that our long-term strategy will one day boost the ranks of family and other primary care physicians where they are needed most, namely in underserved rural communities.

The University of Arizona College of Pharmacy Rural Health Professions Program

Elizabeth A. Hall-Lipsy, JD, MPH

RHPP Director

Assistant Professor

Program Manager, Health Disparities Initiatives and Community Outreach

The UA College of Pharmacy is committed to developing the pharmacy workforce to address the access challenges of Arizona's rural and medically-underserved communities. Access to health-care services is a top priority and how a state's health-care workforce is distributed affects access to care, particularly in rural and remote areas of that state. A recent survey by the UA Center for Rural Health determined that 7% of Arizona pharmacists practice in urban areas, yet approximately 15% of Arizona's population lives in rural communities. Accordingly, the college is working to address workforce distribution issues through its RHPP and Professional Certificate in Pharmacy-related Health Disparities, both of which have dramatically impacted students' exposure and decision to practice in rural and underserved communities.

Students selected for the RHPP/Professional Certificate are placed in rural communities during three points in their pharmacy education: (1) the summer between first and second year for a four-week introductory community or institutional rotation, (2) the summer between second and third year for a four-week introductory community or institutional rotation and (3) during fourth year for a six-week advanced pharmacy practice rotation. Over the last seven years, as a result of AzaHEC funding, the RHPP has expanded from recruiting four first-year student participants per year to an average of more than 22 new participants per year. Total RHPP participation represents about 22% of the college's Doctor of Pharmacy (PharmD) student body. In 2015–2016, RHPP and non-RHPP students completed 197 rotations in rural and urban underserved Arizona communities, totaling 41,080 hours of community-based training. Among the students in the classes of 2017, 2018 and 2019 pursuing the

Professional Certificate (n=68), 39.7% have lived in a rural area, 32.2% came from a disadvantaged background and 22.1% are from underrepresented ethnic/racial groups.

Among the 15 Class of 2016 RHPP Certificate graduates, ten students sought and eight were selected for competitive post-graduate pharmacy residency. This is an impressive placement result (80%) given the overall 68% match rate to residency programs. In addition, one student was selected for a pharmacy fellowship at the Pharmacy Quality Alliance. Among the other six graduates, three accepted employment at a rural Arizona pharmacy, one accepted employment at a pharmacy out of state, and two were undecided at the time of data collection. Employment tracking for all RHPP alumni has revealed that since AzaHEC funding was awarded, 47 students (55%) have obtained post-graduate residency training, 27 (32%) are employed in a rural setting and 37 (44%) are employed treating underserved patients. The college is especially proud to report that 20 RHPP alumni are practicing in rural Arizona, and 10 of our RHPP alumni now act as rural preceptors for current pharmacy students.

To improve student retention and to provide additional structure and support to student participants, the RHPP was enhanced to include a Professional Certificate in Pharmacy-Related Health Disparities in 2010. In 2016, 15 graduating students earned the certificate, joining a total of 50 students who have successfully completed the certificate. In addition to clinical rotations, the certificate requires two classroom-based courses taught by college faculty: *Community Assessment for Pharmacy Students* and *Health Disparities in the United States*. As a result of the community assessment course, 83 students have conducted community assessments of their RHPP site communities and have presented their findings orally and in written reports. These reports have also been presented at the Annual Interprofessional Rural Health Professions Conference and shared with the AzaHEC regional centers working in the communities. During rotations, students also participate in community programs and events coordinated by the regional centers, such as PharmCamp, health fairs and other community outreach.

Currently, the RHPP is assisting in a collaborative project with the college's Medication Management Center (MMC), the Arizona Department of Health Services, Northern Arizona AHEC, Western Arizona AHEC and five rural Arizona pharmacies in San Luis, Flagstaff, Taylor, Benson and Willcox. RHPP students helped the pharmacies enroll more than 500 diabetic patients to receive free comprehensive medication reviews by the MMC team. All participating patients received quarterly one-on-one counseling sessions and regular follow-up consultations, conducted in cooperation with their local clinic and pharmacy staff. Program outcomes were presented by an interdisciplinary team of researchers at the American Public Health Association Annual Meeting and those outcomes demonstrated significant improvements in clinical outcomes and guideline adherence for preventative care. The project has completed its second year and is focusing on recruiting additional patients and following up on patients with high-risk clinical markers.

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RHPP Interprofessional Collaboration: Chronic Pain Management in Primary Care

A statewide, interprofessional clinical education and telemedicine event, *Best Practices in Chronic Pain Management for the Primary Care Provider*, was led by the RHPP directors at the UA Colleges of Nursing and Pharmacy in collaboration Northern Arizona AHEC and other UA nursing and pharmacy faculty. Three sites, Flagstaff, Phoenix and Tucson, were connected via videoconferencing. The purpose of the event was to provide students with training in collaborative, team approaches for treating patients with chronic pain.

The event featured an interprofessional expert panel, including a family/acute care nurse practitioner pain specialist and a pharmacist. In addition, faculty and community providers from multiple health-care disciplines facilitated interprofessional case studies with the students. Participation totaled 57 students in nurse practitioner, physician assistant, osteopathic medicine and pharmacy programs at the UA, NAU, A.T. Still University and Midwestern University. RHPP student participation included 14 from the UA College of Pharmacy and five from the UA College of Nursing. The primary outcome of this telemedicine event was improved knowledge of the pharmacist's role in clinical decision-making and patient management, with particular emphasis on effective use of patient prescription drug monitoring resources.



UA College of Nursing students participated in RHPP brown bag lunch meetings at the UAHS Tucson campus to discuss rural health topics.

interprofessional health-care workforce to practice in rural and medically-underserved areas across Arizona. In November 2015, the college's RHPP was featured in a local article outlining strategies to increase the number of rural Arizona providers.

During 2015–2016, a range of didactic and clinical support was provided to the college's doctoral NP students to develop expertise in working with these communities. During this time period, 57 doctoral NP students participated in didactic and/or clinical components of the college's RHPP scholars track. Of the five RHPP scholars who graduated in May 2016, two are working in rural, underserved communities in Arizona; one is working for an urban underserved federally qualified health center in Phoenix; and two are working with rural or vulnerable patient populations out of state. Both of the 2015 RHPP scholar graduates are currently working in Arizona, one in a rural and medically underserved area, and the other in the Phoenix area at a site that specifically provides services to bordering rural communities.

During 2015, there were 21,686 rural and/or medically-underserved patient encounters, including 14,014 encounters in rural areas, an increase from 2014. The majority (90%) involved family nurse practitioner (FNP) students, as well as dual specialty students in FNP/psychiatric mental health and FNP/adult-gerontology acute care, which are particularly important for rural areas. In 2015–2016, the RHPP supported 70 rotations in rural and urban underserved areas, totaling 8,947 hours of community-based training. Of the students (n=30) who completed these rotations, 80.0% have lived in a rural area, 66.7% come from a disadvantaged background, 23.3% are from underrepresented ethnic/racial groups, and 50.0% are from Arizona. A new rural clinical site for the college's NP students was successfully developed at Tuba City Regional Health Care Corporation on the Navajo Reservation. Under the direction of AzaAHEC, housing for Tuba City clinical rotations was secured for UA NP and medical students.

The college's three graduate rural health courses, chaired by Dr. Pacheco, were required for RHPP scholars and were also open to RHPP students from other colleges and any graduate students interested in rural health. Seven students, including

The University of Arizona College of Nursing Rural Health Professions Program

Christy Pacheco, DNP, FNP-BC
RHPP Director
Clinical Assistant Professor

There are persistent health disparities in Arizona, with access to care a key issue, particularly among rural and medically-underserved populations. Every county in Arizona is experiencing a shortage of primary care providers across both rural and urban areas, and every county has federally-designated health professional shortage areas and medically-underserved areas/populations. Nurse practitioners (NPs) are in a unique position to provide primary care services with a focus on prevention and community/population health. Consistent with the AzaAHEC mission, the UA College of Nursing RHPP aims to improve the development and recruitment of an

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UA Nurse Practitioner Student Committed to Rural Health and Underserved Practice



Hope A. Francisco, BSN, RN, is a doctor of nursing practice (DNP) student at the UA College of Nursing and is specializing to become a family nurse practitioner (FNP). She describes herself as a homegrown Arizonan, having been raised in rural Springerville, Ariz., a town of fewer than 2,000 people. From an early age, Hope wanted to become a nurse:

I always loved caring for people...Throughout my childhood I helped care for my dad, who was a kidney transplant recipient. We had to travel anywhere from 45 miles to 200 miles one way to see the health-care providers that my dad required. I saw many close family and friends that also had to travel to seek medical care and realized the lack of providers located in rural areas. From the time I was 16 years old and in high school, I decided that I wanted to be a nurse practitioner and have been working toward this ever since.

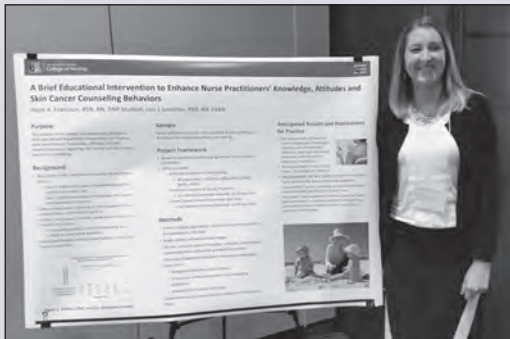


As an RHPP scholar, Hope has completed primary care clinical rotations in Green Valley, Ariz. and will also rotate in Show Low, Ariz. She considers the RHPP paramount to her educational career at the UA and values the opportunity to complete clinical rotations in rural settings:

The [RHPP] has been key to my educational experience. Growing up in a rural community I already had an idea what health care was like in a rural setting and the stigmas that come with it. However, participating in RHPP has given me an even better understanding of the dynamics of rural culture and how to better care for individuals in rural and underserved areas.



After graduation, Hope plans to work in a rural or underserved area. She would like to practice in Arizona because she considers small-town Arizona as home. She notes the importance of rural health understanding for every health-care provider:



As many rural individuals seek specialized care in urban areas it is important for everyone to have a foundational understanding of the differences between rural and urban cultures to better treat these patients when they are encountered.

Hope A. Francisco, BSN, RN, presented her poster, A Brief Educational Intervention to Enhance Nurse Practitioners' Knowledge, Attitudes and Skin Cancer Counseling Behaviors, at the 43rd Annual Arizona Rural Health Conference in Flagstaff, Ariz.

UA College of Nursing RHPP

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five RHPP scholars, completed *Conceptual Foundations for Rural Health Nursing* (NURS 638). Twenty-nine students, including 12 RHPP scholars, completed *Rural Community Health* (NURS 774). *Rural Health Systems* (NURS 773) will be offered during the summer. Required Doctor of Nursing Practice (DNP) projects provided an opportunity for students to explore issues and conduct quality improvement initiatives related to rural populations. During 2015–2016, Dr. Pacheco supervised 18 students' DNP projects, which included topics such as access to care, chronic disease management and chronic pain management.

Students participated in monthly RHPP breakfast meetings via web conferencing and on-campus brown bag lunches. These activities provided opportunities for networking, as well as advising and support, particularly around rural rotations and DNP projects. These activities were also open to interested students from other health sciences colleges. Future interprofessional education plans include multiple training programs for NP and medical students on family planning services and using ultrasound for assessment and diagnostics. Dr. Pacheco looks forward to continued collaboration with other RHPPs and AzaHEC regional centers across the state to develop a competent, interprofessional primary care workforce.

ASU Nurse Practitioner Student Committed to Urban Underserved Practice



Lisa Apolinar, BSN, CEN, is a DNP-FNP student at the ASU College of Nursing & Health Innovation. She is a lifelong Arizona resident and grew up on a farm in the community of Laveen, southwest of Phoenix. She has been working in underserved communities since her first nursing job as a licensed practical nurse (LPN) at age 17:

When a small community hospital in South Phoenix took me under their wing, what a blessing and opportunity. Not only did I get to serve in a community that I grew up in, but also a community that had deep ties to the heart of Phoenix.



Lisa worked at this community facility for 15 years, which included professional development to a registered nurse position. She described the clinical setting as a place where one could truly make a difference in patients' lives, and she embraced the community environment:

There was such gratitude and a sense of family because so many of the employees lived and grew up in the area; these were not just patients but family members.



Throughout the progression of Lisa's nursing career, she has continued to work in non-profit facilities serving vulnerable patient populations, including diverse inner city populations and the homeless. As an RHPP fellow, she has completed rotations in underserved areas of Phoenix:

I am fortunate to have been provided the opportunity to participate in the RHPP and complete rotations in clinics that serve those in need. Through this program, I was able to expand my skills and knowledge caring for patients from diverse backgrounds but found the most satisfaction in providing care to patients in the lower socioeconomic sector.



Lisa's career goal after graduation demonstrates her long-term commitment to underserved practice in Arizona:

Moving forward, I cannot envision a career that does not encompass caring for patient populations in urban underserved areas.



Lisa Apolinar, BSN, CEN (right), rotated at Mountain Park Health Center in Phoenix with preceptor Emma Edwards, NP (left).

Arizona State University College of Nursing & Health Innovation Rural Health Professions Program

Diane E. Nuñez, DNP, RN, ANP-BC, FNAP
RHPP Director
Clinical Associate Professor
Clinical Coordinator, Adult Health

The ASU College of Nursing & Health Innovation RHPP aims to provide clinical opportunities for primary care DNP students to

work in rural and urban medically-underserved areas throughout the state, while fostering interprofessional educational opportunities that stimulate and cultivate students' interest in careers in underserved settings. This contributes to the AzaAHEC mission to develop a culturally-competent, diverse health-care workforce to help reduce health disparities and improve health outcomes for Arizona's vulnerable populations. DNP students are selected as RHPP fellows based on an essay statement and interview, leadership and community involvement, scholarship activities and potential to seek employment in AzaAHEC focus areas upon graduation. Participants' nursing disciplines include family nursing, adult/geriatric nursing, pediatrics and family

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ASU RHPP

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psychiatric mental health. Clinical and academic mentors guide RHPP fellows during the program to foster positive clinical experiences and encourage fellows to remain in an AzaAHEC service area upon graduation.

In 2015–2016, the RHPP supported 43 rotations in rural and urban underserved areas, totaling 7,283 hours of community-based training. Of the students (n=28) who completed these rotations, 64.3% have lived a rural area and 60.7% come from a disadvantaged background. Clinical experiences for most students include long-term rotations across two to four semesters which fosters deeper community engagement and long-term patient care continuity. These long-term rotations were part of a pilot advanced practice nurse residency program beginning in summer 2015 and have been successful in recruitment and retainment of the students in RHPP sites for direct patient care as well as process improvement projects in their third-year doctoral work. In addition, RHPP students completed interprofessional rotations at Wesley Community & Health Centers and the Student Health Outreach for Wellness (SHOW) clinic, which serve vulnerable populations in Phoenix.

The college's academic scholarship committee fosters networking, outreach, community service and educational opportunities for RHPP fellows to interact with interprofessional groups of students. This approach assists the students in developing interdisciplinary knowledge and expertise in the unique challenges of working in rural and urban medically-underserved areas, along with an understanding of the relevant health and access issues these populations face. Specific opportunities during 2015–2016 included organizing, planning and participating in HopeFest, a large-scale community outreach event; development of new health interventions in underserved areas; and evaluation of student practice inquiry projects. Examples of projects included *Self-Management of Arthritis in the Latino Population*; *Interprofessional Collaboration in a Population Living with Serious Mental Illness and Diabetes*; and *Diabetes Prevention Education among Adults with Prediabetes in a Rural Community, Safford, Ariz.* RHPP students also engaged in interprofessional featured-learning resource modules and student seminars coordinated by the recently-launched Center for Advancing Interprofessional Practice, Education and Research at the ASU College of Nursing & Health Innovation. Examples of interprofessional practice preparation seminar topics included meeting the primary care needs of Arizona's multi-ethnic refugee communities, addressing substance use disorders in the primary care setting, and how health professionals can influence health policy.

Northern Arizona University School of Nursing Family Nurse Practitioner Program Rural Health Professions Program

Douglas Sutton, EdD, MSN, MPA, APRN, ANP-C

RHPP Director

Associate Professor

Coordinator of Master's Nurse Generalist Track

The NAU School of Nursing is proud to incorporate educational and clinical experiences that enhance our graduates' abilities to meet the needs of Arizona's rural, frontier and underserved communities. This past year, NAU admitted its largest class of family nurse practitioner (FNP) students in the school's history. AzaAHEC support provides masters-prepared nurse practitioner students with various forms of theoretical and clinical experiences to meet the growing need for highly-skilled and competent primary care clinicians.

The NAU School of Nursing RHPP remains focused on three priority goals. The first major goal is to help transition newly-admitted students to advanced practice roles. FNP students are required to participate in a week-long immersion experience, known as boot camp. In May 2016, 57 new FNP students attended boot camp, which included lab sessions and skills development in health assessment for adult, older adult, and pediatric patients; didactic content on women's health and a simulated childbirth experience; suturing and advanced office procedures; and joint assessment and splinting. Classes covered essential topics, such as evidence-based practice, comprehensive lab interpretation, diagnostic testing and radiology, differential diagnosis, documentation and coding, 12-lead electrocardiogram interpretation, and management of the pregnant patient in primary care. A lecture about cost-effectiveness taught students how to manage care when patient and family financial resources are limited. This year's program also featured a clinical scientist's presentation on the challenges faced by family care providers in a rural communities. Students consistently evaluate this immersion experience as important to their future careers and clinical skills development.

The second priority goal is to support FNP students completing clinical rotations in rural communities, where they receive mentorship from practicing rural primary care providers. The faculty, students, and preceptors often report that no textbook can begin to convey the unique need for specialized training in rural primary care. Through these experiences and integration with the AzaAHEC regional centers, students become authentically present with the rural community, providers, and patients. During 2015–2016, the RHPP supported 71 rotations in rural and urban underserved communities, totaling more than 23,000 hours of community-based training. FNP students

logged more than 2,000 patient care visits, including more than 575 American Indian and 400 Hispanic patient encounters. NAU's FNP students come from diverse backgrounds, and the majority are Arizona residents. More than half come from rural communities, including the Navajo Nation. Evaluating several years of post-graduate employment trends reveals that the majority of NAU FNP graduates accepted employment in rural and medically-underserved communities, demonstrating the continued success of the RHPP in contributing to the AzaHEC mission of increasing the health-care workforce in underserved areas.

The third priority is to enhance the design, implementation and number of curricular and clinical interprofessional educational opportunities for students. Evidence supports that patients experience enhanced clinical outcomes when a team of highly-skilled health-care providers across multiple disciplines come together to discuss a patient's plan of care. As technology continues to advance, and access to this technology becomes more readily available in rural communities, the ability for primary care providers to connect and be a part of this type of interdisciplinary care will increase in our rural communities. For academic year 2016–2017, NAU and North Country HealthCare will provide a year-long mentored experience for select FNP students, who will complete more than 90% of their clinical hours in rural communities across northern Arizona and will be mentored by a small group of preceptors with various health-care backgrounds. Clinical skills training sessions will be taught to these nursing students and other health professions students using a collaborative, interdisciplinary model of education. It is only through the continued support of organizations like AzaHEC and RHPP training initiatives that NAU can offer enhanced educational experiences across the state of Arizona. The NAU RHPP director looks forward to being an active participant in such innovative leadership across our state, such that NAU FNP graduates will help achieve better health outcomes in our rural and medically-underserved communities.

The University of Arizona Mel and Enid Zuckerman College of Public Health Rural Health Professions Program

Jill Guernsey de Zapien
RHPP Director
Associate Dean, Community Programs

Our RHPP provides opportunities for students to understand the assets and needs of our communities, to participate in the roles that public health professionals play in building health equity and to chart a clear path towards action that strengthens the health of Arizona's communities. Through five one-week service learning courses, a border health interprofessional experience and

internships/practicums, we actively pursue the overarching goal to increase the number of students in our master of public health (MPH) and doctoral programs who will practice in rural and underserved areas in the state of Arizona.

The Urban Family and Child Health Service Learning Institute in August 2015 included 13 students and focused on how diverse community partners build alliances and implement strength-based approaches to improve fair and equal access to healthy homes, healthy food and public safety. We partnered with the Pima County Health Equity Coalition, the Southern Arizona Fair Housing Council and the Community Home Repair Projects of Arizona (CHRP). Students learned about the multi-disciplinary, multi-sectorial service and advocacy approaches inherent in social justice issues related to housing and public health, and they gained first-hand experience assisting CHRP staff with home repairs in Tucson communities.

In the Border Health Service Learning Institute in August 2015, 15 students and the course faculty collaborated with local community organizations in Douglas, Ariz. to support public health outreach. Students learned about health disparities, economic development and migration in the border region. Partners included the Arizona Department of Health Services Office of Border Health, the Naco Wellness Initiative, Cochise County Health and Social Services, Chiricahua Community Health Centers, Southeast Arizona AHEC's Healthy Farms Initiative, U.S. Customs and Border Protection and Frontera de Cristo. Service activities included health fairs, immunization campaigns, chronic disease collaboration and community gardening.

Seven students participated in the August 2015 Rural Health Service Learning Institute in Graham and Greenlee counties. Activities included a tour of Safford, Ariz. to learn about historical, environmental and economic issues; building walking paths for a demonstration garden at Our Neighbors Farm and

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UA Zuckerman College of Public Health RHPP students assisted in building a raised garden bed in Tuba City, Ariz.



UA Zuckerman College of Public Health RHPP students built walking paths for a demonstration garden at Our Neighbors Farm and Pantry in Safford, Ariz.

UA Zuckerman College of Public Health RHPP

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Pantry; discussions about rural health issues with Graham County Health Department staff; and engaging with community elders at SEACUS (South Eastern Arizona Community Unique Services). Eastern Arizona AHEC was also a key partner. Students gained insights into historical and socio-economic contexts of living in rural areas, the challenges of geographic isolation and lack of funding as well as rural communities’ strengths in social connectedness, creative problem-solving and dedication.

The Phoenix Urban Service Learning Institute in January 2016 included 10 students and collaboration with a variety of community organizations, including the Orchard Community Learning Center and the Sojourner Center. Students learned about public health issues for urban underserved populations, specifically elder care, disabilities, homelessness, mental health, substance abuse, domestic violence, access to care, access to healthy foods and the strong link between poverty and health status.

In May 2016, the Maternal and Child Health in a Rural Setting Service Learning course included 10 students and focused on the rural health systems, culture and environment of the Navajo Nation and Hopi Tribe. Partners included the Hopi Wellness Center and the Navajo Nation’s community health representative (CHR) program. A highlight was reciprocal teaching between the graduate students and Kayenta CHRs.

The RHPP continues to be foundational to the educational experience of our graduate students by providing opportunities for collaboration with community partners in rural and underserved areas in efforts to create and sustain health equity in Arizona. According to evaluation surveys, among the students who participated in the service learning institutes or internships/



practicums (n=53), 84.9% intend to pursue employment and/or further training in an underserved setting, 69.8% would like to remain in Arizona, and 43.4% intend to work/train in a rural area.

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RHPP Interprofessional Collaboration: Border Health Service Learning

The second Interprofessional Border Health Service Learning Experience took place in August 2015 in Nogales, Ariz. With the theme of Building Healthy Communities, the three-day interprofessional activity brought together 16 students from the UA Colleges of Medicine, Nursing, Pharmacy and Zuckerman College of Public Health. The interprofessional experience allowed students and participating team leaders and faculty to explore collaborative roles in globalization, migration and health. Learning objectives included increasing understanding of interprofessional collaboration, community engagement and addressing health and wellness within the context of the border region.

Interprofessional teams of students worked with community partners on community-engaged projects addressing chronic illness, dengue, nutrition, oral hygiene, community gardening, mental health and bullying prevention. This interprofessional experience relied on collaboration among Southeast Arizona AHEC, Mariposa Community Health Center and faculty from the UA Colleges of Agriculture and Life Sciences, Medicine, Nursing, Pharmacy and Zuckerman College of Public Health.



Conference attendees participated in lively discussions with presenters during the poster session.



Roberto Dansie, PhD, gave the conference keynote presentation.

Fourth Annual Interprofessional Rural Health Professions Conference

The Fourth Annual Interprofessional Rural Health Professions Conference was held on April 22, 2016 at UAHS with more than 110 participants, including health-care professionals from the community and students, faculty and staff from the UA, ASU and NAU. The conference included in-person as well as technology-enabled participation. In particular, this conference provided opportunities for RHPP students to network and discuss their rural health experiences. Participation included RHPP students from ASU College of Nursing & Health Innovation, NAU School of Nursing and the UA Colleges of Nursing, Pharmacy and Zuckerman College of Public Health.

The conference featured a keynote presentation by Roberto Dansie, PhD, who shared insights on cultural wisdom, rural health and interprofessional practice. As a Maya and ancient wisdom scholar, Dr. Dansie, a clinical psychologist and a member of the Toltec tribe of Mexico, is internationally recognized as a contemporary authority on cultural wisdom. In the afternoon, John Bormanis, PhD, from the UA College of Medicine – Tucson, presented an overview of culturally and linguistically appropriate services in the health professions. Conference participants then completed small-group, interprofessional workshop activities on cultural self-awareness and culturally-competent care. Faculty and other health professionals facilitated the small groups.

The conference included a poster session with 20 posters from students and researchers at the Arizona Center for Rural Health; ASU College of Nursing & Health Innovation; NAU School of Nursing; the UA Colleges of Nursing, Pharmacy and Zuckerman College of Public Health; and the UA College of Medicine – Tucson Office of Diversity and Inclusion. Example

poster topics included community health assessments in rural Arizona, interprofessional service learning in Nogales, cultural humility in low-resource communities, pre-diabetes education in a rural primary care setting, rural nurse practitioners' knowledge of childhood obesity management, and practice-based research to improve chronic pain management in primary care. The posters can be viewed from the conference website: <http://azahec.uahs.arizona.edu/events/rhpp>.

This event was sponsored by the UA Center for Transformative Interprofessional Healthcare. Partners included AzaAHEC; the RHPPs at ASU, NAU and the UA; and the UA College of Medicine – Tucson Office of Diversity and Inclusion.

AzaAHEC-Supported Interprofessional Education Program

The University of Arizona Health Sciences Core Interprofessional Education Events

The UA is an early adopter of interprofessional education (IPE). For several years, IPE events have engaged students in medicine, nursing, pharmacy and public health through hands-on opportunities to learn and practice in interprofessional, collaborative, team-based environments and provide safe, quality, patient-centered care. In 2015–2016, four interprofessional training exercises brought together participants from the UA Colleges of Medicine, Nursing,

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UAHS Core Interprofessional Education Events

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Pharmacy and Zuckerman College of Public Health as well as from other disciplines and universities. These exercises blended online learning with in-person, team-learning experiences to encourage collaboration and communication across disciplines and professions. At each exercise, students worked together in interprofessional teams and interacted with interprofessional facilitators from both academia and professional practice. After each exercise, surveys indicated that students had overall more positive attitudes toward interprofessional health-care teams and the team approach to care.

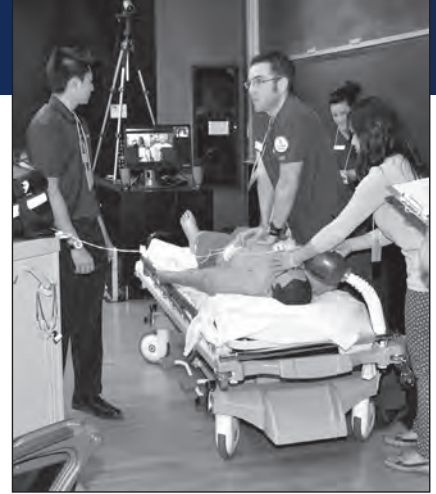
In fall 2015, the first of the four exercises, *Interprofessionalism for Patient Safety*, included more than 360 health professions students in the UA Colleges of Medicine – Tucson, Nursing and Pharmacy and focused on how collaborative team behaviors promote positive patient outcomes. Students learned about shared and complementary scopes of practice and how to be constructive team members. Also during the fall semester, the *Interprofessional Public Preparedness Exercise* integrated video conferencing technologies between the UA Tucson and Phoenix

During the interprofessional training exercises, student teams worked together to develop interprofessional, team-based approaches to health-care and public health issues.



Interprofessional teams of students, connected across nine classrooms via telemedicine, coordinated a public health response to a simulated Ebola outbreak.

With virtual facilitation from RHPP DNP students, interprofessional teams of students worked together to deliver life-saving measures to a manikin in simulated cardiac arrest.



Angel Holtrist, Arizona Telemedicine Program

campuses and Greater Valley AHEC with the technical support of the Arizona Telemedicine Program. Richard Carmona, MD, MPH, FACS, 17th Surgeon General of the United States, and other expert panelists discussed real-world events related to the exercise topics. Participation included more than 340 students from the ASU School of Social Work and the UA Colleges of Medicine – Phoenix, Medicine – Tucson, Nursing, Pharmacy and Zuckerman College of Public Health. Working in interprofessional teams, students took part in a simulated Ebola epidemic, exploring issues that arise during a disease epidemic, understanding the roles and responsibilities of different professionals and coordinating in teams to control the spread of disease.

In spring 2016, students again had the opportunity to simulate interprofessional practice during the *Interprofessional Team Behavior Simulation*. More than 370 students from the UA Colleges of Medicine – Tucson, Nursing and Pharmacy; the ASU School of Social Work and the Southwest College of Naturopathic Medicine were assigned to interprofessional teams of six to ten members. Teams responded to a simulation manikin having a heart attack, using the simulation lab technologies of the UA College of Medicine – Tucson's Arizona Simulation and Technology Education Center, the UA College of Medicine – Phoenix's Center for Simulation and Innovation and the UA College of Nursing's Steele Innovative Learning Center. This exercise focused on team skills and effective communication. Recognizing that many UA students are not co-located due to two UAHS campuses and online-delivered programs, the exercise included a pilot technology-assisted component. Four sessions were virtually facilitated by UA College of Nursing RHPP DNP students and the RHPP director, Christy Pacheco, DNP, FNP-BC. This pilot provided an interprofessional student peer learning framework and the opportunity for students to explore effective communication strategies in a telehealth setting.

The final event for the academic year, *Disabilities: An Interprofessional Exercise*, involved 410 students in the disciplines of engineering; law; medicine; nursing; pharmacy; physical and occupational therapy; public health; social work and speech, language, and hearing sciences at the UA, ASU, NAU and Creighton University. Through a situational learning exercise and a panel discussion with members from the community, students learned the importance of multiple communication methods; social and cultural understanding; and interprofessional, team-based practice in caring for patients with disabilities. In a pilot initiative, community members, who had experience with disabilities, joined several student teams for case discussions.

National CLARION Interprofessional Case Competition

This year marked UAHS's first time participating in the National CLARION Interprofessional Case Competition, an initiative at the University of Minnesota. The competition centers around a highly complex, fictitious case with real-world issues related to medical errors and patient safety. Participating teams, consisting of three to four students from at least two different disciplines, were tasked with creating a root cause analysis of the case for presentation to interprofessional judges. Each team's presentation, analysis and recommendations were evaluated in the context of real-world standards of practice. The purpose of the competition is to empower health professions students to use interprofessional communication and teamwork to improve patient safety, patient outcomes and the quality of health care.

The UAHS Local CLARION Interprofessional Case Competition was held in March 2016 to determine the winning team who would represent the university at the national competition. Five interprofessional teams of students, with representation from all five of the UAHS colleges, competed in this inaugural competition. Acting as hired consulting groups, the teams had five weeks to prepare an integrated solution to address prevention; treatment; community-based follow-up; and patient-centered, culturally-competent care as related to the health-care issues demonstrated in the case of Doris E., a 23-year-old Native American woman. All case analyses were conducted by the official team members only. UAHS faculty served as team mentors to provide students with general resources and guidance related to communication and presentation skills. At the local competition, each team presented their case analysis to a panel of judges representing leaders from various disciplines within the health-care industry: Kara Snyder, RN, MS, Banner – University Medical Center Tucson; Cathy Townsend, RN, CNO, Banner – University Medical Center Tucson and South; Ted Tong, PharmD, associate dean, UA College of Pharmacy; Ronald Weinstein, MD, director, Arizona Telemedicine Program; and LeeAnne Denny, MD, interprofessional education program director, UA College of Medicine – Phoenix. The judges were impressed with the outstanding quality of all presentations.

UAHS's winning team traveled to Minneapolis, Minn. and competed in the National CLARION Interprofessional Case Competition in April 2016. A total of 17 teams from across the country competed for three scholarship awards. The UAHS team represented the institution with great poise, teamwork and innovative solutions to the case. The national competition judges were deeply impressed with the UAHS team's performance and commented on the team's "exceptional bearing." The judges valued the team's proposed technology solutions, their outreach efforts to better understand the tribal populations being served and their pipeline approach for mentoring Native American youth into health careers to address provider shortages.



Interprofessional student team, (left to right) Naran Lodhia, Merta Cushing, Kelly Clifton and Eric Brucks, presented their case solution to the judging panel at the UAHS Local CLARION Interprofessional Case Competition.

UAHS Local CLARION Interprofessional Case Competition Results

First place	<ul style="list-style-type: none"> ▶ Ashley Assadi, UA College of Medicine – Phoenix ▶ Mark Guevorkian, UA College of Medicine – Phoenix ▶ Caitlin Denning, UA College of Nursing ▶ Kaitlyn Skulkan, UA College of Pharmacy
Second place	<ul style="list-style-type: none"> ▶ Eric Brucks, UA College of Medicine – Tucson ▶ Merta Cushing, UA College of Pharmacy ▶ Kelly Clifton, UA Zuckerman College of Public Health ▶ Naran Lodhia, UA Zuckerman College of Public Health
Third place	<ul style="list-style-type: none"> ▶ Katie Hawk, UA College of Medicine – Phoenix ▶ Mei So, UA College of Medicine – Phoenix ▶ Jason Kwan, UA College of Pharmacy

The winning teams of the 2016 national competition were as follows: first place – University of Florida; second place – University of Missouri; third place – Army-Baylor University.



Interprofessional student team, (left to right) Kaitlyn Skulkan, Mark Guevorkian, Ashley Assadi and Caitlin Denning, competed at the National CLARION Interprofessional Case Competition in Minneapolis, Minn.

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National CLARION Interprofessional Case Competition

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Francine Gachupin, PhD, MPH, assistant professor in the UA Department of Family and Community Medicine, served as a cultural advisor for the local UAHS competition and traveled with the team to the national competition. Dr. Gachupin is a tribal member of the Pueblo of Jemez in New Mexico. She hopes to see the proposed solutions operationalized in the Indian Health Service (IHS) and has worked with the UAHS first and second place teams to share their presentations with representatives from IHS.

The UAHS local competition and the UAHS team's travel were supported by the UA Center for Transformative Interprofessional Healthcare.

UA Health Sciences' Virtual Learning Exercise Bridges Continents, Technology and Interdisciplinary Health Training

During an interprofessional learning workshop that included sites at Oxford University in the United Kingdom and Arizona, UA Health Sciences students learn while UA experts teach the value of virtual care through telemedicine and health education simulation technology.

In emergency-care situations like cardiac arrest, the difference between life and death can be a matter of minutes, complicated by distance and access to health care. Working to overcome these challenges, UAHS is using virtual learning technologies, including medical-simulation technology and the power of telemedicine to train interdisciplinary health-care teams.

Sharing its expertise internationally, UAHS recently held a live, multi-site telemedicine simulation workshop that included students and faculty members in Flagstaff at Northern Arizona AHEC, Phoenix, Tucson and global attendees at Oxford University in the United Kingdom. The workshop was held to show how interprofessional training using telemedicine and simulation technology can save lives.

The workshop was held during the "All Together Better Health VIII Conference" at Oxford University and was made possible

by Sally Reel, PhD, RN, FNP, FAAN, UAHS associate vice president for interprofessional education, collaborative practice & community engagement and director of the AzaHEC program, and Michael Holcomb, associate director of information technology, Arizona Telemedicine Program (ATP).

The workshop provided Dr. Reel and Holcomb the opportunity to show and share UAHS expertise on interdisciplinary education, telemedicine and simulation by combining the expertise of the ATP, directed by Ronald S. Weinstein, MD, who participated remotely from Tucson, and the Arizona Simulation Technology and Education Center (ASTEC), whose executive director is Allan J. Hamilton, MD.

ASTEC provides students and seasoned clinical practitioners training using simulation technology, including high-fidelity patient-simulators (mannequins) and artificial tissue models to transform health-care training and reduce medical errors. The ATP works to create new paradigms for health-care delivery over the information superhighway enhancing health-care delivery to medically underserved populations and is recognized for its strong commitment to research and technology transfer. Both programs are part of UAHS.

Supported by the ATP, the workshop linked an ASTEC medical simulation training session to the Oxford University Examination Hall and student participants at six locations in Arizona. The virtual simulation grew from a "proof of concept" envisioned by Dr. Reel in 2014 and devised for introducing technology into nurse-practitioner

UAHS expertise in interdisciplinary education, telemedicine and simulation was demonstrated during an international interprofessional learning workshop.



Angel Holtrist, Arizona Telemedicine Program



The interprofessional learning workshop included sites at Oxford University in the United Kingdom and Arizona.

education. The project was funded by the Health Resources and Services Administration, Division of Nursing.

The interprofessional student team included an on-site team at ASTEC in Tucson with Heidi Clouser and Paige Brei, both graduate students at the UA College of Nursing; Garrett Berger, doctoral student at the UA College of Pharmacy; and Jim Dunleavy, UA College of Medicine – Tucson student. Joining virtually in Phoenix, Tyler Dunn with the UA College of Medicine – Phoenix led the simulated code for cardiac arrest, directing the interprofessional student team in Tucson who used the same intervention protocols on an advanced patient simulator mannequin that would have been used on a live patient. Dunn was joined remotely by Megan Fah, also a student at the UA College of Medicine – Phoenix. Participating virtually from separate sites in Phoenix were UA College of Nursing students Caitlin Denning, MEPN graduate student, and Sheng Yun Peng, DNP graduate student. Pharmacy residents Khanh Huynh and Christina Chau participated virtually from Northern Arizona AHEC/ North Country Healthcare in Flagstaff.

Lisa Grisham, MS, NNP, ASTEC medical simulation specialist, facilitated the response to the simulated cardiac arrest code in Tucson that was designed to model the principles of health-care team behaviors. “As an instructor, it was surreal watching the students work together from directly in front of me to hundreds of miles away. Within a matter of minutes they became a cohesive group that performed in a collaborative interprofessional effort to provide lifesaving care to our simulated patient. An experience that will not soon be forgotten,” said Grisham.

Students at the remote sites had full visual access to the simulation, including remote access to patient vital signs. The on-site students at ASTEC in Tucson also could see and hear remote students through videoconferencing technology at the simulation site. All participants also could see the audience at the Oxford Examination Hall.

“I felt like running a cardiac arrest from a remote site would be an almost impossible thing to do. But after participating in this simulation I realized that it is possible and quite effective. The technology allowed me to have all of the information I needed to know about the patient and communicate with the other team members without difficulty,” said Dunn, a third-year medical student.

Pilot work done by ASTEC and ATP in 2015 successfully tested the use of smart devices as a real-time approach to expand remote student team learning. The workshop and international conference demonstration in the U.K. replicated the successful 2015 virtual model using internet connectivity to engage students in real-time interprofessional simulations at a distance.

“The tele-simulation exercise with Oxford demonstrated that we could easily run a meaningful, immersive and useful training exercise long-distance with live, real-time

participation from students on two continents. It was a powerful example of where our multi-disciplinary approach at the University of Arizona could seamlessly be folded into a joint exercise using the Arizona Telemedicine Program and that we could pull in students and experts from around the world to participate in the discussion and teaching of the material,” said Dr. Hamilton.

“Using technologies in real time enhances and promotes institutional collaboration, partnering and resource sharing. This type of simulated practice environment creates an anytime/anywhere reach to teach students positive ways of interacting with each other on an equal basis. Congruent with interprofessional learning, this modality also increases students’ awareness of the unique value co-workers from other disciplines bring into interdisciplinary team practice environments,” said Dr. Reel, who also is university distinguished outreach professor and clinical professor at the UA College of Nursing and director of the AzAHEC program.

“This demonstration has profound implications. It opens access to advanced simulation education for millions of health workers for the first time. Medical errors are killing hundreds of thousands of Americans every year. Simulation at a distance will address some of these issues down the road,” said Dr. Weinstein, an international expert on innovation in medical education.

This workshop illustrated state-of-the-art, complex multi-modal distance learning and collaboration of leaders across disciplines, including system engineers and operations experts Pete Yonsetto, ATP videoconferencing administrator, and David Biffar, ASTEC director of operations, who facilitated all technical aspects of the workshop.

“For me, this experience was like no other. As a beginning University of Arizona master’s of science nursing student, I have not had much experience in cardiac arrest situations. With my participation in this simulation event, I was able to gain experience of not only cardiac arrest, but also experience in communication with a team. It has made me more confident in treating patients, especially in emergency situations and I found this simulation to be very beneficial to my future in the nursing profession,” said Brei.

Written by Rebecca Ruiz McGill, information specialist coordinator, UAHHS Office of Public Affairs

AzAHEC-Supported Academic Programs

The University of Arizona College of Medicine at South Campus Family Medicine Residency and Internal Medicine Residency Rural Programs

Jerry Koleski, MD

*Rural Curriculum Director
Assistant Professor*

The University of Arizona College of Medicine at South Campus family medicine and internal medicine residency programs dedicate a portion of resident training in rural Arizona to produce physicians who serve the medical needs of these communities. Family medicine residents choose rural rotations from among Indian Health Service and community hospitals in Nogales, Polacca, Safford, Show Low, Tuba City and Whiteriver, Ariz. Rotation specialties include family medicine, obstetrics and emergency medicine. Internal medicine residents rotate in community health centers in Arivaca, Green Valley and Marana, Ariz. During 2015–2016, family medicine residents completed 30 rotations, and internal medicine residents completed 13 rotations, totaling 6,620 hours of community-based training. AzAHEC funding also supports faculty development for rural supervising physicians as well as advanced life support courses to prepare residents for rural practice environments and low-resource settings.



Jerry Koleski, MD, is the new rural curriculum director at the UA College of Medicine at South Campus. Dr. Koleski attended medical school at the University of South Florida and completed family medicine residency training at Marshall University in West Virginia. While working as adjunct clinical faculty at El Rio Community Health Center in Tucson, Dr. Koleski did a faculty development fellowship with the UA College of Medicine – Tucson, Department of Family and Community



Medicine. He served as a medical missionary in Ecuador for five years and Malawi for three years. Dr. Koleski joined the UA faculty in 2012 and is an assistant professor. His interests include global health and teaching residents about practicing in low-resource settings.



Graduate Medical Education (GME), or residency education, is a period of didactic and clinical education in a medical specialty that physicians undergo after they graduate from medical school. Most residency programs last from three to seven years, and during this time residents provide patient care under the supervision of physician faculty. Upon completion of a residency program, a physician is eligible to take board certification examinations and practice independently. Residency programs are sponsored by teaching hospitals, academic medical centers, health care systems and other institutions.

Of the nine family medicine residents graduating between June and November 2016, six will work with underserved patients in Arizona, two will work with underserved patients in other states, and one will serve our country as physician in the United States Army. Our graduates' employment choices demonstrate success in the mission of educating physicians who are ready and eager to work in medically-underserved communities.

The dedication and passion of rural supervising physicians help make the rural experiences among the most popular rotations during residents' three years of training. Rural preceptors have a unique perspective on medicine and patient care because patients are also their neighbors. Residents in their third year (PGY-3) shared the following comments about their rural rotations:

Working in Hopi offered the ability to care for patients in a number of settings, including inpatient, outpatient and home visits. There was a huge focus on primary care, and this allows young doctors to fully grasp what it means to be a full-spectrum primary care physician.

– Joseph Anthony Saenz, MD (PGY-3, Chief Resident)

My experience in rural rotations has been unexpected every time. Most recently, spending time in Whiteriver, Ariz. on the [Fort] Apache Indian Reservation was an experience that opened my eyes to possible careers in family medicine that I hadn't considered. The setting is unparalleled to any experience that can be had in a city. It made me proud of the work we do, and the rural setting makes it even more personal.

– Joshua Clutter, MD (PGY-3)

Training in a rural setting on an obstetrics rotation was very valuable to my growth as a physician. It allowed me to...work with multiple doctors with different styles, and most importantly, allowed me to work with a different patient population and expand my communication skills, particularly when I had to speak Spanish.

– Shana Semmens, MD (PGY-3, Chief Resident)

Mobile Health Program Obstetrics

The Mobile Health Program Obstetrics continues to provide prenatal, postpartum and family planning services to uninsured patients in Tucson. UA College of Medicine – Tucson faculty, Elizabeth Moran, MD, MPH, and Victoria Murrain, MD, supervise first- and third-year residents as they provide services at two locations in the city. Third-year family medicine residents also teach medical and pre-medical students and volunteers during mobile health clinical rotations.

NAHEC/North Country HealthCare Family Medicine Residency Program

Sean Clendaniel, MPH

NAHEC Director

Years in the making, Northern Arizona AHEC (NAHEC) / North Country HealthCare has developed a family medicine residency program. The need has never been higher, the solution never clearer and the opportunity never better to develop the only Accreditation Council for Graduate Medical Education (ACGME) physician residency program in Arizona using the Teaching Health Center model. Unique not only in its teaching model but also its location, it is the only ACGME residency program north of Phoenix and the only program owned by a regional AHEC center.

The physician shortage facing our nation and Arizona is a serious issue, and family medicine physicians are well-suited to meet the health-care needs in rural and frontier areas. Our new family medicine program will be one-of-a-kind in the state. It will help meet regional and statewide primary care workforce needs, increase access to care, develop a culturally-attuned physician workforce, have far-reaching economic impacts and address long-standing health disparities.

The family medicine residency program is well on its way to implementation, with provisional accreditation expected in fall 2016 and resident recruitment for summer 2017 already underway.

The University of Arizona Mel and Enid Zuckerman College of Public Health Master of Public Health Program in Phoenix

Cecilia Rosales, MD, MS

*Assistant Dean, Phoenix Programs
Professor of Public Health*

The UA Mel and Enid Zuckerman College of Public Health Phoenix campus offers a master of public health (MPH) program



High school students toured the UA College of Medicine – Phoenix Center for Simulation and Innovation during Health Careers Day, a collaboration with Greater Valley AHEC.

with concentrations in public health practice (PHP) and health services administration (HSA). Additionally, the program also offers a doctor of medicine (MD)/MPH dual degree program in partnership with the UA College of Medicine – Phoenix and a dual degree with the Southwest College of Naturopathic Medicine and Health Sciences. The MPH programs in Phoenix utilize a combination of distance and in-person teaching modalities to serve the needs of both traditional and non-traditional students. The college continues to enroll a diverse student body, with increasing numbers of underrepresented minorities and working professionals. An area of growth has been the online MPH degree, which has 157 active students, 114 of whom are pursuing the HSA concentration. The Phoenix campus has more than 80 continuing students from the PHP, HSA and MD/MPH program. A total of 106 students have graduated from the Phoenix MPH program. AzAHEC funding has helped establish a strong foundation for this accredited MPH program in Phoenix.

The college's Phoenix campus staff continues to cultivate strong relationships with community partners in order to recruit prospective students, develop internship projects, share information about college events and collaborate with community public health professionals in curricular activities. Students' required MPH internships are opportunities to integrate classroom learning in practice settings. During 2015–2016, 29 MPH and MD/MPH students commenced internships in Arizona with a variety of public health community organizations and agencies, especially in underserved communities of Arizona's Greater Valley region. Projects ranged in hours from 270 to 540 and covered diverse public health topics in disease prevention/health promotion, environmental health, epidemiology, health policy/management, infectious disease control and social/behavioral science. Examples of projects included: *Health Literacy and Education: Integrating Health Information*

Continued on page 22

UA Zuckerman College of Public Health Phoenix Program

Continued from page 21

and Medical Care Utilizing Technology; Improving Breast Cancer and Cervical Cancer Screening Rates Among Ethnic Minority and Sexual Minority Women at a Federally Qualified Community Health Center in Arizona; Integrating a Smoking Cessation Program into a Neighborhood Outreach Clinic; and Environmental Health/Biomonitoring in Rural Communities.

In partnership with Greater Valley AHEC, Northern Arizona AHEC and other organizations, the college regularly conducts outreach workshops and presentations in local high schools and at youth events to discuss public health, specifically its importance to communities and value as an educational path and future career. Public health career workshops include team-based interactive activities, such as an outbreak investigation; discussions of public health in the media; presentations about the importance of interdisciplinary collaboration in the health sciences; and examples of how public health practitioners work at the county, state and national levels to promote health, prevent disease and protect communities. During 2015–2016, 36 sessions reached more than 1,080 students at multiple high schools and events in rural and underserved areas.

In October 2015, Cecilia Rosales, MD, MS, was awarded a grant by the U.S.-Mexico Border Health Commission to develop and implement a primary prevention mobile unit. The unit provides access to health services and promotes healthy lifestyles to the Latino population in Maricopa County. Dr. Rosales convened and works with a team of interprofessional students and faculty from the UA Health Sciences in Phoenix to provide outreach services to residents who lack access to health services or are underinsured. The mobile unit's student participation has included students in medicine, nursing, physician assistant and public health academic programs. In fall 2016, pharmacy students are joining the mobile unit's activities.



The primary prevention mobile unit provides health services for Latino populations in Maricopa County.

Community outreach has targeted five communities in the Phoenix metropolitan area, and more than 150 screenings have been performed. A monthly workshop is provided for community health workers to receive training on topics, including domestic violence, nutrition and promoting healthy lifestyles.

Integrating Pharmacy Practice Residents and Student Pharmacists into Practice to Promote Innovative Pharmacy Services in Rural Arizona

Amy K. Kennedy, PharmD, BCACP, Assistant Professor;
Kathryn Matthias, PharmD, BCPS, Assistant Professor;
Elizabeth Hall-Lipsy, JD, MPH, Program Director for Health Disparities Initiatives and Community Outreach
UA College of Pharmacy

With the passage of national health-care reform and the documented impact of pharmacists on patient outcomes and health-care costs, it is more important than ever to ensure that patients have access to quality pharmacy care and that our future pharmacists receive the necessary training to improve patient care and outcomes. This grant provides an interprofessional training and pharmacy workforce development program in a rural setting for pharmacy students and pharmacy residents. Additionally, this program will design and implement expanded clinical pharmacy services for rural populations that suffer from significant health disparities.

The program's first pharmacy resident participant from North Country HealthCare graduated in June 2016. North Country HealthCare has successfully recruited another pharmacy resident for the 2016–2017 cycle. Recruitment will also take place at Kingman Regional Medical Center, Banner Casa Grande Medical Center, Flagstaff Medical Center and Sun Life Family Health Center. A rotation elective has been developed to focus on health promotion and rural health. We plan to enhance our leadership series to include technology-enabled participation, allowing integration among sites, AzaHEC regional centers and residents.

Through the UA College of Pharmacy's robust teaching certificate program, we will offer preceptors remote access to high-quality education sessions on teaching and working with students. During upcoming site visits in fall 2016, we will assess sites' technology capacities for participation. We have developed and shared a rural residency best practices document to provide sites with program guidance.

Med-Start Summer Program at the UA College of Medicine – Tucson

Francisco Moreno, MD, Assistant Vice President for Diversity and Inclusion at UAHS

Med-Start is an academic enrichment and health career exploration program offered by the UA College of Medicine – Tucson and UAHS since 1969. Med-Start helps young people prepare for their future in the health professions by providing the opportunity to take college-level coursework in English and science; experience life on a college campus; and participate in health career lectures, interactive tours, observations and presentations. The program provides a six-week residential experience at our Tucson campus for high school students from all regions of Arizona. Our goal is to encourage Arizona students, particularly economically or educationally disadvantaged and underrepresented minority students, to pursue careers in science and health care. In 2016, financial support was provided by AzaAHEC for 36 students and by the U.S. Health Resources and Services Administration's (HRSA) Center of Excellence grant for 10 students. The 46 student participants represented 38 Arizona high schools from all regions of the state. The AzaAHEC-funded students included 31 (86%) from underrepresented minority groups, 20 (56%) who grew up in a rural community and 29 (81%) from a disadvantaged background.

Throughout the six weeks of the program, activities were designed to develop students' teamwork skills as well as promote constructive communication and conflict resolution skills. Students also participated in health career exposure activities and academic instruction. During the second week of the program, representatives from the five AzaAHEC regional centers met with the Med-Start students from their respective regions of service. Each team of students worked with the regional representatives to develop ideas and plans for a health-related community awareness project to be implemented in their region of service. During the following weeks, students developed strong relationships with the AzaAHEC representatives through communication and mentorship related to project progress. The following projects provided students with the opportunity to apply and improve their skills in effective teamwork.



Med-Start students conducted experiments on dosage and toxicity under the direction of the UA College of Pharmacy.



AzaAHEC Sponsorship

AzaAHEC was proud to again be a platinum sponsor of the 43rd Annual Arizona Rural Health Conference and 11th Annual Performance Improvement Summit in Flagstaff, Ariz. in August 2016. This annual event is presented by the UA Mel and Enid Zuckerman College of Public Health, Center for Rural Health. The conference provides an environment to dialogue, network and attend educational activities regarding rural health. Conference information can be found at <http://crh.arizona.edu/events/annual-conference>.

- ▶ **Increasing Health Careers, Eastern Arizona AHEC:** Students prepared an illustrated manual of exciting and little-known health professions to educate high school students exploring career opportunities in the health professions.
- ▶ **Nurse Practitioner Requirements, Greater Valley AHEC:** Students developed an animated film that describes the role of nurse practitioners in primary care.
- ▶ **In-A-Box Curriculum, Northern Arizona AHEC:** Students produced a video-clip to promote the In-A-Box curriculum series in middle and high schools of northern Arizona. The In-A-Box curriculum series includes five self-contained boxes, geared for 4th–8th graders, with health and science lessons about the bones and muscles, eyes, ears, brain and guts.
- ▶ **Aedes aegypti, Southeast Arizona AHEC:** Students developed an informational video to educate border communities about the spread of mosquito-borne illnesses, such as dengue, chikungunya and Zika.
- ▶ **Diabetes, Western Arizona AHEC:** Students developed an engaging role-play and a video to educate young people about the importance of diet and exercise in preventing type 2 diabetes.

At the conclusion of the summer program, Med-Start students presented their team-based projects to UA faculty and staff, community members and AzaAHEC representatives. These presentations demonstrated the advances students had made in interprofessional, collaborative team building; the integration of mentoring relationships with AzaAHEC regional representatives; and the focus on health topics relevant to students' home communities.

Intramural Grant Program

Since FY 2007, AzaAHEC has supported innovative, interprofessional education programs and research through a competitive intramural grant program. In 2015–2016, three grant programs were supported as follows:

- ▶ **Community Engagement Research Grant Program:** The purpose of this program is to foster meaningful community engagement for translating research into practice, reflective of the health needs of Arizona’s communities. This pilot program aims to stimulate the development and enhance the maturation of academic-community research teams capable of performing highly innovative, extramurally-fundable, community-engaged research that will sustainably contribute to the health and well-being of Arizona’s diverse populations.
- ▶ **Faculty Development Research Grant Program:** The purpose of this program is to support well-defined clinical or translational research projects leading to measured outcomes, such as preliminary data for an extramural grant submission. Preference is given to junior investigators and investigators undertaking a new area of focused research related to the UAHS priorities of health disparities, population health, precision medicine and neuroscience.
- ▶ **Research and Project Small Grant Program:** The purpose of this program is to provide UA health sciences graduate students, trainees and residents with an opportunity to gain experience in rural and urban medically-underserved Arizona communities through research and/or scholarly projects. Projects should demonstrate interprofessional education or practice models and address community needs specific to one or more of the AzaAHEC regions of service.

New grantees from the above programs as well as continuing grantees from previous programs are listed on page 27. The following section highlights recently-completed projects.

Project Taking Charge

Jenny Chong, PhD; Theodore G. Tong, PharmD; Sheila Parker MS, MPH, DrPH; Howard Eng, MS, DrPH; and Bruce Coull, MD; Principal Investigators

The purpose of Project Taking Charge (PTC) was twofold: 1) engage an underserved community toward self-management of health and 2) use an interprofessional team-based approach to provide educational experiences for community members and future health-care providers with the ultimate goal of improving health and wellness for program participants. Students and faculty from the UA Colleges of Pharmacy, Medicine and Zuckerman College of Public Health came together to provide eight sessions of health clinics and workshops on Saturday mornings over a period of 30 weeks to a diverse and underserved population at the Fred Archer Neighborhood Center in Tucson, Ariz. The students provided interprofessional team-based care, which included regular health screening and promotion activities, interactive and didactic sessions as well as personalized attention to help bring about changes in health behaviors, practices and attitudes to improve health and quality of life.

A total of 34 individuals participated in the project to learn how to identify, prevent and reduce health risks that lead to cardiovascular diseases and diabetes. PTC engaged families and individuals in their self-care through screenings, education, instruction, exercise and physical activities. Participants appreciated the personalized attention and were able to track their health outcomes over several months. Participants decreased their risk factors as indicated by the screening results, reported an improved diet and increased physical activity over the course of the project. One of the pharmacy students noted:

Seeing the improvements in the wellness and health status in project participants helped me appreciate the importance of team-based learning activities.

PTC was an opportunity for health professions students to serve an at-risk population in a community setting using a team-based approach. Students developed mutual respect and trust from interacting with each other and gained invaluable knowledge about patient-centered care. The positive effects of their collaboration and interprofessionalism on patient care were further highlighted when their participants showed improvement and satisfaction with the team-based care. After every session, students debriefed and reflected upon the progress and challenges of each participant and shared ideas on addressing those challenges.



AzaAHEC Community Engagement Grant

Lois J. Loescher, PhD, RN, FAAN, with the UA College of Nursing and The University of Arizona Cancer Center Skin Cancer Institute, is the principal investigator of the project *Students Training Students in Healthy Lifestyles: Project SASS as a Model to Promote Sun Safety in Rural Arizona Communities*. This project aims to study the feasibility and efficacy of training high school students in rural southeastern Arizona as peer educators for a youth-oriented skin cancer prevention program, Project Students are Sun Safe (Project SASS). The project involves collaboration with Southeast Arizona AHEC.



Students and faculty from the UA Colleges of Pharmacy, Medicine and Zuckerman College of Public Health worked interprofessionally during Project Taking Charge at the Fred Archer Neighborhood Center in Tucson, Ariz.



Students provided interprofessional team-based care during Project Taking Charge.

One of the medical students remarked:

The most valuable lesson I learned from my participation in the project was our team's joint responsibilities, as future physicians, pharmacists and public health professionals, to ensure the health and well-being of those whom we serve.

PTC was transformational for the participants and the student providers. A larger-scale, longer and comprehensive interprofessional effort will further promote and enhance primary care, disease and illness risk reduction. Opportunities like PTC are needed for more health professions students to foster collaboration, interprofessionalism, trust and mutual respect, ultimately leading to improved patient-centered care, outcomes and patient satisfaction.

Posters about this project were presented by the investigators at the Interprofessional Education Collaborative's fall 2015 conference, *Interprofessional Education: Building a Framework for Collaboration*, in Herndon, Va. and by the pharmacy students at the 2016 Annual Arizona Pharmacy Association Annual Meeting in Chandler, Ariz.

Principal investigators' affiliations: Jenny Chong, research associate professor, UA College of Medicine – Tucson, Department of Neurology; Theodore Tong, associate dean, UA College of Pharmacy; Sheila Parker, lecturer, UA Zuckerman College of Public Health, Health Promotion Sciences Department; Howard Eng, associate professor, UA Zuckerman College of Public Health, Community, Environment & Policy Department; Bruce Coull, professor, UA College of Medicine – Tucson, Department of Neurology.

Barriers to Stroke Prevention in Underserved Communities

Marina G. Martinez, PhD; Chelsea Kidwell, MD; and Jenny Chong, PhD, Principal Investigators

Stroke is the leading cause of adult disability in the U.S. despite advances in prevention and treatment of cerebrovascular disease. Currently, the incidence of stroke in Hispanics is double the rate in whites. Furthermore, Hispanics are more likely to have a recurrent, or secondary, stroke as compared to their white counterparts. Moreover, minority groups suffer from greater neurological impairment, poorer functional outcomes and, in some communities, higher mortality rates from stroke. Studies report that 50–80% of strokes can be prevented, making stroke prevention the greatest opportunity for decreasing stroke incidence and mortality. Evidence-based therapies for stroke prevention are not properly adopted despite endorsement from current national guidelines. Minority populations are less likely to engage in stroke prevention measures than whites, suggesting the existence of unique barriers specific to minorities in the U.S.

With this study, we proposed to assess barriers to risk factor management and stroke prevention in southern Arizona, with a particular focus on barriers within the Hispanic population. The barriers identified in this proposed study will form the foundation of a community-based and culturally-tailored intervention program that will address the management of stroke risk factors among Hispanic stroke survivors with the ultimate goal of reducing stroke-related health disparities within this population. We performed a prospective study of stroke patients from an academic stroke center and surveyed members of the general community in Tucson, Ariz. The results suggest that Hispanic stroke patients perceive less control over their health, experience more health-care barriers and demonstrate lower rates of stroke literacy. Interventions for stroke prevention and education for Hispanics should address these racial/ethnic differences in stroke awareness and barriers to risk factor control.

The results of this study were recently published: Martinez, M., Prabhakar, N., Drake, K., Coull, B., Chong, J., Ritter, L., & Kidwell, C. (2015). Identification of Barriers to Stroke Awareness and Risk Factor Management Unique to Hispanics. *International journal of environmental research and public health*, 13(1), 23.

Dr. Martinez was a post-doctoral research associate at the UA College of Medicine – Tucson, Department of Neurology at the time of the project. Dr. Kidwell is a professor and vice chair of research, and Dr. Chong is a research associate professor at the UA College of Medicine – Tucson, Department of Neurology.



UAHS Career Development Award

Francine C. Gachupin, PhD, MPH, was the recipient of a two-year UAHS Career Development Award, sponsored by AzAHEC during 2014–2016. The UAHS Career Development Award program provides research training and funding opportunities for UA junior faculty members to foster an academic career in clinical and translational research. Dr. Gachupin is the assistant director of the UA Native American Research and Training Center and an assistant professor at the UA College of Medicine – Tucson, Department of Family and Community Medicine.

The goal of Dr. Gachupin’s research is to develop a comprehensive, six-month intensive program that results in sustained healthy lifestyle choices for American Indian youth. Pilot data was collected during the 2015 and 2016 residential American Indian Youth Summer Medical Wellness Camps. Camp participation included 32 youth (6 boys, 26 girls) in 2015 and 62 youth (22 boys, 40 girls) in 2016. The camp was

held in partnership with southwest tribes, including Hopi, Salt River Maricopa Indian Community, Jemez Pueblo, Pascua Yaqui, Yavapai Apache and Gila River Indian Community. In addition, collaborations were established with Hopi to conduct physical assessments during their Be Hopi Be Healthy Day Camp program, which included participation from 198 youth at four camps in 2016.

Preliminary results from these pilot studies underscore the need for continued nutrition education, follow-up with youth to maintain physical activity and the importance of involving parents in interventions. Dr. Gachupin has presented posters about this research at multiple conferences and has been an invited speaker for conferences and webinars, notably for the Indian Health Service Special Diabetes Project for Indians and the National Congress of American Indians. She has secured continued funding for these initiatives, including grants from the Diabetes Action Research and Education Foundation and the Marin Community Foundation.

Understanding the Role of Community Health Representatives in Building Community Resilience in Native Communities

Samantha Sabo, DrPH, MPH, Principal Investigator

AzAHEC funds facilitated a series of face-to-face meetings with several community health representative (CHR) programs, tribal health department directors and American Indian health policy experts throughout the state. Sessions served to explore and assess the challenges and opportunities to strengthen the CHR workforce through voluntary CHR certification and opportune financing mechanisms to build resilience in American Indian communities. These meetings enabled the development of working relationships between the UA Zuckerman College of Public Health, CHR programs and American Indian health policy experts as well as the identification of several opportunities for partnership in research, practice and policy.

We conducted face-to-face meetings with three of the largest CHR programs in the state, including Tohono O’odham, San Carlos Apache and Navajo Nations. In addition, the *Community Health Representative Certification, Reimbursement and Sustainability for Healthy Communities: Policy Summit* brought together CHR programs from across the state to discuss national, regional and state-level developments related to CHR certification, reimbursement and sustainability for healthy communities. The event was attended by 65 people and represented 17 of 22 tribal CHR programs. Several leaders and



CHRs and CHR supporters attending the CHR Policy Summit shared ideas about workforce sustainability.

experts in the field of community health workers (CHWs) and CHRs also discussed major shifts in CHW-related policy and the unique opportunities CHRs have to advance their workforce. This one-time event has evolved into the CHR Movement, which is a broad-based network of CHRs, CHR supervisors, health department directors, AHECs, universities, CHW professional associations and American Indian health policy experts and advocates, all focused on strengthening the CHR workforce in the state.

To further strengthen the CHR Movement, a team of doctoral and masters-level public health students will develop an advocacy toolkit to operationalize the CHR Policy Summit Report findings and recommendations. Our original goal of building individual relationships with CHR programs has

expanded to a much broader and more integrated approach to supporting the CHR workforce.

Through this initiative and in collaboration with our tribal partners, we developed two peer-reviewed presentation abstracts that were accepted in major national and international

conferences, the *2015 American Public Health Association Annual Meeting: Health in All Policies* and the *2015 Pathways to Resilience III Conference: Beyond Nature vs. Nurture*.

Dr. Sabo is an assistant professor at the UA Zuckerman College of Public Health, Health Promotion Sciences Department.

New and Continuing Grant Projects

AzAHEC Grant Program	Award Year	Principal Investigator(s)	Project Title	College/Department	Amount Awarded
Community Engagement Grants	2016	Lois J. Loescher, PhD, RN, FAAN	Students Training Students in Healthy Lifestyles: Project SASS as a Model to Promote Sun Safety in Rural Arizona Communities	UA College of Nursing; Skin Cancer Institute at The University of Arizona Cancer Center	\$50,000
	2015	Jennifer R. Hartmark-Hill, MD, FAAFP	Improvement in management of chronic illness in the urban homeless population in Phoenix through interventions of a multi-institutional, interprofessional, student-run free clinic	UA College of Medicine – Phoenix, Department of Family, Community & Preventive Medicine	\$50,000
		Colleen Cagno, MD	Evaluating an Interdisciplinary Group Prenatal Program to Improve Health Outcomes Among Somali Refugees in Southern Arizona	UA College of Medicine – Tucson, Department of Family & Community Medicine	\$50,000
Faculty Development Research Grants	2016	Jian Gu, PhD; Aparna Sertil, PhD	Microfluidic enabled 3D <i>in vitro</i> model of osteosarcoma for drug development applications	UA College of Medicine – Phoenix, Department of Basic Medical Sciences, Center for Applied Nanobiotechnology and Medicine	\$10,000
		Jui-Cheng Hsieh, PhD	Interaction between the mammalian hairless protein and the p53 pathway in the control of brain cancer proliferation and viability	UA College of Medicine – Phoenix, Department of Basic Medical Sciences	\$10,000
		Rajesh Khanna, PhD	Evaluating novel pain therapeutics targeting sodium channels in human nociceptors for improved success of clinical translatability	UA College of Medicine – Tucson, Department of Pharmacology	\$10,000
		John M. Streicher, PhD; Wei Lei, PhD	Determining the Molecular Mechanism of Functionally Selective cAMP Signaling by Endomorphin Peptides	UA College of Medicine – Tucson, Department of Pharmacology	\$10,000
		Jun Wang, PhD	Exploring multi-component reactions for the discovery of broad-spectrum antivirals targeting influenza viruses	UA College of Pharmacy, Department of Pharmacology and Toxicology	\$10,000
Research and Project Small Grants	2016	Ashley A. Lowe	The Epidemiology and Environmental Determinants of Childhood Asthma in Navajo Nation: A Community Needs Assessment	Arizona Respiratory Center	\$5,000
		Lisa Stoneking, MD	Better Preparing Emergency Medicine Physician Trainees for Rural and Global Practice Settings: a longitudinal component of University of Arizona's South Campus Emergency Medicine graduate medical education curriculum	UA College of Medicine – Tucson, Department of Emergency Medicine South Campus	\$5,000
		Sophie B. Sun, PhD	Health Education Classes to Improve Hypertension and Diabetes in a Homeless Population	UA College of Medicine – Phoenix, Student Health Outreach for Wellness (SHOW)	\$5,000

Regional Center Directors' Reports

Eastern Arizona Area Health Education Center (EAHEC) Activities

Workforce Development Summary - EAHEC

Type of Program	Participation
Health Careers Preparation Participants	2,357
Health Professions Trainee Experiences	72
Continuing Education Health Professional Participants	268
Community Health Education Participants	3,214



Jeri Byrne, BA, MS
Executive Director, Eastern Arizona Area Health Education Center

Eastern Arizona AHEC (EAHEC), based in Globe, Ariz., serves rural communities of Graham, Greenlee, Gila and Pinal counties. We are proud to provide programming and support at all points of the health professions pipeline, including K–12 students, health professions students and practicing health professionals, in support of health-care workforce development and healthy communities. The following highlights EAHEC’s programming during 2015–2016.

Payson High School HOSA Club

EAHEC continues to take a hands-on approach to supporting pipeline health-career programs like the Payson High School HOSA club. During the 2015–2016 academic year, HOSA members focused on chapter excellence for its members and its leadership team. The officer team attended the Officer Leadership Camp in Prescott, Ariz. in September 2015 and



Payson High School HOSA club members competed in state and national events.

designed a great program of work for the year, which included competitive event competitions, school activities, support of the national service project with the Leukemia and Lymphoma Society and community events.

Six members attended the State Leadership Conference in Tucson, Ariz. and competed in the categories of epidemiology, medical photography, health education on the effects of screen usage, extemporaneous health display and health education events. The chapter achieved silver member recognition and now proudly displays the plaque at Payson High School. Five members received bronze-level recognition for additional HOSA activities. The group also submitted a gold-level scrapbook highlighting the HOSA members, activities and events during the academic year. Four of the six members qualified for the National Leadership Conference in June 2016 in Nashville, Tenn., where the group received several chapter recognition awards.

The HOSA members are looking forward to helping with the Payson High School Wellness Conference and other activities. Their program of work is designed around the state HOSA theme “Operation Leadership.” EAHEC’s ongoing support is vital to the success of pipeline programs like HOSA.

Scrubs Nursing Camp

EAHEC continues to sponsor its very successful Scrubs Nursing Camp, with additional support provided by the Henry Mackintosh Foundation and Gila Community College. In June 2016, two camps were held in Globe and Payson, Ariz. Students entering sixth, seventh and eighth grades explored different health careers, gained medical vocabulary and learned from health-care professionals in their community. Each location had three days packed full of lectures and hands-on activities, including dissections, working on manikins and practicing IV



Payson High School HOSA members volunteered at Scrubs Nursing Camp.

blood draws on artificial training arms. Campers also had the opportunity to learn different surgical techniques, such as suturing, stapling and using surgical glue. Tours included the local hospital, the Native Air helicopter and a fire department truck.

Several Payson HOSA members volunteered at the Scrubs Nursing Camp at the Gila Community College campus in Payson. HOSA members helped the campers move through the many hands-on activities and assisted the camp instructors with set-up and flow of the camp.



Middle school students practiced IV blood draws on artificial arms at Scrubs Nursing Camp.

5th Grade Pathways into Health

The 5th Grade Pathways into Health program began in the summer 2011. The San Carlos Apache Tribe was then beginning the blueprints to build a new hospital operated by the tribe. The Pathways program was initiated to support health careers and academic achievement. The program is utilized during the school year at the fifth grade level at San Carlos Intermediate School and St. Charles Parochial School. The science standards for the state of Arizona are used as curriculum guidelines. Within that umbrella, the inquiry method is the foundation for scientific study. During the school year, lessons cover three branches of science—physical, life and space/earth—interweaving the inquiry method within those areas. Weekly one-hour lesson

are presented to seven fifth grade classrooms, and activities/experiments are used as extensions to the lesson so that students can implement the inquiry method.

Summer school is held for a month, and each week is devoted to certain areas of study. The inquiry method, cultural connectivity, health careers and exploration in science are emphasized in the summer curriculum. At the end of each week a field trip is taken, ideally, to extend the lesson. The class load is held at 15 students, two student aides and one college intern. EAHEC provides the funds for the program, including stipends for the high school student aides, field trip expenses and classroom supplies.

The 5th Grade Pathways into Health program aims to motivate and create academically-successful students who will graduate from high school and attend college.

EAHEC remains dedicated to the communities within its service area and works with schools, health-care facilities, the EAHEC Board of Directors, community leaders and local health-care providers to support, develop and implement programs tailored for the region.



Students in the 5th Grade Pathways into Health program conducted experiments to practice the inquiry method.



Students in the 5th Grade Pathways into Health program participated in field trips.

Regional Center Directors' Reports

Greater Valley Arizona Area Health Education Center (GVAHEC) Activities

Workforce Development Summary - GVAHEC

Type of Program	Participation
Health Careers Preparation Participants	659
Health Professions Trainee Experiences	136
Continuing Education Health Professional Participants	2,339
Community Health Education Participants	3,703



Martha McNair, MBA, RDN
Director, Greater Valley Area Health Education Center

The Greater Valley AHEC (GVAHEC) at Empowerment Systems, Inc. has continued to build partnerships and programs during 2015–2016. It has been a year of breaking down silos and integrating programming. We are excited to report the highlights of our programming, partnerships and accomplishments.

Community Health Workers and Workforce Development

GVAHEC, with many other health organizations, is invested in the development of community health workers (CHWs). We see CHWs as vital components in helping our communities achieve optimal well-being. One demonstration of our commitment is our strong partnership with Central Arizona College (CAC) and the development of the new CHW certificate program. Support this year included curriculum guidance on chronic disease self-management, stipends to enrolled students and an

agreement to provide a community site and preceptor for two CAC CHW students at the GVAHEC Apache Junction location. GVAHEC staff began working with the Arizona Living Well Institute to develop a lay leader certification program in our efforts to promote and include the Stanford Chronic Disease Self-Management education curriculum as continuing education for CHWs.

GVAHEC staff has been involved with the newly formed Pinal County Workforce Investment Board through the Workforce Innovation and Opportunity Act (WIOA). Efforts have moved forward to clarify the goals and strategies of the board and to incorporate planning for future health-care workforce needs.

Human Papillomavirus (HPV) Immunization Project Grant

In our second year of the HPV immunization project grant through the National AHEC Organization, GVAHEC staff continued to provide state and regional oversight. We partnered with The Arizona Partnership for Immunization (TAPI), the Maricopa County Department of Public Health and the Arizona Department of Health Services to conduct nine continuing education events in multiple counties. Seminar topics included HPV; adult immunizations; and vaccination safety, storage and handling. More than 900 participants were reached, primarily nurses, physicians and vaccine managers.

The HPV immunization project grant provided an opportunity for GVAHEC interns to participate in HPV data collection and health education. Public health and pharmacy students collected data for an environmental scan, which determined numbers of health professionals providing vaccinations by county and an overview of state legislative policies. An HPV public service announcement for Hispanic/Latino audiences was created and produced by a master of public health student.



Two GVAHEC interns, Hawa Kore (left) and Neha Bomb (right), provided health education at St. Mary's Food Bank in Phoenix.

Health Careers

GVAHEC continued its work with the Combs High School HOSA club and nursing assistant program. We held two Saturday skills labs to help students pass their certification exam. We continued to increase the certified nursing assistant exam pass rate with 100% passing on the knowledge exam and 90% passing on the skills lab.

The Central Arizona Valley Institute of Technology (CAVIT) was an important health career group that we supported this past year. CAVIT medical assistant (MA) students and nursing assistant students regularly participated in the monthly Healthy Harvest program in Apache Junction. MA students conducted health screenings, including blood glucose, blood pressure, respiration and heart rate checks, for more than 100 community members.

GVAHEC continued its partnership with the AzaHEC Future Health Leaders residential summer camp. Nutrition interns conducted the “Food Box Chopped” competition for the third year. Two of our public health students acted as camp chaperones for the full week.



Student Success Story: *Juan Luquin, Combs High School/ Nursing Assistant Program 2015 graduate, is currently working as a CNA, while completing the Mesa Community College RN program. In the future, he plans to transfer to a BSN program.*

physician assistants, social workers and certified health education specialists. GVAHEC provided certifications for a variety of conferences and events, such as the Health Equity

This year, GVAHEC introduced a virtual health career club in an effort to connect with more high school students. Our first event was held in August at the UA Phoenix Biomedical Campus. High school students listened to a talk about applying for medical school, spent two hours at the Center for Simulation and Innovation and participated in a public health epidemiology activity.

Continuing Education

Professional development programming for health-care providers and other professionals in the region is a particular strength of GVAHEC. We provided continuing education for physicians, nurse practitioners, nurses,

conference, Embracing Change conference, the Arizona Coalition for Military Families conference, Arizona Public Health Association’s fall and spring conferences, TAPI trainings and many other events.

Health Professions Programs

GVAHEC continues to provide a wide array of clinical and community field experiences for students from many health professions programs. Students from the A.T. Still University (ATSU) Arizona School of Dentistry and Oral Health (ASDOH) receive valuable community clinical experience working at the Dental Outreach Rural Arizona (DORA) clinic located at our Apache Junction office. Under the supervision of a faculty dentist, fourth-year ASDOH dental students provide dental care for patients in a rural community setting.

Our nutrition internship program continues to grow as we accept more students from the Iowa State University distance dietetic internship program. They join other GVAHEC nutrition interns from programs including the Maricopa County Department of Public Health dietetic internship program, ASU School of Nutrition and Health Promotion dietetic internship program and CAC and Mesa Community College dietetic technician programs. In spring 2016, our GVAHEC students engaged in outreach activities at several senior centers that resulted in the enrollment of more than 200 older adults in the Supplemental Nutrition Assistance Program. Nutrition students created and presented nutrition education utilizing our Blackboard learning platform, which provided students with programming tools, such as community needs assessments, establishing learning objectives and measuring learning outcomes.

Due to the outstanding efforts of our GVAHEC ASU exercise and wellness (EW) students, the K–6 students at Concordia Charter School in downtown Mesa participated in fun, weekly physical activity classes that they otherwise would not receive. The ASU EW students have provided programming at the charter school for four consecutive semesters.

At our GVAHEC Lifebridge campus, Midwestern University PharmD students completed eight-week urban underserved community rotations during the spring and fall semesters. In 2015–2016, the PharmD students assisted with a Walgreens mobile flu shot clinic, participated in our HPV grant vaccination data collection and conducted community immunization education. With the addition of the Midwestern University’s Homeless Outreach through Medicine & Education (HOME) program to the Lifebridge campus, we look forward to building interdisciplinary student teams to provide health-care services to the homeless.

Regional Center Directors' Reports

Northern Arizona Area Health Education Center (NAHEC) Activities

Workforce Development Summary - NAHEC

Type of Program	Participation
Health Careers Preparation Participants	1,151
Health Professions Trainee Experiences	432
Continuing Education Health Professional Participants	3,959
Community Health Education Participants	24,051



Sean Clendaniel, MPH
Director, Northern Arizona Area Health Education Center, North Country HealthCare

The past year has been productive and rewarding at Northern Arizona AHEC (NAHEC) / North Country HealthCare (NCHC). While we have maintained the programming NAHEC has developed over the years, we also discovered new opportunities in practice transformation, research and clinical training. We again worked with three other AHECs for the annual Future Health Leaders (FHL) camp and coordinated the 12th annual Indigenous Pride Health Workers (IPHW) program for Hopi students. The In-A-Box curriculum program completed its inaugural year, with a proposed expansion to Williams and Fredonia in 2017. Eat for Life, our plant-based nutrition program, completed its sixth class and demonstrated improvements in body mass index (BMI), cholesterol, blood glucose levels, stress reduction, sleep and chronic pain for participants. Our continuing education and health professions programs have continued to expand, and we welcomed several talented new team members. We also hosted Jalen Redhair, a health insurance navigator from the UA Center for Rural Health, who completed outreach and enrollment activities throughout the region. We graduated our sixth year of A.T. Still University (ATSU) School of Osteopathic Medicine in Arizona (SOMA) students from the Flagstaff community campus, and five of our previous graduates have now signed contracts to practice in the northern Arizona region. In addition to ATSU-SOMA students, we coordinated rotations for more than 100 students from UA, NAU, Coconino Community College and other local schools. Here are a few program highlights from 2015–2016:

Interprofessional Education (IPE)

NAHEC/NCHC has long been committed to implementing effective interprofessional education and practice (IPEP) within our student experiences and in general clinic operations. Ongoing interprofessional programming includes monthly med-skills sessions with nurse practitioner and second-year osteopathic medicine students, participation in statewide and local IPE one-day events, shadowing and service-learning days. This year, eleven med-skills sessions facilitated by nurse practitioner and physician staff covered topics like ophthalmic exams, contraceptives, splinting and casting, newborn exams and psychiatric evaluations. Twenty-one students attended at least one session, and the program evaluation (53% response rate) showed that these sessions increased students' intent to use interprofessional teams in their future practice. In addition,



NAHEC/NCHC welcomed the ATSU-SOMA Flagstaff community campus class of 2019.

82% of participants stated that they learned something new from working with other disciplines during the activities, and the most common feedback was to expand the training to additional disciplines. We have established an interdisciplinary team to explore and develop IPE rotation standards for all students who rotate through NCHC for clinical learning. We are proud of the effectiveness of our IPE model and look forward to expanding and enhancing student IPE opportunities.

Health-Care Practice Transformation

As a teaching health center, NAHEC/NCHC is constantly leading quality improvement efforts for costs, health outcomes and the patient and provider experience. Historically, NAHEC has been an incubator for practice transformation efforts within the NCHC network, including developing a robust telemedicine program for delivery of education programs and clinical care, integration of IPEP through patient-centered medical home and team-based care initiatives, and utilization of a UA master of public health student project about improving older adult population health through clinical quality improvement. With HRSA's new focus on practice transformation within the AHEC structure, we are excited to expand and improve our practice transformation efforts. New projects include data optimization for research and clinical process improvement as well as enhancement of the student placement workflow within NAHEC/NCHC region to accommodate increasing health professions student enrollment and prevent preceptor burnout.

Research and Informatics

NAHEC/NCHC received our first year of funding for an integrated research and informatics program to build more formal academic-community partnerships between NCHC and Arizona's research institutions, including UA, NAU and others. The program coordinator has been developing a comprehensive data warehouse utilizing patient data and other sources across the NCHC network. Once complete, this data warehouse can be used for internal and external research and quality improvement efforts. We are also participating in several initial research projects, including a study with NAU on health disparities in jail populations, titled "Converging Epidemics that Impact Population Health and Health Care in Coconino County." We look forward to expanding this program in the coming year to help design and implement research projects that address the needs of the northern region communities.

A.T. Still University Community Campus

NAHEC/NCHC just began our ninth year as a community campus for ATSU-SOMA. The SOMA model of distributing the second-, third- and fourth-year medical students to community health centers for clinical education has proven effective at recruiting these students back into rural and underserved communities to practice. Five former students of our community

campus have already signed contracts with NCHC or other health-care providers in the area. This includes Alex Hu, DO, a SOMA graduate who just began his rheumatology practice in Flagstaff and is participating in a National AHEC Organization grant through NAHEC regarding lupus education for primary care providers who serve populations at higher risk for underdiagnosed lupus. Another SOMA graduate, Helen Hill, DO, was awarded the National Public Health Service Award at graduation this year. We are proud to be a community campus for ATSU and look forward to bringing even more graduates back to the northern Arizona region over the coming years, as graduates complete their residencies.

Northern Arizona Provider Group

On the continuing education front, one of our most prolific and long-standing collaborations is with the Northern Arizona Provider Group (NAPG), which was founded in 1990 and has been supported by NAHEC for more than ten years. NAPG has 102 members located throughout rural northern Arizona, including nurse practitioners, physician assistants, registered nurses and other mid-level and allied health professionals. This year, NAPG sponsored nine continuing education programs reflecting the diversity of its membership. Topics included mental health, sleep disorders, oral health, infectious disease, nutrition, orthopedic exam tips, consensus model review and common hand injury management. Attendance averaged 25 participants per session with 88% of members attending at least one session. NAPG also added a new outreach/volunteer program for 2015–2016, which included two health fairs and holiday gift giving for teens in foster care.

Girls on the Run Expansion

Girls on the Run of Northern Arizona (GOTRNA) celebrated its fifth year as a part of NAHEC/NCHC. We have grown

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A girl and her running buddy celebrated crossing the finish line at the 2015 Girls on the Run 5K.

NAHEC

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Girls from Leupp Elementary School participated in a 5K run.



Intern, Hugo Arzola, helped staff the Health Partners desk.

from 20 teams in 2015 to 28 teams and more than 330 girls in fall 2016. We are welcoming new schools and communities from across our region this year, including Many Farms, Williams, Prescott, Cornville and Winslow. The program in Many Farms is a collaboration with the Chinle Comprehensive Healthcare Diabetes and Community Nutrition program and marks our second team on the Navajo Nation. GOTRNA is also proud to have received two new foundation grants this year from the National Women's Sports Foundation and Subway Kids & Sports to support the middle school programs and shoe scholarships for girls, respectively. We awarded the second annual Sara Morley Girls on the Run Spirit Scholarship to Tess Seimons and promoted Marney Babbitt to Girls on the Run council director.

Health Partners

Health Partners is an innovative program designed to address health disparities in low-income populations. The Health Partners desk is located inside of the NCHC Flagstaff clinic. Patients are referred by providers or are free to walk in at their convenience. In addition to supporting patients directly and helping providers get their patients the community support they need, Health Partners is an effective community-based field experience for undergraduate health professions students. The desk is staffed by interns, generally pre-health or pre-behavioral sciences students who have an interest in working with underserved populations and learning to manage complex patient scenarios. NAHEC/NCHC recently enhanced the field experience by developing a curriculum for independent study credit at NAU. This has helped keep the desk consistently staffed and has served to enrich the experience of the students, who are learning first-hand how social determinants of health affect patients in a community health center setting. Since its inception in 2015, Health Partners has helped more than 625 patients.

Summer Research Enhancement Program

In summer 2016, NAHEC hosted two students from the Dine College Summer Research Enhancement Program (SREP). The program's vision is to "prepare Native American students for careers in public health and health research and to strengthen research capabilities of Tribal Colleges and Universities." We were proud to participate in this program and give these undergraduate students the opportunity to work with the patients and staff at a rural community health center. One student worked with the Navajo Nation Ryan White Part B HIV/AIDS program to investigate how HIV status intersects with cultural norms for Navajo individuals and families. The other student worked with the NCHC diabetes program to investigate how the community health worker model can be applied effectively to different programs serving Native American patients.

Looking Ahead

The NAHEC team recently completed a strategic planning session and identified clinical training, practice transformation and data and evaluation as our three programmatic priority areas for the next three years. We intend to focus more resources on community-based clinical training experiences for health professions students who are interested in careers in rural and underserved communities. We will also be implementing our family medicine residency program, which will accept its first year of residents in July 2017 and over time will increase the capacity of the northern region to accommodate more students and learners than ever before.



The NAHEC team held a strategic planning retreat in June 2016.

Regional Center Directors' Reports

Southeast Arizona Area Health Education Center (SEAHEC) Activities

Workforce Development Summary - SEAHEC

Type of Program	Participation
Health Careers Preparation Participants	354
Health Professions Trainee Experiences	154
Continuing Education Health Professional Participants	908
Community Health Education Participants	1,335



Gail Emrick, MPH

Executive Director, Southeast Arizona Area Health Education Center

Southeast Arizona AHEC (SEAHEC) is proud to present the following highlights from 2015–2016.

SEAHEC Health Career Club Students Combat Dengue and Zika

SEAHEC's Future Health Leaders (FHL) program encourages youth from rural, border and tribal communities to consider pursuing health careers. SEAHEC accomplishes this through mentoring, university tours and providing hands-on community projects. One of the 2015–2016 projects engaged teens in citizen science to conduct public health surveillance and learn about environmental health issues.

In response to increased threats of mosquito-borne diseases, the Santa Cruz County Health Department and the Border Infectious Disease Surveillance (BIDS) program of the Arizona Department of Health Services (ADHS) began a pilot project of mosquito surveillance, with SEAHEC as a partner. SEAHEC's Nogales High School club members collected scientific data on the presence of mosquitos in the county.

BIDS staff educated students on mosquito-borne disease and prevention and trained students to collect data using ovitraps, which are devices to trap and contain insect eggs. Students conducted trappings following strict protocol, and BIDS staff recorded presence or absence of mosquito eggs. Project outcomes included increased student knowledge of mosquito-borne disease, eliminating mosquito breeding sites and avoiding mosquito bites. Students enjoyed the hands-on activities, such as examining mosquito eggs, and the opportunity to help their community. One student summarized the best part of the project as knowing the work "would affect Santa Cruz County in a positive way." Motivating future health professionals is the essence of AHEC pipeline work.

During 2015–2016, SEAHEC supported nine health career clubs with 129 high school student members. Among 23 graduating seniors surveyed, 18 applied and were accepted into college.

Students Join Fight the Bite Campaign to Prevent Mosquito-Borne Illness in Santa Cruz County

The Border Latino & American Indian Summer Exposure to Research (BLAISER), a new UA program, has provided SEAHEC another opportunity to help prepare health professions students for real-world practice. In summer 2016, SEAHEC hosted 19 students for a two-day immersion in border health. SEAHEC has been working with ADHS and other partners to stop the spread of mosquito-borne illnesses through its Fight the Bite education campaign. BLAISER students joined the campaign, building on efforts by FHL students and students in the UA College of Medicine – Tucson's Focusing Research in the Border Area (FRONTERA) program. BLAISER students conducted community surveys in southern Arizona to assess knowledge of mosquito-borne illnesses and provide information on prevention. In total, BLAISER and FRONTERA students helped collect more than 200 community surveys to be utilized by ADHS to develop educational messages.

Advocating for the CHW Workforce at the National AHEC Organization 2016 Conference

At the National AHEC Organization 2016 Conference, SEAHEC, the Arizona Community Health Workers Association (AZCHOW) and the UA College of Medicine – Tucson Department of Family and Community Medicine highlighted the growing and important role of community health workers (CHWs) in primary care. SEAHEC elaborated on the AHEC role in supporting our statewide professional association of CHWs. Floribella Redondo, coordinator of SEAHEC-led Casa Saludable Consortium and president of the AZCHOW board, spoke about our HRSA-funded effort to increase access to care through enrollment into health insurance coverage. To date, utilizing CHWs at the center of outreach, our efforts have contributed to more than 5,000 people enrolling in health plans in Pima, Santa Cruz and Cochise counties.

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SEAHEC

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Colleen Cagno, MD, with the UA College of Medicine – Tucson Department of Family and Community Medicine, presented on an innovative program, integrating medical residents and CHWs to provide prenatal group education to Somali refugees. The project is funded by an AzaHEC Community Engagement Grant and involves collaboration with SEAHEC and the International Rescue Committee. Medical resident, Omavi Bailey, MD, provided his perspective on the value of working alongside CHWs.

Summer 2016 Future Health Leader Camps a Success

One of SEAHEC's most inspiring youth activities are the annual week-long FHL summer camps, which are packed with exciting opportunities to explore health careers, develop friendships and leadership skills, prepare for college and learn about the latest advances in the health-care industry. The AHEC FHL Summer Camp and the Tohono O'odham Summer Camp were held in June 2016.

The Tohono O'odham FHL Summer Camp provided an exploration of health careers in the context of Tohono O'odham cultural heritage. The students explored a number of topics related to practicing as health professionals in the Tohono O'odham community. Students stayed at the Tohono O'odham Community College campus dorms. Activities included a tour of Sells Indian Hospital; building adobe bricks in the traditional O'odham manner; hands-on learning at the Arizona Simulation Technology and Education Center (ASTEC) at the UA College of Medicine – Tucson; earning CPR and first aid certification; and participating in a service learning activity at the Tohono O'odham Archie Hendricks, Sr. Skilled Nursing Facility.

The AHEC FHL Camp included students from the EAHEC, GVAHEC, NAHEC and SEAHEC regions. Students spent the week at the University of Arizona Tucson campus, and the camp themes were building bonds, medical biology, community service and college success. Activities included earning CPR and first aid certification; touring the UA Colleges of Medicine,



AHEC FHL camp participants earned CPR and first aid certification.

Nursing and Pharmacy; and participating in hands-on activities at ASTEC. Students also volunteered at the local food bank, explored public health topics and participated in learning sessions on behavioral health.



SEAHEC FHL Alumnus Pursues Public Health

The long-term impact of SEAHEC's youth investment is demonstrated when alumni of SEAHEC's FHL program continue on their educational path in pursuit of health careers, returning to participate in training events as college-level health professions students. Raymond Larez, Douglas High School FHL Med-Club class of 2008, has returned to SEAHEC twice to take advantage of service learning opportunities in Nogales, Ariz. In 2014, he participated in the FRONTERA program, along with former classmate, Kimberly Escarcega. Now as a master of public health student at the UA Zuckerman College of Public Health, Larez volunteered to participate in the Interprofessional Border Health Service Learning Experience, a collaboration between the college and SEAHEC.



Raymond Larez is an FHL alumnus and a current graduate student at the UA Zuckerman College of Public Health.

Larez joined SEAHEC's FHL program during his sophomore year at Douglas High School. He remembers participating in club activities that exposed him to college campus tours, college application preparation, the certified nursing assistant (CNA) program and other health career preparation activities. After graduating from high school in 2008, Larez enrolled at the UA, where he majored in nutritional science and went on to pursue graduate studies in public health.

Larez credits SEAHEC's Med-Club for making his graduate studies in public health possible. Being part of the club helped to alleviate his anxiety about applying to college, and the opportunities the club offered boosted his confidence in pursuing a career in health. His advice for current club members and other high school students is:

Take advantage of the opportunities, and even though it may be intimidating, just push through and be open-minded.

Larez plans to work in public health administration and is contemplating enrolling in medical school. He is definitely interested in serving rural, underserved populations. Larez's story illustrates how providing pathways for youth advancement renders invaluable returns for the mission to grow our own health-care providers.

Regional Center Directors' Reports

Western Arizona Area Health Education Center (WAHEC) Activities

Workforce Development Summary - WAHEC

Type of Program	Participation
Health Careers Preparation Participants	2,777
Health Professions Trainee Experiences	111
Continuing Education Health Professional Participants	1,209
Community Health Education Participants	22,433



Elizabeth Arredondo, BA
Director, Western Arizona Area Health Education Center

Regional Center for Border Health, Inc. (RCBH) / Western Arizona AHEC (WAHEC) is proud to provide the following 2015–2016 achievements.

Yuma County Community Integrated Paramedic Program

RCBH/WAHEC and the City of Somerton Cocopah Fire Department have collaborated in an effort to address gaps in health-care delivery, specifically addressing the health-care needs of residents in Somerton, Ariz. who have been identified by the San Luis Walk-In Clinic, Inc. (SLWIC) as high-risk patients. The program consists of patient home visits jointly conducted by a fire department paramedic and a family care coordinator, who follow up on each patient’s treatment and vitals as well as provide patients with education on health, safety, medication compliance and other health-related topics. The program focuses on providing assistance to patients with chronic illness, diabetes, hypertension, COPD and asthma to avoid unnecessary emergency department visits and readmissions to the hospital. A total of 32 patients currently participate in the program, and patients receive weekly, biweekly or monthly visits depending on their individual needs. The Yuma County Community Integrated Paramedic Program was honored with the 2016 Inspiring Rural Health Program Award at the 43rd Annual Arizona Rural Health Conference in Flagstaff, Ariz. This award recognizes a local- or state-level community-based program that involves one or more health professionals or entities and promotes the development of rural health deliveries systems.

Mental Health First Aid for Youth, Adults and Veterans

RCBH/WAHEC continues to work in partnership with the AmeriCorps National Community Service Network to deliver the youth mental health first aid curriculum. This curriculum is primarily designed for adults who interact with young people. The course introduces common mental health challenges for youth, reviews typical adolescent development and teaches a five-step action plan for how to help young people in both crisis and



Yuma County Juvenile Detention staff completed training in youth mental health first aid.

non-crisis situations. Topics covered include anxiety, depression, substance use, disorders in which psychosis may occur, disruptive behavior disorders (including attention-deficit/hyperactivity disorder) and eating disorders. During 2015–2016, the trainings were provided to teachers, juvenile detention staff, probation officers, college professors, community college housing support staff, school counselors, law enforcement professionals, behavioral health case managers, foster parents and community members. In addition, RCBH/WAHEC works with two certified staff members, who facilitate the adult and veteran mental health first aid trainings throughout Yuma, Mohave and La Paz counties. Mental health first aid skills can be applied anytime, anywhere and for anyone in distress. Total number of participants trained included 158 in youth mental health first aid, 25 in adult mental health first aid and 31 in veteran mental health first aid.

College of Health Careers Clinical Practice

Since 2007, RCBH/College of Health Careers has been dedicated to establishing a pipeline for growing our own health-care workforce in western Arizona. The mission is to engage local health-care industries and address their health-care workforce needs as well as work closely with medically-underserved and health professional shortage areas. RCBH/WAHEC and the College of Health Careers have more than 49 affiliation agreements with local medical facilities, assisted living centers, restaurants, pharmacies and behavioral health agencies where students conduct their practicum experiences after completing required classroom

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WAHEC

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hours. Students are placed with local organizations in Yuma, La Paz and Mohave counties to conduct clinical rotations in areas where medical professionals are needed. The College of Health Careers offers the following trainings that require clinical externship: medical office specialist, nursing assistant, medical assistant, pharmacy technician, nutrition and food service management, phlebotomy technician and behavioral health technician. The College of Health Careers offers certified nursing assistant training in Lake Havasu City and Parker, Ariz. Student job placement and pipelines to employment are tracked in order to meet the ongoing need for health-care professionals in rural and underserved areas. The College of Health Careers is proud to have graduated a total of 1,113 students, year to date. Among 2014–2015 graduates, the overall job placement rate was 84%, and the retention rate was 91%. Job placement rates for 2014–2015 graduates by profession were as follows:

- ▶ Medical office specialist: 88%
- ▶ Electronic health records: 100%
- ▶ Certified nursing assistant: 70%
- ▶ Pharmacy technician: 80%
- ▶ Phlebotomy technician: 73 %
- ▶ Direct care worker: 100%
- ▶ Caregiver: 100%
- ▶ Nutrition and food service management: 75%
- ▶ Medical coder and biller: 73%



Faith Mendoza was the first Lake Havasu HOSA member to qualify for the National Leadership Conference.

HOSA Leadership Conferences

RCBH/WAHEC is a proud sponsor of HOSA clubs in Mohave, La Paz and Yuma counties. A total of 531 members participated in seven HOSA clubs during 2015–2016. San Luis High School and Lake Havasu High School HOSA clubs participated in the State Leadership Conference

in Tucson, Ariz. in April 2016. Both clubs had members who qualified to participate in the National Leadership Conference, which took place in Nashville, Tenn. in June 2016 with 8,500 student participants. Faith Mendoza, Lake Havasu HOSA club member, received the bronze medal in human growth and development at the state conference, and she earned second place at the national conference. She was the first Lake Havasu HOSA member to qualify for the National Leadership Conference.

Arizona Rural Health Association

RCBH/WAHEC supported the Arizona Rural Health Association (AzRHA), providing in-kind contributions for staff and office space. AzRHA advocates on behalf of the health needs of rural Arizonans at national, state and local levels.



The 2016 AzRHA Youth Leadership Conference inspired students to become leaders in their communities.

Youth Leadership Conference

RCBH/WAHEC and AzRHA co-sponsored the 2016 AzRHA Youth Leadership Conference in San Luis, Ariz. The purpose of the Youth Leadership Conference is to inspire students to become leaders in their communities, and this year's theme was "Leading through Action." Other stakeholders and sponsors included the City of Douglas, City of San Luis, City of Somerton, Cenpatico, Legacy Foundation of Southeast Arizona, SEAHEC, the Center for Academic Success and the Portable Practical Educational Preparation (PPEP) program in Douglas. RCBH/WAHEC invited local colleges and universities to set up informational booths for students to obtain career information. The keynote speaker, Tim D. Hardy, director of Yuma County Juvenile Justice Center, talked about "Mental Time Travel" and how to become a leader in the community. Students also had the opportunity to participate in several hands-on sessions. A total of 65 students participated in conference.

Integrated Primary Care with Behavioral Services

In October 2015, RCBH/WAHEC and SLWIC, a rural health clinic, became a specialty provider with the integration of primary care with behavioral health services. In May 2016, RCBH/WAHEC became a behavioral health services intake and coordination of care agency in Yuma County. The integrated health care model offers substance abuse evaluations and treatment, family and individual therapy, anger management sessions, family support services, driving under the influence (DUI) screenings, domestic violence, integrated health services, psychiatry telehealth services, treatment and education services, group support counseling services, and adult and children services. This model of care presents the opportunity to actively participate with both primary care and mental health providers in care delivery. Integrated primary care combines medical and

behavioral health services to fully address the spectrum of health issues that patients bring to their primary medical provider.



RCBH/WAHEC began using an integrated care model combining medical and behavioral health services.

AzAHEC Spotlight on Diversity

Diversity and AzAHEC's Health Career Preparation Pipeline Programs

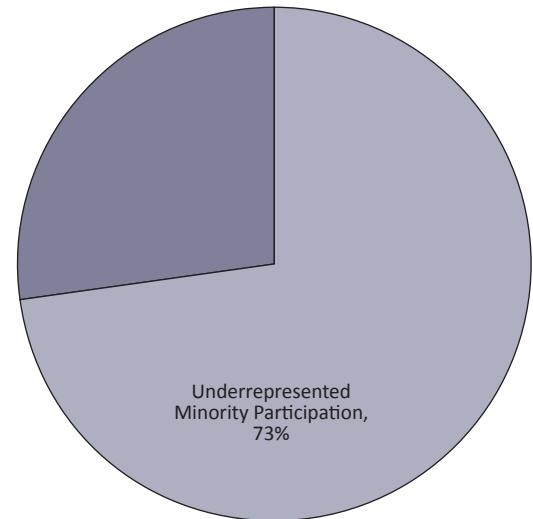
Inequalities in health are disproportionately experienced among groups of different racial, ethnic, and socioeconomic status. Diversity is synonymous with the residents of Arizona. Improving health disparities hinges upon improving the diversity of Arizona's health workforce. Our AzAHEC regional centers are on the frontline of improving the diversity of those interested in pursuing health careers. During 2015–2016, more than 7,000 individuals participated in health career preparation programs delivered by our regional centers. Using high school career clubs as a community-based proxy, close to 75 percent of health career preparation participants are from underrepresented ethnic/racial groups, thus reflecting the diversity of Arizona (see highlighted summary figures below). In the reports provided by each regional center, brief synopses describe the nature of these programs.

A Selection of Health Career (K–12) Preparation Programs

- ▶ Camp Not-A-Choo
- ▶ Coconino High School Employment Fair
- ▶ Combs High School Community Health Fair
- ▶ Forensic Science Day
- ▶ Future Health Leaders Camps
- ▶ Girls on the Run
- ▶ Grand Canyon University Health Science
- ▶ HOSA (Health Occupations Students of America) Meetings and Leadership Conferences
- ▶ Med-Start Summer Camp
- ▶ Midwestern University Health Science Day
- ▶ Northern Gila County College and Career Fair
- ▶ Payson High School Wellness Conference
- ▶ Pharmacy Camp
- ▶ Skills for Workplace Success
- ▶ STEM (Science, Technology, Engineering and Mathematics) Conference
- ▶ Summer Scrubs Nursing Camps
- ▶ Teen Health Fair
- ▶ UA Health Science Day
- ▶ Yavapai County Teen Maze
- ▶ Youth Leadership Conference

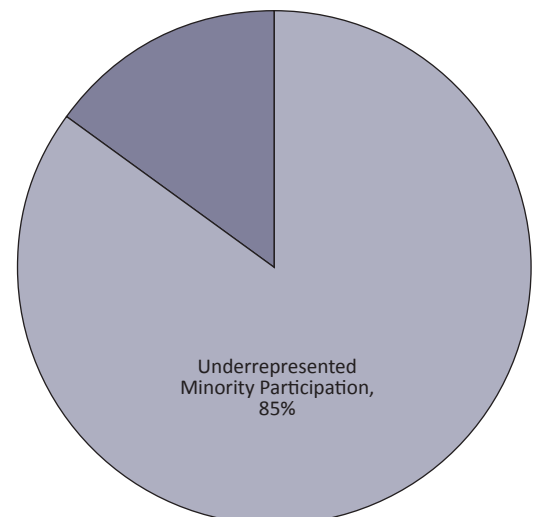
Diversity of Students in Health Career Clubs throughout Arizona

Total Clubs = 21; Total Students = 802



Diversity of Students in Health Career Clubs in the Arizona-Mexico Border Region

Total Clubs = 13; Total Students = 494

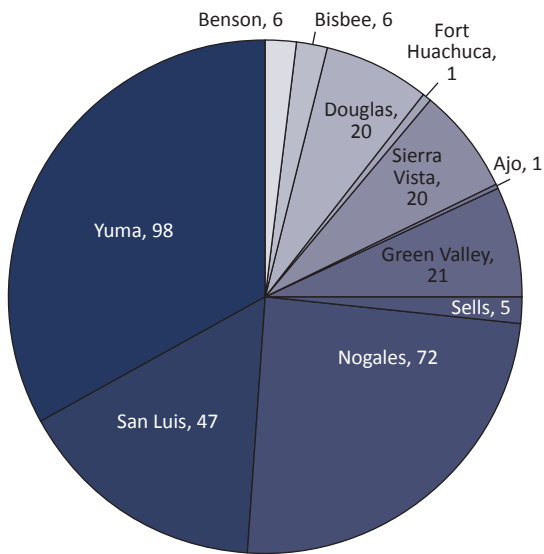


AzAHEC Spotlight on the Border

Health Professions Trainee Field Experiences in the U.S.-Mexico Border Region, FY 2016

Border health is complex—an intersection of local and international issues play a factor in high health disparities among border populations. The UA’s commitment to improving health at the border is long-standing, and for decades, two of our AzAHEC regional centers—SEAHEC and WAHEC—have supported extensive health education training programs, health promotion programs, and improved access to care for border residents. Health professions trainee education in border settings is important to assure a robust pipeline of health-care providers for the future. The following section highlights the FY 2016 health professions field experiences in Arizona communities within 60 miles of the U.S.-Mexico border.

Health Professions Field Experiences in Arizona Communities within 60 Miles of the U.S.-Mexico Border, N=297



County	Community
Cochise	Benson
	Bisbee
	Douglas
	Fort Huachuca
	Sierra Vista
Pima	Ajo
	Green Valley
	Sells
Santa Cruz	Nogales
Yuma	San Luis
	Yuma

Field experiences were reported by the RHPPs at the UA, ASU and NAU; the UA College of Medicine at South Campus family medicine and internal medicine rural programs; the UA Zuckerman College of Public Health Phoenix program and the AzAHEC regional centers.

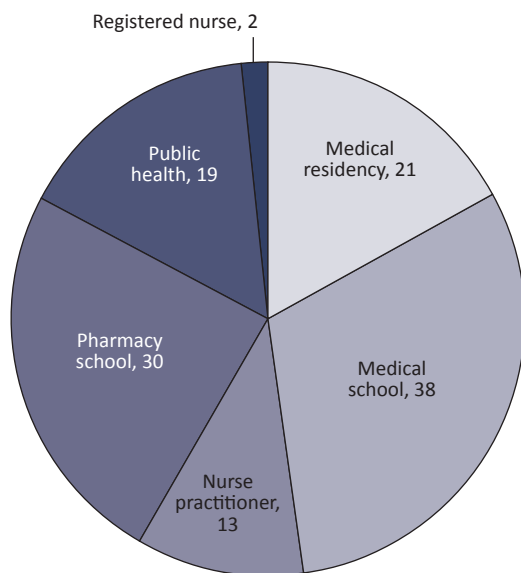
Health Professions Field Experiences and Contact Hours by Discipline in Arizona Communities within 60 Miles of the U.S.-Mexico Border

Academic Discipline/Program	Community	# Field Experiences	Contact Hours	Total Field Experiences	Total Contact Hours
Dentistry and dental hygiene	Nogales	2	190	2	190
Medical residency	Green Valley	13	640	21	2,230
	Nogales	8	1,590		
Medical school	Bisbee	6	1,400	48	7,094
	Douglas	4	560		
	Green Valley	2	480		
	Nogales	20	1,174		
	Sells	1	240		
	Sierra Vista	3	560		
	Yuma	12	2,680		
Nurse practitioner	Fort Huachuca	1	153	26	4,224
	Green Valley	6	1,200		
	Nogales	1	24		
	San Luis	9	828		
	Sells	1	480		
	Sierra Vista	5	834		
	Yuma	3	705		
Nursing or medical assistant	Nogales	1	240	60	5,320
	San Luis	7	840		
	Yuma	52	4,240		
Other allied health	Nogales	3	840	42	4,480
	San Luis	23	1,940		
	Yuma	16	1,700		
Pharmacy school	Benson	4	800	31	4,936
	Douglas	1	160		
	Nogales	10	1,056		
	San Luis	1	160		
	Sells	3	520		
	Sierra Vista	7	1,280		
Physical and occupational therapy	Nogales	1	30	2	190
	San Luis	1	160		
Physician assistant	Ajo	1	160	26	4,760
	Benson	1	160		
	Nogales	9	2,160		
	San Luis	6	820		
	Sierra Vista	1	160		
	Yuma	8	1,300		
	Public health	Benson	1		
Douglas		15	600		
Nogales		8	450		
Registered nurse, nurse anesthetist, or nurse midwife	Yuma	1	80	10	651
	Nogales	5	138		
	Sierra Vista	4	433		
Social work and behavioral health	Yuma	1	80	4	135
	Nogales	4	135		
TOTAL				297	35,500

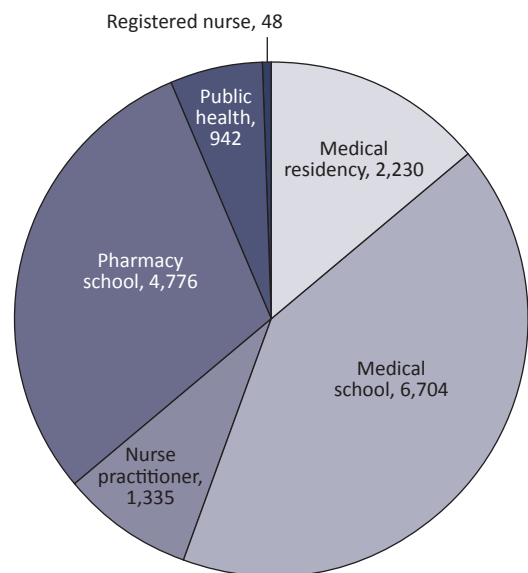
UA Health Professions Field Experiences in Arizona Communities within 60 Miles of the U.S.-Mexico Border

County	Community	Academic Discipline/Program	# Field Experiences	Contact Hours	Total Field Experiences	Total Contact Hours
Cochise	Benson	Pharmacy school	4	800	4	800
	Bisbee	Medical school	6	1,400	6	1,400
	Douglas	Medical school	4	560	20	1,320
		Pharmacy school	1	160		
		Public health	15	600		
	Fort Huachuca	Nurse practitioner	1	153	1	153
	Sierra Vista	Medical school	3	560	12	1,944
Nurse practitioner		2	104			
Pharmacy school		7	1,280			
Pima	Green Valley	Medical residency	13	640	18	1,480
		Medical school	2	480		
		Nurse practitioner	3	360		
	Sells	Medical school	1	240	4	760
		Pharmacy school	3	520		
Santa Cruz	Nogales	Medical residency	8	1,590	35	3,844
		Medical school	10	784		
		Nurse practitioner	1	24		
		Pharmacy school	10	1,056		
		Public health	4	342		
		Registered nurse	2	48		
Yuma	San Luis	Nurse practitioner	5	484	6	644
		Pharmacy school	1	160		
	Yuma	Medical school	12	2,680	17	3,690
		Nurse practitioner	1	210		
		Pharmacy school	4	800		
TOTAL					123	16,035

UA Health Professions Field Experiences by Discipline in Arizona Communities within 60 Miles of the U.S.-Mexico Border, N=123



UA Health Professions Field Experience Contact Hours by Discipline in Arizona Communities within 60 Miles of the U.S.-Mexico Border, Total=16,035 hours



AzAHEC Spotlight on Community-Based Training

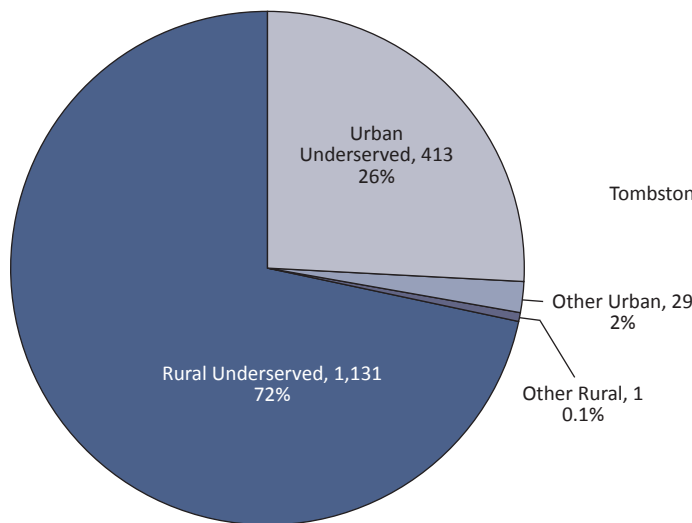
Field Experience Sites Training UA Students and Residents

The training of our students and residents in rural and urban medically-underserved communities is made possible by the generosity and volunteered time of health-care providers throughout the state. AzAHEC and its supported programs are deeply grateful for this dedicated network of preceptors who are integral partners in preparing students and residents to practice culturally-competent, patient-centered, team-based care.

The following charts and table highlight the training settings and site types of students from UA RHPP colleges and residents from the UA College of Medicine at South Campus family and internal medicine programs during a three-year period, FY 2014–2016. In total, students and residents trained at 227 community-based sites throughout the state. Notably, 72% of field experiences occurred in rural underserved communities, 23% within 60 miles of the U.S.-Mexico border and 43% at unique site types for underserved practice.

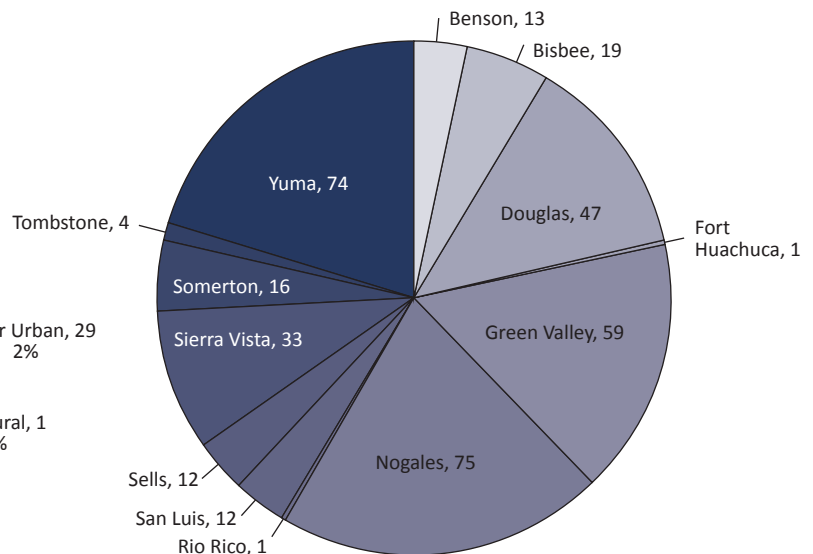
UA Student and Resident Field Experiences by Site Setting, FY 2014-2016

N = 1,574



UA Student and Resident Field Experiences in the U.S.-Mexico Border Region, FY 2014-2016

N = 366



Analysis uses the rural definition according to ARS § 15-1754. Underserved characterization is based on formal medically-underserved community designations by the Arizona state or federal government. Percentages may not sum to 100 due to rounding.

UA Student and Resident Field Experiences by Unique Site Types for Underserved Practice, FY 2014–2016

Description	# Training Sites	# Field Experiences	Total Training Hours
Critical Access Hospitals	8	75	15,734
Federally Qualified Health Centers (FQHCs) and Look-Alikes	33	369	63,722
Indian Health Service (IHS) and tribal-affiliated sites*	21	247	44,561
Rural Health Clinics	5	32	5,512

**IHS and tribal-affiliated sites that are FQHCs or critical access hospitals are included in both applicable totals. Four training sites and 43 field experiences have dual characterization.*

Financial Review: Fiscal Year 2016

As in years past, the Arizona AHEC Program received funding allocations from state and federal sources (Chart F1, Table F1). The fiscal year dates vary by funding source. The federal grant fiscal year is September 1 to August 31, and the state fiscal year is July 1 to June 30. The fiscal year (FY) 2016 federal allocation of \$517,750 was provided by the U.S. Department of Health and Human Services, Health Resources Services Administration, Bureau of Health Professions Model AHEC grant award. This federal award requires the AHEC regional centers to receive 75 percent of the funds with the remaining 25 percent supporting the program office. Continuation of the Model AHEC award is contingent upon matching non-federal funds.

State funds are allocated to the Arizona AHEC Program through the Arizona State Lottery (per ARS § 5-572C). All state lottery payments received by the Arizona AHEC Program by the close of the current fiscal year are utilized in the operating budget for the following fiscal year. State funding for FY 2016 operations was \$4,746,883. This amount corresponds to lottery payments distributed based on FY 2015 lottery performance. The total AHEC fund balance at the end of FY 2016 was \$12,387,205, which consists of a carry forward reserve of \$7,575,274 (see Table F2) and total lottery payments received during FY 2016 of \$4,811,931. The FY 2016 lottery payments are utilized in the FY 2017 operating budget. The Arizona AHEC Program carry forward reserve enables investment in innovative multi-year initiatives to develop the State's health professions workforce by ensuring the stability and sustainability of funding.

The AHEC regional centers receive their annual funding allocations via subcontracts administered through the AHEC program office at the University of Arizona (project period: Sep. 1 – Aug. 31; see Table F3). Program office costs are supported by federal and state dollars (see Table F2).

Table F1. FY 2016 Arizona AHEC Program: Federal and State Funding Allocations

Funding Source	Amount
Federal Funds	
FY16 Federal Model AHEC Grant	\$517,750
State Funds	
Arizona Lottery Distribution	\$4,746,883
Total State and Federal Allocations	\$5,264,633

Chart F1. FY 2016 Arizona AHEC Program: Funding Allocations

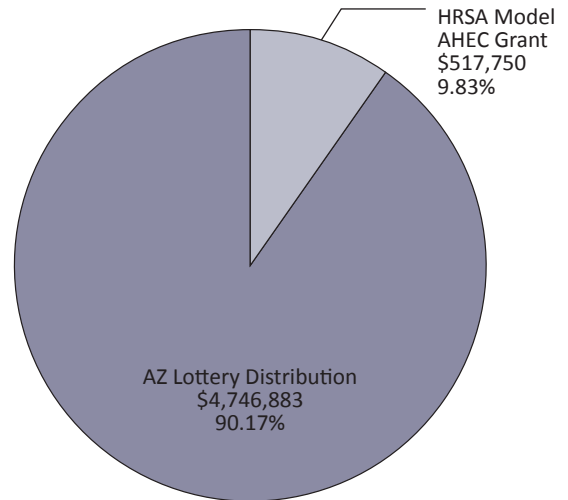


Table F2. FY 2016 Arizona AHEC Program: Federal and State Operating Funds & Expenditures

Funding Source	Amount
Federal Funds	\$525,616
<i>(includes part of FY 2015 allocation distributed in FY 2016)</i>	
Lottery Funds	\$4,746,883
Sub-Total	\$5,272,499
Expenditures	
Program Administration & Operations	\$770,652
Five Regional AHEC Centers	\$2,577,502
<i>(includes part of FY 2015 allocations distributed in FY 2016)</i>	
Statewide Programming Support	\$1,348,940
Sub-Total	\$4,697,094
FY 2016 state funds carried forward	\$575,405
Beginning FY 2016 carry forward reserve	\$6,999,869
Ending FY 2016 carry forward reserve	\$7,575,274

Table F3. FY 2016 Arizona AHEC Program: Allocations to the Five Regional Centers

Funding Source	Eastern Arizona AHEC	Greater Valley AHEC	Northern Arizona AHEC	Southeast Arizona AHEC	Western Arizona AHEC
Federal					
Model AHEC	\$76,252	\$76,252	\$76,159	\$76,252	\$76,252
State					
Lottery	\$430,298	\$430,298	\$430,298	\$430,298	\$430,298
Total	\$506,550	\$506,550	\$506,457	\$506,550	\$506,550

Note: FY16 subcontract award period is from 9/1/2015–8/31/2016.

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Arizona Department of Health Services

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Hospice of the Valley

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UA Cooperative Extension

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Patricia Tarango

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Bureau of Health Systems Development
Arizona Department of Health Services

Amy Waer

Associate Dean for Medical Student Education
Associate Professor of Surgery
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Ronald Weinstein

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Note: All members are faculty within UAHS

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Professor, Pharmacy Practice and Science
UA College of Pharmacy

ARIZONA AHEC Program Regional Centers 2015–16

Contact Us!

Eastern Arizona AHEC (EAHEC)

SERVICE REGION: Gila, Graham, Greenlee
Counties and portions of eastern and
southern Pinal County
5880 S. Hospital Drive, Suite 115
Globe, AZ 85501-9449
(Mailing) PO Box 572 ZIP: 85502
928-402-8054

Greater Valley AHEC (GVAHEC)

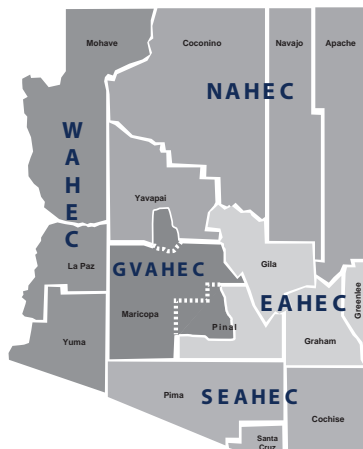
SERVICE REGION: Maricopa County and
portions of west-central Pinal and
south-central Yavapai Counties
c/o Empowerment Systems, Inc.
2066 West Apache Trail, Suite 116
Apache Junction, AZ 85120-3733
480-288-8260

Northern Arizona AHEC (NAHEC)

SERVICE REGION: Apache, Coconino, Navajo
Counties and eastern portions of Yavapai County
c/o North Country HealthCare
2920 North Fourth Street
Flagstaff, AZ 86004-1816
(Mailing) PO Box 3630, ZIP: 86003
928-522-9860

Southeast Arizona AHEC (SEAHEC)

SERVICE REGION: Cochise, Pima,
Santa Cruz Counties
1171 West Target Range Road
Nogales, AZ 85621-2415
520-287-4722



Western Arizona AHEC (WAHEC)

SERVICE REGION: La Paz, Mohave,
Yuma Counties
Regional Center for Border
Health, Inc.
214 West Main Street
Somerton, AZ 85350-0617
PO Box 617 Somerton, 85350
928-276-3414



THE UNIVERSITY OF ARIZONA
Arizona AHEC
Area Health Education Centers

The Arizona AHEC Program is administered through the University of Arizona and is responsible to the Senior Vice President for Health Sciences. The University of Arizona Health Sciences includes the UA College of Medicine – Tucson, UA College of Medicine – Phoenix, UA College of Nursing, UA College of Pharmacy, and the UA Mel and Enid Zuckerman College of Public Health.

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