





A call to action from the Purdue University Center for Health Equity and Innovation

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Abstract

The Purdue University College of Pharmacy established the Center for Health Equity and Innovation (CHEI) to provide students, faculty, and internal and external partners with a coordinating center whose primary purpose is to address inequities in the social determinants of health. Through this article the development of the center, the interdisciplinary activities the center is currently engaged in, ongoing educational efforts to provide instruction related to equity, and research endeavors designed to better understand the impact of our efforts are described. Pharmacists and colleges/schools of pharmacy must optimize health equity efforts with interdisciplinary partners by: (1) providing student opportunities to learn about diverse populations through engagement and integration with communities, (2) encouraging students to identify and lead health equity initiatives, (3) incorporating health equity engagement and track impact of efforts designed to address inequity into annual review and promotion processes, (4) creating and participating in health equity training opportunities, and (5) developing a formal structure for collaborative networks to align health equity efforts. These five strategies and examples are not intended to be prescriptive, but rather, an opportunity to synergize and cultivate further discussion of work in health equity across colleges/schools of pharmacy.

KEYWORDS

access, DEIA, diversity, equity, health disparities, health equity, inclusion, minority, social determinants of health, underserved

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1 | INTRODUCTION

Health equity means that everyone has social justice and opportunities to be as healthy as possible, which is commonly impacted by the social determinants of health.¹ The social determinants of health are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.² The overall lack of accessible health care providers and increasing rates of provider burn out will likely only increase the need for pharmacists, the most accessible health care provider, to take on the responsibility of addressing health inequities and connecting resources to the communities they serve. With the growing recognition of the importance of addressing needs related to the social determinants alongside clinical care needs, pharmacy landscape must evolve to be more aware of the broader systemic issues facing populations who are underserved.

In response to these emerging trends, the Purdue University College of Pharmacy established the Center for Health Equity and Innovation (CHEqI) to provide students, faculty, and internal and external partners with a coordinating center whose primary purpose is to address inequities in the social determinants of health. Through this article the development of the center, interdisciplinary activities the center is currently engaged in, ongoing educational efforts to provide instruction related to equity, and research endeavors designed to better understand the impact of our efforts are described.

It is the goal that this example of Purdue's experience in establishing, designing, and implementing CHEqI will be helpful in informing the approaches of other colleges of pharmacy in responding to the growing needs for integration of social determinants of health and equity considerations in all facets of pharmacy education, practice, and research.

2 | CHEqI BACKGROUND

In January 2020, the CHEqI was formed within Purdue University's (PU) College of Pharmacy. Since its inception, CHEqI has collaborated with both internal and external partners to conduct and support interdisciplinary efforts to mitigate health inequities. The process for identifying and engaging with community partners has evolved with time. It initially began as an organic process that tapped into existing partnerships and networks within communities who are underserved and has developed into a more strategic approach. Early initiatives that demonstrated initial success were then built upon. CHEqI is committed to working with communities and community-based organizations in a bottom-up approach to improve health equity through reciprocity, equitable distribution of resources, and shared decision-making. The mission of CHEqI is to address the needs of populations who are underserved and/or historically marginalized, locally and globally. CHEqI's vision is to reduce health inequities through innovative strategies. CHEqI does this by implementing and supporting initiatives to improve preventive healthcare, access to care, and care optimization, with a focus on the social determinants of health (Figure 1).

Purdue selected Dr. Jasmine Gonzalvo, Clinical Professor of Pharmacy Practice, to serve as the Director of CHEqI given her experience in researching, teaching, engaging in care, and advocating for policies designed to advance services for populations who are underserved. Faculty from both the College of Pharmacy and the Department of Public Health collaborate to provide leadership of CHEqI efforts.³ Organized retreats with CHEqI leadership have helped advance CHEqI's mission and strategy. CHEqI's efforts are funded through the College of Pharmacy, donor gifts, and grant support.

CHEqI has worked with communities to identify, address, and mitigate health inequities in innovative ways. Below, many of these initiatives across the areas of engagement, teaching, and research are described.

3 | ENGAGEMENT

Engagement is at the core of CHEqI's mission, which includes understanding contextualized health inequities, developing collaborative partnerships, and identifying innovative solutions to achieve equity.

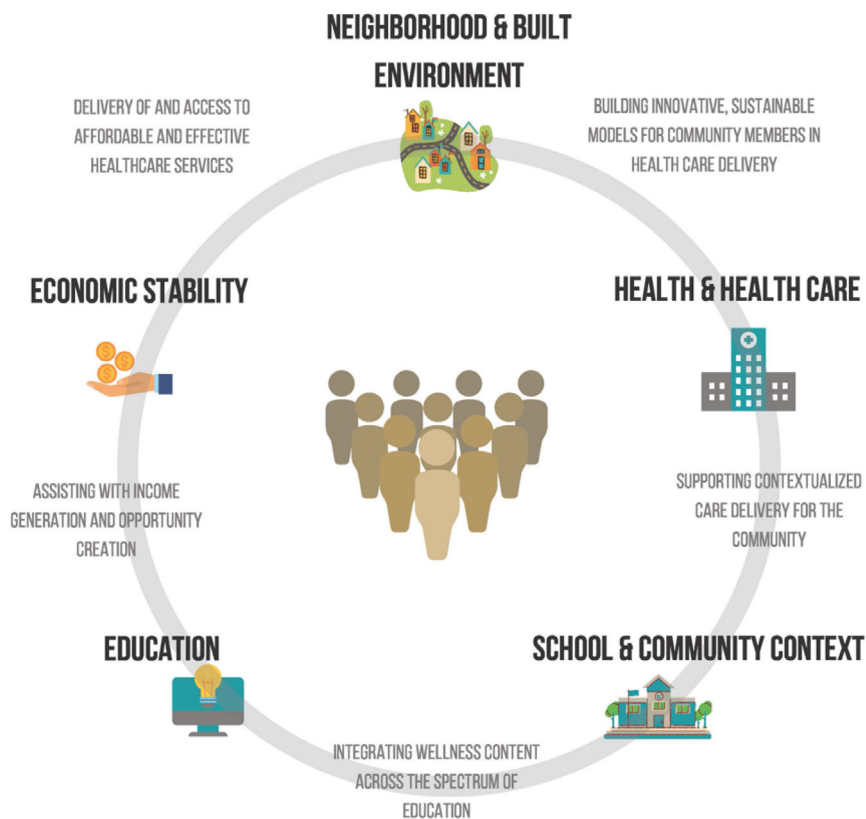
3.1 | Microgrant funding for communities

In an effort to promote shared-decision making with communities and an equitable distribution of resources, CHEqI developed a request for proposals that was distributed to community-based organizations. The application was concise and straightforward with the intent to make the process brief. This funding had limited restrictions, simple reporting requirements, and allowed for communities to direct funding to their identified health equity priorities. For example, local food banks submitted applications aimed at procuring equipment and supplies to screen for chronic conditions among their clientele. A local public school submitted an application for supplies to support an art therapy program for students. Awards ranged from \$1000 to \$15 000. A donation to CHEqI of \$50 000 from a donor allowed for development of this microgrant program. The hope is to continue to support these initiatives based on their initial success.

3.2 | Vaccination events

CHEqI has joined local efforts to come up with novel approaches designed to address the problems of populations who are underserved across the State. Indiana has consistently ranked in the bottom third of all states for a variety of health metrics.⁴ Contributing to this, one in five residents of central Indiana experience food insecurity, a sociodemographic factor that disproportionately affects oppressed populations and results in higher rates of coronavirus disease 2019 (COVID-19) morbidity and mortality.⁵ National trends reveal that COVID-19 vaccine hesitancy is greater among people from racial and ethnic minority groups. The fully vaccinated population in Indiana lags

FIGURE 1 CHEqI focus areas



far behind the national average.^{6,7} Recognizing these factors, CHEqI partnered with Walgreens and two large food banks/pantries in the Midwest, Gleaners Food Bank of Indiana and St. Vincent de Paul, to implement an innovative University-Community partnership model to address food insecurity, decrease COVID-19 vaccine hesitancy, increase COVID-19 vaccine accessibility, and promote health equity in central Indiana.

Vaccination events were implemented in the spring of 2021 and accommodated drive-thru and walk-up food delivery models. In fall 2021, CHEqI's vaccination events began to offer both the influenza vaccine and the Pfizer COVID-19 vaccine (initial series, booster, and pediatric). CHEqI faculty and student volunteers provided vaccine information to food bank clientele, answered questions, addressed vaccine hesitancy, and assessed interest in receiving any of the available vaccines. Walgreens staff (pharmacists and technicians) administered appropriate vaccine(s) to interested clients, but the primary program objective remained to meet the food needs and avoid food disruptions of clientele. Spanish and Haitian-creole interpreters were available at most events. Recently, CHEqI has collaborated with homeless shelters and food pantries in rural Indiana to offer vaccination events; these have also demonstrated early success. Vaccination events are ongoing and will continue as long as collaborators express interest.

3.3 | Community Health Workforce Development Institute

Beyond pharmacy, CHEqI recognized the vital role and expected growth of community health workers (CHW) to bridge the gaps and address the many inequities between low-income communities and the healthcare system. To address CHW workforce development challenges in Indiana, a collaboration was formed between CHEqI, the Indiana Community Health Worker Association (INCHWA), and Purdue University's Department of Public Health in the College of Health and Human Sciences. Dedicated to health equity, CHWDI's mission is to increase access to health and social services for disinvested communities by expanding employment opportunities for community members through Indiana's CHW workforce.

In 2020, CHWDI conducted a statewide needs assessment to (1) characterize the current CHW workforce landscape, (2) describe CHWs' experiences with training, certification, scope of work, job security, career development opportunities, and community priorities, and (3) explore employers' experiences in hiring, training, and supervising CHWs, current challenges and potential areas of needed training and development activities, and funding mechanisms to sustain or expand CHW employment opportunities. Four key recommendations were identified from this needs assessment: (1) standardize, build, and

maintain a database on the roles and impact of CHWs in Indiana, (2) disseminate evidence and educate employers and communities about the CHW profession to advocate for CHW workforce integration and expansion, (3) facilitate understanding and promote access to and utilization of existing funding mechanisms for CHW workforce sustainability and expansion, and (4) share CHW workforce models and best practices across employer organizations to optimize strategies. A full report provides the detailed findings of the needs assessment.^{8,9} Examples of projects initiated to address the key recommendations include:

- Establishing a 3-year partnership with Indiana Department of Health to conduct a needs assessment and programmatic evaluation of the Statewide Health Equity Council, which focuses on efforts to address COVID-19 inequities across the state through work with District Health Equity CHWs and Public Health Preparedness Districts.
- Developing resources that list all CHW certification pathways available in Indiana and identify CHW reimbursement pathways through Indiana Medicaid. Pending final review and approval by the CHWDI steering committee, these resources will be available at <https://cheqi.pharmacy.purdue.edu/>.
- Implementing a demonstration project with CICOA Aging & In-Home Solutions for the creation of CHW positions within community-based organizations. CHWDI will support CICOA in hiring and training the CHWs, while also providing program implementation and evaluation support.
- Designing a pilot project with the YMCA to adapt, implement, and evaluate the proposed solution of a CHW-driven, cross-sector diabetes prevention program (DPP) to address proactively the socially-driven diabetes-related health inequities of historically marginalized communities in Central Indiana.

To date, CHWDI faculty associates have hired five CHWs who are engaged in work related to the social determinants of health, chronic disease management and support, COVID-19 testing and vaccination, human immunodeficiency virus (HIV) and cervical cancer screening in communities experiencing homelessness, and Latinx migrant farmworker families. CHWDI supports the needs of these CHWs as academic research partners through provision of support and community. Some examples of this include: having a Steering Committee that provides guidance on aligning efforts, regularly hosting informal group sessions to provide space and time for the CHWs to vent, learn and motivate each other, and encouraging external connections with the broader Indiana CHW community through participation in INCHWA's regular Huddles. Ultimately, CHWDI aims to support the development of the existing CHW workforce, create CHW employment opportunities, provide guidance and support to CHW employers, conduct outcome evaluations, and influence CHW-related policies.

3.4 | Purdue Polytechnic High School

Aligned with CHEQI's efforts to integrate wellness content across the spectrum of education, a University-School-Community partnership

with Purdue Polytechnic High School (PPHS) was formed. This collaboration focuses on upstream factors to support the integration of healthy behaviors, the promotion of mental health, and the prevention of chronic disease in a high school population. PPHS provides opportunities to youth who are underserved/historically marginalized in three locations across Indiana by conducting research and creating solutions that make a positive impact within their communities. Science, technology, engineering, and mathematics (STEM)-based experiential and project-based learning opportunities were provided through a flexible and personalized learning environment.

The initial phase of this effort was a 6-week, wellbeing-based course in which PU students worked alongside PPHS students to design and implement wellness activities within the school. Subsequent activities have included the introduction of opportunities for additional physical activity through cycling to positively impact health behaviors. Planned for Spring 2022, nutrition education, demonstrations, and urban gardening experiences will offer healthy food alternatives and influence decision-making skills, as related to nutrition. To assess the success of this initiative, measurements will include a biometric evaluation and pre- and post-surveys in addition to interviews of program participants.

Overall, the collaborative approach to wellbeing provided PPHS students, staff, and the surrounding community with:

1. Student-designed and -led health and wellbeing experiences.
2. Opportunities to participate in physical activity, sport-based programming, nutrition education, and other physical health-enhancing activities before, during, and after school hours.
3. Mentorship from college students and access to other higher education resources via partnership with PU.
4. Resources and activities to support mental and social health and enhance a sense of belonging among PPHS students, staff, and the surrounding community.
5. Community nights and workshops to engage and involve families and caregivers
6. Professional development opportunities for coaches and school administrators to engage in health and wellbeing activities.

3.5 | Mental health

Consistent with CHEQI's efforts to improve access to care, in collaboration with the Purdue student chapter of the College of Psychiatric and Neurologic Pharmacists (CPNP), a CHEQI student-led survey was developed to gain a better understanding of the current mental health needs and experiences of the student body at PU. The aims of this project were to: (1) Survey the student body on their perceptions and experiences with Purdue Counseling and Psychological Services (CAPS) and identify student needs; (2) Conduct an assessment of mental health resources in the surrounding area to develop a resource for providers and students; and (3) Utilize student volunteers to implement an outreach campaign on campus, educating students on the mental health resources accessible in the area.

3.6 | Gender health

Gender diverse (gender identities that demonstrate a diversity of expression beyond the female or male binary framework, including transgender, transsexual, and gender nonconforming persons) individuals are marginalized and often experience challenges obtaining equitable healthcare. While medication therapy for the treatment of transgender patients is well understood, there is a lack of data examining the role and perception of pharmacists in providing care to gender diverse patients. Thus, CHEqI students developed a multi-phase study to investigate, in phase one, (1) the frequency of community pharmacists in Indiana who have received formal training in providing gender diverse care to the transgender, transsexual, and gender nonconforming community, (2) interest in such training programs, and (3) preferred delivery format for such training programs. Phase 2 of the study is investigating the experience of gender diverse clients in the community pharmacy setting. The results of this study will be used to inform the development and implementation of pharmacist continuing education and College of Pharmacy curriculum focused on the care of gender diverse patients.

3.7 | Reproductive/women's health

CHEqI faculty have worked with the PU Pharmacy and Student Health Center to create a collaborative drug therapy management (CDTM) agreement allowing campus pharmacists, including CHEqI faculty, to prescribe hormonal contraception to enrolled students. The CDTM allows the pharmacist to prescribe all forms of short-acting hormonal contraception (oral pills, patches, vaginal rings, injection, emergency) and the prescription vaginal gel, following evaluation of a patient's self-screening health questionnaire. Since the start of this service in August 2020, more than 250 appointments have been completed. CHEqI faculty have also worked with various campus student organizations to provide education on contraceptive methods and how to obtain them.

4 | EDUCATION AND OPPORTUNITIES FOR LEARNERS

As a Center, CHEqI has the responsibility to develop the next generation of pharmacists with an equity mindset. As one of the most accessible health care providers, the public needs pharmacists with the knowledge, skills and attitudes required to manage the social determinants of health (SDOH) that are often interwoven and impact a patient's care plan. Below CHEqI's initiatives that impact learner education and provide opportunities for meaningful involvement in health equity activities are described.

4.1 | Student engagement

Since CHEqI's inception, it was clear that interdisciplinary students from across campus were motivated and seeking opportunities to

“make a difference.” Students began reaching out to CHEqI leadership with ideas on how to make meaningful change, both on and off campus. The initial enthusiasm from a small group of students soon became an organized student advisory council, leading health equity initiatives. The purpose of the student advisory council is to drive change within the university and communities through curricular development, engagement, and research.

Additional interest from students seeking involvement in CHEqI led to an expansion beyond the initial student advisory council to create a formal campus student organization. This interdisciplinary organization of more than 30 active members exposes students to: (1) key leaders in health equity through a speaker series, (2) a forum to discuss concepts related to health equity and the social determinants of health, (3) advocacy and policy initiatives, and (4) opportunities to engage in health equity work. CHEqI student members have been involved in many of the vaccine and other initiatives previously described. In addition, students created a monthly newsletter, “Check In with CHEqI,” to disseminate CHEqI outcomes and updates. Two internships focused on social determinants of health have been created with local community-based organizations: Lafayette Transitional Housing Center (LTHC) and Klondike Elementary School. This student group developed a video presentation describing their work, inter-professional collaboration, and engagement activities and entered it into the annual PU Engagement and Service-Learning Summit's competition; this presentation was awarded second place in 2021.¹⁰

4.2 | Curriculum

While the Doctor of Pharmacy curriculum helps to develop communication and clinical skills, considerable gaps still exist in providing students with the necessary skills to address health inequities.¹¹ While students with a prior interest in health equity have readily engaged with the student organization, CHEqI students and faculty desired to reach a wider population through curricular changes that would develop a foundation of knowledge, skills, and attitudes in health equity. The goal of this effort is to create diversity, equity, inclusion, and access (DEIA) curricular content with a conscious approach to growing the knowledge, skills, and attitudes of student pharmacists. Because health equity content was not previously tracked in the College of Pharmacy curriculum, CHEqI students and faculty devised a plan to review, assess, and evaluate the current content and identify opportunities for growth. Through discussions with PU campus leaders in DEIA, meetings with experienced faculty from outside institutions, and literature searches, CHEqI students and faculty recognized the need to create a unique tool to identify and evaluate health equity content in the curriculum. A survey was created to prospectively identify health equity content in each lecture of select courses in the first, second and third professional years of the pharmacy curriculum. Two students were recruited and trained from each professional year to complete the survey after each class. Students provided ideas on opportunities for improvement to create more inclusive lectures, such as including more images of black and brown skin tones

when learning about dermatological diseases. Data from the survey will be provided to the curriculum committee to inform curricular changes that incorporate equity considerations into all healthcare delivery concepts.

4.3 | Spanish language track

Recognizing a lack of language concordant health professionals in the United States, combined with a growing Spanish speaking population, CHEqI created a student Spanish language track to increase pharmacy student language proficiency. CHEqI students and faculty partnered to streamline and augment the requirements for a Spanish for Health Professions minor. CHEqI received intramural grant funding to support the development of the Spanish Language Track and the partnership with the Universidad de Antioquia in Medellín, Colombia. The track requires the completion of a Spanish minor, participation in several cultural immersion activities, completion of an online medical Spanish program (CanopyLearn), virtual language exchanges with pharmacy students from Colombia, and Advanced Pharmacy Practice Experiences (APPE) in Spanish-speaking communities. Six students are currently completing the Spanish Language Track requirements. These students have access to resources and collaboration through a virtual learning-management system. Future initiatives include the creation of internship opportunities allowing for additional practice with language skills and expansion to other disciplines.

4.4 | Student research and scholarship

Through CHEqI, students have opportunities to engage in research and acquire necessary skills to identify opportunities for improvement in health and well-being within their own communities. For example, the advisory council was interested in understanding student perceptions of mental health resources on campus. Accessing mental health services in the United States can be challenging, with college campuses being no exception.¹² CHEqI students engaged with mental health providers on campus to better understand available resources. With faculty guidance, students developed a research methodology, including a survey. The survey has been disseminated campus-wide with over 200 respondents. This project is ongoing and results will be reported by the end of 2022. The success of this student-led initiative has prompted the establishment of a student research grant through CHEqI, whose goal is to foster student interest and research in health equity.

4.5 | Postgraduate training opportunities

CHEqI is intentionally developing future pharmacy providers who are able to address the challenges patients face and fill the gaps in care that exist today. PU College of Pharmacy has long-standing partnerships with both educational and health care institutions in Kenya. As a

result, CHEqI established a 2-year Health Equity and Global Health Fellowship program for pharmacists in partnership with the United States Agency for International Development. Goals of this program are to create pharmacy leaders in public health who are able to utilize the practical skills developed during the fellowship to identify the needs of communities, both locally and globally, and implement strategies to address health inequities. Building on this fellowship with its strong global focus, CHEqI created another 2-year Health Equity Fellowship for pharmacists which partners with local safety-net hospitals. Fellows gain skills in (1) understanding the unique care implications for underserved populations, (2) utilization of implementation science skills to address inequities, and (3) assessment and evaluation of innovative solutions. Graduated pharmacists are eligible to apply for these competitive fellowship opportunities.

5 | RESEARCH

Research and evaluation are integral components of CHEqI engagement and teaching initiatives. Students are also responsible for leading and evaluating many of the CHEqI initiatives with faculty oversight and support. Despite being early in its establishment, notwithstanding, during a pandemic, research and evaluation was conducted for several CHEqI engagement and teaching initiatives. When available, CHEqI initiative research products, findings, and overall impact on health equity are described in Table 1.

6 | CHALLENGES

Securing initial funding support is necessary to ensure that implementation of equity work is possible. CHEqI was initially funded internally through the College of Pharmacy for the first 3 years, and has since been successful in obtaining external funding to continue to grow programs and projects. Engaging with the College's Development Office has also expanded the funding avenues by identifying donors to support equity initiatives. The capacity for current faculty and staff to assume additional responsibilities was insufficient to support the rapid growth and expansion of equity work. The initial funding support allowed for expanded bandwidth through hiring project managers and students. Collaborating with interdisciplinary faculty colleagues was also a critical strategy to ensure support and explore alignment of ongoing initiatives.

Competing priorities in academic vs community settings are a threat to keeping the focus on the community at the center of our work. The inclination to produce the most robust data set for comprehensive evaluation can distract from developing or implementing a process which respects and values individual community members. It is not uncommon for the requirements of a grant application to be misaligned with the community-based approach that is necessary for successful program implementation. The CHEqI team has been mindful of maintaining mutually beneficial relationships with community-based organizations. These relationships are vital to CHEqI's continued success.

TABLE 1 The first 2 years (2020-2021) of the Purdue University College of Pharmacy Center for Health Equity and Innovation (CHEI) initiative research products, major study findings and overall impact on health equity

Initiative	Funding	Research and scholarly products	Major research findings and overall impact
Vaccination events	Marion County Public Health Department, City of Indianapolis, and Resolve to Save Lives COVID-19 Community Recovery Grant (21101970)	<p><i>Scientific products:</i></p> <ol style="list-style-type: none"> 1. NIH food insecurity, neighborhood food environment, and nutrition health disparities: State of the science 2021 (poster presentation)¹³ 2. Translational Science 2022 (poster abstract submitted) 3. Peer-reviewed manuscript (in preparation) <p><i>Local and international media:</i></p> <ol style="list-style-type: none"> 4. Indiana CTSI News¹⁴ 5. The Conversation¹⁵ 6. Purdue Engagement¹⁶ 	<ul style="list-style-type: none"> • 15 events from June–November 2021: total of 548 vaccines administered and approximately 460 families served via food distribution at each event • <i>Vaccinated population characteristics:</i> average age was 46 years old, 51% female, 48% LatinX, 48% Black or African American • <i>Impact:</i> University-community partnerships offer an innovative approach to improve the reach and quality of public health efforts to reduce health disparities and address social determinants of health
Community Health Workforce Development Institute (CHWDI)	Indiana Clinical and Translational Sciences Institute, National Institutes of Health, National Center for Advancing Translational Sciences (UL1TR002529)	<p><i>Scientific products:</i></p> <ol style="list-style-type: none"> 1. 2020 Needs Assessment Report⁹ 2. 2021 Indiana Rural Health Association (invited lecture)¹⁷ 3. 2021 Indiana Public Health Association Conference & Annual Meeting (poster presentation) 4. 2021 American Public Health Association Annual Conference¹⁸ 5. Peer-reviewed manuscript⁸ 	<ul style="list-style-type: none"> • <i>Four key recommendations:</i> <ul style="list-style-type: none"> ○ Build an evidence base on the role and impact of CHWs in Indiana ○ Educate communities and employers about the CHW profession and its impact ○ Facilitate access to funding to enable CHW workforce sustainability and expansion ○ Share CHW workforce models and best practices across all employer organizations to optimize strategies • <i>Impact:</i> Efforts to address key recommendations can aid in increasing CHW workforce capacity to reduce health disparities among underserved communities in Indiana and inform other state efforts
Mental health ^a	College of Psychiatric and Neurologic Pharmacists, Student Chapter Impact Grant	<p>In progress</p> <p>Survey distribution and data collection ongoing (November 2021–January 2022)</p> <ul style="list-style-type: none"> • <i>Impact:</i> Improved access to mental health resources for students 	
Gender health ^a	College of Psychiatric and Neurologic Pharmacists Foundation, <i>Defining the Future Research Grant</i>	<p><i>Scientific products:</i></p> <ol style="list-style-type: none"> (1) 2021 Indiana University LGBTQ+ Healthcare Conference, Poster Presentation: Assessing the Need for Gender Diverse Education Amongst Practicing Community Pharmacists, Phase I (2) 2021 College of Psychiatric and Neurologic Pharmacists Annual Conference, Poster Presentation: Assessing the Need for Gender Diverse Education Amongst Practicing Community Pharmacists, Phase I 	<ul style="list-style-type: none"> • 300 community pharmacists in Indiana participated in a telephone-based survey with 183 (67%) reporting no previous engagement in formal gender diverse training program(s) • 76% of respondents indicated they were interested in a training program to learn basic gender diverse care terms related to healthcare and pharmacotherapy regimens • Participating pharmacists ranked their preferred delivery of format of such training

(Continues)

TABLE 1 (Continued)

Initiative	Funding	Research and scholarly products	Major research findings and overall impact
Reproductive/ women's health	N/A	<i>Scientific products:</i> (1) 2021 American College of Clinical Pharmacy Virtual Poster Symposium: Implementation of a Pharmacist-Led Contraceptive Prescribing Service in a Campus Community Pharmacy (2) Peer-reviewed manuscript (under review)	programs in the following order: web based, live webinar, and live classroom based <ul style="list-style-type: none"> • These findings will be used to inform and create continuing education for community pharmacists and technicians and curricula content at Purdue University • <i>Impact:</i> Gain perspective into gender equity challenges in the community pharmacy setting and implement educational initiatives that promote equitable healthcare for the LGBTQ community <ul style="list-style-type: none"> • 125 student appointments were completed in the first year of service provision (2020-2021) • 119 prescriptions were written: combined oral pill (n = 91, 76.5%), shot (n = 12, 10.1%), patch (n = 6, 5%), vaginal ring (n = 5, 4.2%), progestin only pill (n = 5, 4.2%) • Median patient age was 21 years (range, 18-30 years) • These findings were used to support expansion of eligibility for students seeking contraception • Results for 2021—present are in progress • <i>Impact:</i> Increase education and resources offered to female students regarding contraception to decrease STD's and unplanned pregnancies

Abbreviations: CHEqI, Center for Health Equity and Innovation; CHW, community health worker; CTSI, Clinical and Translational Sciences Institute; LGBTQ+, lesbian, gay, bisexual, transgender, queer/questioning; N/A, not applicable; NIH, National Institutes of Health.

^aIndicates student-led initiatives.

7 | CALL TO ACTION

Given the growing awareness of health inequities and urgency in responding to them across all facets of healthcare delivery, meaningful strategies are required to reduce health inequities and better address social determinants of health. The next generation of pharmacists should have a new perspective aligning with national pharmacy organization efforts and the revisions to the “Oath of the Pharmacist.”¹⁹ When taking this oath, students state, “I will consider the welfare of humanity and relief of suffering my primary concerns. I will promote inclusion, embrace diversity, and advocate for justice to advance health equity.” CHEqI is positioned not only to train future leaders within this space, but also to take action. CHEqI

breaks the mold of the traditional academic model by simultaneously implementing engagement initiatives that have an impact on communities, while also incorporating real-world teaching and community-engaged research. In this manuscript, several initiatives have been presented that were informed by the needs of our local communities.

Pharmacists and colleges/schools of pharmacy must optimize health equity efforts with interdisciplinary partners across five health equity strategies described below and + to applicable CHEqI and broader PU initiatives. These five strategies and examples are not intended to be prescriptive, but rather, an opportunity to synergize and cultivate further discussion of work in health equity across colleges/schools of pharmacy.

1. Provide student opportunities to learn about diverse populations through engagement and integration with communities.

Colleges/schools of pharmacy should implement initiatives in the community and invite interdisciplinary student volunteers to help support the work. This allows for connection and relationship building between students and community members.

CHEqI initiative examples:

- At the vaccine events, community members (food bank and homeless shelter clientele) inquired about the upcoming events, and if/when the CHEqI team would return. Community members were eager to engage with CHEqI team members again, including students. Similarly, these experiences were valued by the student volunteers as many participated in multiple events.
- PPHS: Mentorship from college students and access to other higher education resources via partnership with PU.

2. Encourage students to identify and lead health equity initiatives.

Students are motivated and eager to engage in health equity work. Providing students an organized club or platform to support their ideas fosters their vision and professional growth, which may have an impact on their career trajectory. Utilizing faculty mentorship for effective strategies to launch these efforts, students are well equipped to develop and lead health equity initiatives.

CHEqI initiative examples:

- Student advisory board: The purpose of the student advisory council is to drive change within the university and communities through curricular development, engagement, and research.
- CHEqI students have identified and led a variety of initiatives in the health equity space, leading to the opportunity for skill enhancement, resource development, and improvements at the university level.

3. Incorporate health equity engagement and track impact of efforts designed to address inequity into annual review and promotion processes.

Historically, the annual review and promotion processes for colleges/schools of pharmacy have focused on objective measures such as numbers of publications, hours of teaching provided, and grant funding obtained. Deans and Department Heads have the opportunity to revise current annual review and promotion process documents to integrate DEIA efforts as a valued and vital contribution.

CHEqI initiative examples:

- In the annual report, faculty were asked to identify any work in the DEIA space to provide credit for the time and effort spent dedicated to these efforts.
- Equity has been prioritized at the university level. The College of Pharmacy is hiring two faculty lines dedicated to advancing equity work.

4. Create and participate in health equity training opportunities.

Colleges/schools of pharmacy curriculum have not consistently integrated DEIA content. An evaluation should be done to identify where the content currently exists, how to integrate it effectively throughout the curriculum, and ensure that faculty are trained to facilitate discussion and deliver DEIA content.

CHEqI initiative examples:

- CHEqI students and faculty devised a plan to review, assess, and evaluate the current content within the curriculum and identify opportunities for growth within DEIA.
- CHEqI invited key leaders in health equity (pharmacy alumni) through a speaker series that provided an opportunity for students and faculty to learn about careers in health equity and engage with experts in the DEIA space.

5. Develop a formal structure for collaborative networks to align health equity efforts.

Colleges/schools of pharmacy should emphasize partnerships and teamwork and refrain from working in silos. Collaborating with others will amplify the impact and allow for continued growth.

CHEqI initiative examples:

- The College of Pharmacy made a deliberate effort to collaborate with interdisciplinary schools and departments (nursing, public health).
- Creation of the Spanish language track included utilization of the existing study abroad relationship with Columbia.

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CONFLICT OF INTEREST

Jasmine Gonzalvo is on an advisory board for Abbott Diabetes Care for work unrelated to the efforts described in this paper. Ashley Meredith is an Advisory Board Member for Birth Control Pharmacist and on the Pharmacotherapy Board Prep and Review Course for ACCP for work unrelated to the efforts described in this paper. Sonak Pastakia serves as a consultant for Abbott and Becton Dickinson for work unrelated to the efforts described in this paper. Jerome Adams is a board member for Atea Pharmaceuticals and Chair of Total Diversity for work unrelated to the efforts described in this paper. Rakhi Karwa is an immediate family member who serves as a consultant for Abbott and Becton Dickinson for work unrelated to the efforts described in this paper. All other authors have no conflicts of interest to disclose.

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