



PURDUE
UNIVERSITY®

College of Pharmacy

**Center for
Health Equity
and
Innovation**

Annual Report 2020

PURDUE
UNIVERSITY®

**CENTER FOR
HEALTH EQUITY
AND INNOVATION**

MISSION

**ADDRESSING THE NEEDS
OF UNDERSERVED
POPULATIONS LOCALLY
AND GLOBALLY**

VISION

**TO REDUCE HEALTH
INEQUITY THROUGH
INNOVATIVE
STRATEGIES**

**NEIGHBORHOOD & BUILT
ENVIRONMENT**

DELIVERY OF AND ACCESS TO
AFFORDABLE AND EFFECTIVE
HEALTHCARE SERVICES



BUILDING INNOVATIVE, SUSTAINABLE
MODELS FOR COMMUNITY MEMBERS IN
HEALTH CARE DELIVERY

ECONOMIC STABILITY



ASSISTING WITH INCOME
GENERATION AND OPPORTUNITY
CREATION



HEALTH & HEALTH CARE



SUPPORTING CONTEXTUALIZED
CARE DELIVERY FOR THE
COMMUNITY

EDUCATION



INTEGRATING WELLNESS CONTENT
ACROSS THE SPECTRUM OF
EDUCATION

SCHOOL & COMMUNITY CONTEXT



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Letter from the Director



My longstanding passion and commitment to caring for underserved and marginalized populations, along with the support from Dean Eric Barker and Dr. Alan Zillich, led to the development of the [Center for Healthy Equity and Innovation](#) (CHEqI) in the Purdue University College of Pharmacy in January 2020. In the first year, CHEqI has successfully advanced the College's Strategic Plan, established a network of internal and external stakeholders in health equity, and implemented projects that meaningfully address health disparities.

Advancing the Strategic Plan

In its inaugural year, CHEqI initiatives have resulted in 21 peer reviewed publications and have secured nearly \$1.7M in funding with pending grant submissions pursuing an additional \$3.8M. Examples of CHEqI initiatives range from developing innovative Community Health Worker models to support optimal care for marginalized populations, partnering with an independent pharmacy to provide nutrition assistance to at-risk individuals impacted by the COVID-19 pandemic, and developing student-led initiatives to address health disparities. **These initial CHEqI projects align with five of the six areas of the College of Pharmacy's Strategic Plan by achieving excellence in academic programs, research and innovations, pharmacy and healthcare, student experience and success, and alumni engagement.**

Building the Network

Dr. Ashley Meredith and Dr. Sonak Pastakia were appointed to the CHEqI Senior Leadership Council to help set the initial direction for the Center. Subsequently, ten individuals working in health equity from across the University have signed on as CHEqI faculty associates and eight College of Pharmacy alumni have been recognized in the CHEqI Alumni Spotlight for their work in health equity. Numerous external stakeholders have also reached out with interest in collaboration with the Center. A variety of initiatives have been implemented or planned for continued engagement with these stakeholders, including a request for proposals disseminated across the University aimed at coordinating interdisciplinary health equity efforts.

Addressing Health Disparities

CHEqI's initiatives have centered around the development and implementation of innovative models in community health for underserved communities and the evaluation and enhancement of health equity curricular content. The CHEqI Student Ambassadors play an integral role in the primary functions of the Center while learning about and getting involved with health equity work.

I'm incredibly inspired by CHEqI's early progress in health equity and am excited to oversee the continued growth and impact of the Center.

A handwritten signature in black ink that reads "Jasmine D. Gonzalvo".

Jasmine D. Gonzalvo, PharmD, CDCES, BC-ADM, FADCES

Director, Center for Health Equity and Innovation (CHEqI)

Clinical Professor | COLLEGE OF PHARMACY | PURDUE UNIVERSITY

Clinical Pharmacy Specialist | PRIMARY CARE | [ESKENAZI HEALTH](#)

Summary of CHEqI projects mapped on to College of Pharmacy Strategic Plan Goals

Strategic Area: Achieving Excellence in Academic Programs
Exceed Professional Program Outcomes, with emphasis on effective communication, empathy and integrity, advocacy for the profession and patients, progressive pharmacy practice, and evidence-based decision making
Health Equity Content in the Curriculum
Spanish-track for Pharmacy Curriculum
Virtual Experiential Intercultural Learning Grant, Purdue International Programs: Development of a Spanish Language Training Pathway for Pharmacy Students
Provide innovative didactic and experiential curricular aligned with contemporary pharmacy practice models
Health Equity Content in the Curriculum
Spanish-track for Pharmacy Curriculum
Create an inclusive environment that supports opportunities for excellence and expanded diversity in the student body, as well as staff and faculty
Health Equity Content in the Curriculum
Spanish-track for Pharmacy Curriculum
College of Psychiatric and Neurologic Pharmacists (CPNP): Assessing the need for Gender Inclusive education amongst practicing community pharmacists
The Role of Online Interactive Simulation in Teaching Cultural/Unconscious Bias
Strategic Area: Innovations in Pharmacy & Healthcare
Position pharmacists in all practice settings to optimize patient outcomes
Revolving Fund Pharmacy
Counterfeit Detection
Peers and Technology For Adherence (PT4A)
Peer based care delivery for HIV
Reimbursement outcomes of a pharmacist-physician co-visit model in a Federally Qualified Health Center
Long-term outcomes of pharmacist-managed cardiovascular risk reduction services in Federally Qualified Health Centers
CVRR model vs usual care in SMI
Disparities in Outpatient Management of Type 2 Diabetes
Diabetic retinopathy in LatinX/Hispanic population
Gender Diverse Care: curricular content, community pharmacists, continuing education
Point of Care Endothelial Dysfunction Testing to Enhance Identification and Management of Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome (ME/CFS) and Long COVID
Indiana Clinical and Translational Sciences Institute (CTSI): Indiana Community Health Workforce Development Institute
Enhance the relevance and accessibility of the pharmacy profession to all stake holders in the healthcare value chain
CHWs and pharmacist model
Implementation of pharmacist birth control prescribing: legislation, curricular content

Pharmacist birth control prescribing on a college campus via CDTM
Tumaini Innovation Center
BIGPIC (Bridging Income Generation through group Integrated Care)
JR Pharmacy Food Box Delivery
Understanding Pharmacy-Related Barriers to Care in Medication-Assisted Treatment Therapy” Perspectives from Peers, Providers, and Pharmacists
Center for Health Equity and Innovation (CHEqI) Office of Engagement Grant Program 2020-2021
IN ADCES COVID Fund Relief: JR Pharmacy Food Delivery
Becton Dickinson/NACHC: A Pharmacist, Community Health Worker Collaboration to Improve Cardiovascular Outcomes in a Federally Qualified Health Center
McKinley Foundation
Hormonal contraceptive Access via Pharmacist-Prescribing Implementation (HAPPI)
Contraceptive Access through Pharmacist Prescribing (CAPP) Project
Assessing perspective of peers, pharmacists with the pharmacist in the OUD care model
Society of Family Planning Contraceptive Service Delivery: Capturing Innovations Responsive to COVID-19, Contraceptive Access through Pharmacist Prescribing (CAPP) Project
Strategic Area: Achieving Excellence in Student Experience & Success
Provide and encourage opportunities for meaningful faculty mentorship of students to allow all students affiliated with the College of Pharmacy to develop and mature personally, academically, and professionally
CHEqI Student Representatives
Challenge and empower students to become role models, advocates, and leaders in their profession, and support opportunities to play meaningful roles in the local, state, national, and international recognition of their area of practice or science
CHEqI Student Representatives
Health Equity Content in the Curriculum
Spanish-track for Pharmacy Curriculum
Student Service Learning Grant to address Mental Health in Street Youth
Strategic Area: Achieving Excellence in Alumni Engagement
Tailor engagement efforts to recognize alumni lifecycle to increase participation in philanthropy, advocacy, and/or volunteerism
Health Equity Alumni Spotlight Features

Innovative Models of Care

Community Health Workforce Development Institute			Status: Ongoing
Investigators: Jasmine Gonzalvo, Ashley Meredith, Natalia Rodriguez, Yumary Ruiz, Moises Martinez*			
Description		Expected outcomes	
<p>The Institute will carry out the following core functions:</p> <p>1) Sector-based workforce development to create sustainable community health worker (CHW) jobs throughout Marion County at numerous clinical, community-based, and academic partner organizations.</p> <p>2) Support CHW training that is accessible and affordable, ensuring core competencies and sector-specific skillsets needed and identified by partner organizations, and creating a path to certification for reimbursement eligibility in Indiana.</p> <p>3) Rigorous research and evaluation to support evidence-based policy for formal integration of CHWs at a systems level and improved public and private reimbursement mechanisms for all CHW services on levels that are commensurate with a living wage.</p>		<ul style="list-style-type: none"> - Enhanced capacity of academic, community-based and clinical institutions to provide context-specific service delivery - Increased sectors (CBO, faculty, clinical) working in CHW lead opportunities that are writing grants - Expanded engagement of INCHWA membership and partner organizations - Increased understanding of current needs in Hoosier communities to inform and define the potential role and impact of CHWs - Increased access to certification and educational content for CHWs - Increased capacity of CHWs to perform these functions - Increased CHW employment/advancement opportunities and earnings - Policy changes that recognize and promote CHWs as a critical workforce to address health promotion needs in underserved and marginalized communities, as well as emergent needs during disaster response (e.g.; pandemics) - Address CHW identified needs relevant to the profession 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$5000 CTSI Trailblazer Planning Grant	<ul style="list-style-type: none"> - Abstract submitted to 2021 Indiana Rural Health Association Annual Conference - Featured in Indiana Business Journal Dec 2020

*Student; **Resident

CHWs and pharmacist model			Status: Ongoing
Investigators: Jasmine Gonzalvo, Lynn Thoma, Katelyn Wees**			
Description		Expected outcomes	
<p>The objectives of this study are to: 1) assess pharmacist perceptions of and experiences with community health workers and 2) propose a model for the integration of community health workers into a variety of pharmacist service models. Despite making up only 13.4% and 18.5% of the United States population, the prevalence of chronic diseases is consistently higher among Black/African American and Hispanic/Latino communities. The addition of a community health worker (CHW) has shown to help reduce these disparities. The American Public Health Association has defined a CHW as “a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served.” This trusting relationship has allowed CHWs to improve outcomes when added to the healthcare team, particularly in chronic disease state outcomes and adherence to preventive care recommendations. With the increase of community health worker utilization and governmental support comes the inevitable question of how to incorporate them into the healthcare team. Both community health workers and pharmacists have shown that they are well-equipped to produce strong positive outcomes in chronic disease management, but there is still a gap in literature regarding the community health worker-pharmacist relationship.</p>		<p>The results of this study will describe the strengths and areas of improvement of various community-health worker-pharmacist workflows. This information will allow us to propose a model of integration of community health workers into a variety of pharmacist service models, a relatively novel area of research within a rapidly growing field.</p>	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$1000 American Pharmacist Association Incentive Grant	- Abstract submitted to 2021 American Pharmacist Association Annual Meeting

*Student; **Resident

Implementation of pharmacist birth control prescribing: legislation, curricular content		Status: Ongoing	
Investigators: Ashley Meredith, Mary Ott, Tracey Wilkinson, Veronica Vernon			
Description		Expected outcomes	
<p>The District of Columbia and 12 states have passed specific legislation to allow pharmacists to prescribe hormonal contraceptives. Despite strong interest from both patients and pharmacists, uptake of pharmacist-prescribed contraception services is impeded by various barriers to implementation, including inadequate billing mechanisms, training, workflow integration, and patient awareness of the service. The intention of allowing pharmacist-prescribed contraception services is to improve patients' access by allowing direct, convenient access to an array of prescription-only contraception methods within their local community. When implemented effectively, positive outcomes are demonstrated. However, widespread effective implementation has not been realized. An implementation package designed to overcome common barriers to pharmacist-prescribed contraception services would address the current gap in knowledge and practice. Without an implementation package to improve and increase implementation of pharmacist-prescribed contraception services, patients, particularly those facing the most barriers to obtaining contraception, may not have the option of benefitting from this service.</p>		<ul style="list-style-type: none"> - Complete a landscape assessment to characterize and describe existing technology, tools, and resources for pharmacist-prescribed contraception services. - Conduct a participatory, multiple stakeholder analysis to assess perceived needs to implement pharmacist-prescribed contraception services. - Design an implementation package prototype - Refine the implementation package prototype(s) based upon additional feedback from the multi-stakeholder advisory panel. 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$243,000 Submitted Jan 2021 to NIH CDC SBIR	None

Pharmacist birth control prescribing on a college campus via CDTM		Status: Ongoing	
Investigators: Ashley Meredith, Nicole Noel, Trexie Rudd, Mary Ott, Tracey Wilkinson, Alexandra Edwards			
Description		Expected outcomes	
<p>College-age women 18-24 years old have the highest rates of unintended pregnancies in the United States. As an essential service during the pandemic, pharmacies have remained open and adapted procedures to minimize COVID-19 transmission, making pharmacist contraceptive prescribing a COVID-19 sensitive way to safely expand access. Not only does pharmacist prescribing increase convenience, expand geographic reach and eliminate barriers to access such as transportation and limited clinic hours, it also decreases COVID-19 risk by eliminating one clinic visit and decreasing patient contact. Surveys of women document high levels of interest in pharmacist contraceptive prescribing. Despite the promise of expanded access through pharmacist prescribing, only a small number of pharmacies have actually implemented the service, with the greatest implementation barriers at the level of the pharmacy itself, which include a lack of prescribing algorithms, counseling materials, cost structures, example CDTMs, guidance for staffing and workflow, and referral resources. Pharmacists need evidence-informed tools to support implementation. Using the Consolidated Framework for Implementation Research (CFIR), we will develop a set of pharmacy tools for contraceptive prescribing and examine the implementation of this “toolkit” in a campus pharmacy setting.</p>		<ul style="list-style-type: none"> - Examine pharmacist-identified barriers, facilitators, and solutions to the development and implementation of a pharmacist contraceptive prescribing toolkit within a campus pharmacy setting, with attention to COVID-19 related safety and restrictions. - Use pharmacist and client focus groups from multiple campus pharmacies to develop a toolkit. - Use quality improvement (QI) data and pharmacist input to adapt and finalize the toolkit. - Examine client uptake and acceptability of campus pharmacist contraceptive prescribing after toolkit implementation using QI methodologies. - Using pharmacy data and run charts, describe changes in pharmacist contraceptive prescriptions over an 18-month period. We hypothesize that changes made as a result of the QI cycles will increase use of pharmacist prescribing over time. - Using client surveys, describe acceptability and continuation of the pharmacist contraceptive prescribing service. 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$250,000 Pending to NIH R21	None

Tumaini Innovation Center			Status: Ongoing
Investigators: Sonak Pastakia, Jennifer Deboer, Dhinesh Radhakrishnan, Imran Manji, Samuel Kimani			
Description		Expected outcomes	
The Tumaini Innovation Center is focused on addressing the comprehensive needs of street youth in Eldoret by setting them up educational and economic opportunities which will help them find gainful employment.		<ul style="list-style-type: none"> - Assist ~130 youth each year with state of the art services which comprehensively address their social determinants of health - Create culturally relevant educational initiatives within the local context of Western Kenya - Develop practical skills in the youth that participate in the educational opportunities at Tumaini Innovation Center - Community engagement and partnership 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	Philanthropic (Chaney Family) - \$100,000, Crowd Funding Campaign - \$13,000 USAID Asha grant submission pending for 2021	- In Press paper with JACCP

BIGPIC (Bridging Income Generation through group Integrated Care)			Status: Complete
Investigators: Sonak Pastakia, Tina Tran, Daria Szkwarko, James Akiruga			
Description		Outcomes	
The BIGPIC model of care has been developed, implemented, and researched as a novel, community centered model of care which seamlessly integrates microfinance, economic opportunities, and health services into community groups across rural western Kenya		<ul style="list-style-type: none"> - BIGPIC model integrates components of health care and economic opportunities into community groups among rural western Kenya. - Improved health outcomes for individuals who participate in the model of care - Improved access of individuals to funding through microfinance group participation 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	NIH R01 – Completed in 2020 Primary Care International – Completed in 2020 Astellas – \$60,000 Abbott – \$20,000 Abbvie – \$25,000	<ul style="list-style-type: none"> - 1 Paper In-Press with the Journal of the American College of Cardiology - Two other submissions currently under review

Revolving Fund Pharmacy			Status: Ongoing
Investigators: Sonak Pastakia, Imran Manji, Tina Tran, Rajesh Vedanthan			
Description		Expected outcomes	
The revolving fund pharmacy serves as a backup pharmacy to ministry of health pharmacies across western Kenya		<ul style="list-style-type: none"> - Expand to meet the population health needs for patients across western Kenya - Ensure essential medications are in stock at participating facilities - Improve patient access to medications 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	Abbott- \$10,000 per year Abbvie - \$40,000 per year USAID - completed Celgene/BMS - \$40,000	<ul style="list-style-type: none"> - 1 paper published - 1 paper under review - 1 paper in preparation

Counterfeit Detection			Status: Ongoing
Investigators: Sonak Pastakia, Marya Lieberman, Rakhi Karwa, Mercy Maina			
Description		Expected outcomes	
Notre Dame chemists have developed a paper-based chromatography tool for detecting counterfeit medications. We are the primary implementing partner for this technology.		<ul style="list-style-type: none"> - Identify low-cost methods of substandard and counterfeit drug detection - Identify substandard and counterfeit drugs - Understand implementation issues of a paper-based chromatography tool - Explore the ability to integrate a low-cost counterfeit detection technique into a Kenyan healthcare model 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	Walther Foundation completed Lilly Endowment completed Celgene/BMS completed Pfizer \$25,000 per year Gates Foundation completed USAID completed	<ul style="list-style-type: none"> - One paper published in 2019 - An ad on this project was featured during a Notre Dame football game in 2015

Harambee - Integrated Community-Based HIV/NCD Care & Microfinance Groups in Kenya			Status: Ongoing
Investigators: Becky Genberg, Juddy Wachira, Sonak Pastakia, Tina Tran, Omar Gallaraga, et al.			
Description		Outcomes	
Harambee is an NIH R01 funded study looking at the impact of microfinance group participation on HIV clinical outcomes.		<ul style="list-style-type: none"> - Change in HIV viral load - Change in blood pressure, creatinine 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	R01 - Total funding across AMPATH institutions per year - \$510,000 Purdue Funding – ~\$60,000 per year	- One paper is under review

Peers and Technology For Adherence (PT4A)			Status: Ongoing
Investigators: Sonak Pastakia, Tina Tran, Rajesh Vedanthan, Benson Njuguna, et al.			
Description		Expected outcomes	
This program will implement a novel adherence promoting intervention which integrates peers with shared disease experiences, tele-consultation, and data analytics to enhance patient outcomes.		Completion of qualitative research assessing community perceptions on deliveries of medications and incorporation of peers in care.	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	(2020) R24 – Total funding across AMPATH institutions per year - \$535,000 Purdue Component - ~\$60,000 prior to COVID budget adjustment	1 paper published

Peer based care delivery for HIV		Status: Ongoing	
Investigators: Sonak Pastakia, Rakhi Karwa, Adrian Gardner, Suzanne Goodrich, Mercy Maina			
Description		Expected outcomes	
<p>The HIV-peer educator program at AMPATH in Western Kenya is a program that employs trained HIV-positive patients as an integral component in the care model. HIV peer educators are able to create a relationship with patients through their shared experiences in life. The HIV peer educators have provided care through the inpatient setting, outpatient pharmacy, specialty resistance clinics and at satellite sites. Peers focus on ensuring that patients get connected to care and remain continually engaged in the care process. The peers provide psychosocial and adherence counseling to patients. In addition, the promote partner testing and family involvement as a means to support patient care.</p>		<ul style="list-style-type: none"> - Improved patient engagement in care as measured by linkage and retention in care - Improved adherence to antiretroviral therapy by patients - Improved viral loads for patients - Identify areas for improvement in the HIV care model - Engage communities in HIV testing and education 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$10,000 Clinical and Translational Sciences Institute Indiana	<ul style="list-style-type: none"> - Oct 2015: Presented at American College of Clinical Pharmacy Global Conference on Clinical Pharmacy. San Francisco, California - July 2017: Published in PLOS Medicine - Oct 2017: Presented at AMPATH Consortium Meeting. Indianapolis, Indiana - Dec 2017: Presented at Indiana Clinical and Translational Sciences Institute Annual Meeting. Indianapolis, Indiana.

Reimbursement outcomes of a pharmacist-physician co-visit model in a Federally Qualified Health Center			Status: Complete
Investigators: Juan Chang, Jasmine Gonzalvo, Ashley Meredith, Nicole Nace, Lauren Pence, Andy Schmelz, Todd Walroth, Ally Kenneally*			
Description		Outcomes	
Pharmacists have repeatedly demonstrated a positive impact in providing patient care services in the ambulatory setting. However, pharmacists have faced multiple barriers to receiving payment for their services, especially in a Federally Qualified Health Center (FQHC) setting. A commonly cited barrier is pharmacists are not recognized as providers under Medicare and cannot bill and be paid directly. The objective of this study was to describe the reimbursement potential, physician appointment capacity, and billing levels with the use of a pharmacist-physician co-visit model in an urban FQHC.		The pharmacist-physician co-visit model in an urban FQHC increased revenue to justify the addition of one full-time equivalent position, increased the number of patients seen by the physician, allowed for higher-complexity billing levels, and provided the physicians with some variety of responsibilities. In the absence of more direct pharmacist-billing mechanisms, this model justifies the expansion of pharmacist-managed services.	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	None	- Dec 2020: Submitted manuscript to Journal of the American College of Clinical Pharmacy

*Student; **Resident

JR Pharmacy Food Box Delivery			Status: Complete
Investigators: Jasmine Gonzalvo, Claire Schumann*			
Description		Outcomes	
A small team of four doctoral pharmacy students lead by Dr. Gonzalvo to address temporary food insecurity needs during the early stages of the COVID-19 pandemic. This team reached out to independent pharmacies providing medication delivery services to their clients. The intent was to utilize the existing infrastructure of medication delivery for food box distribution to those who were most in need (homebound or economic hardship). In total, 36 food packages were distributed to Hoosier families in Terre Haute.		36 families provided with temporary food assistance in an area with increased numbers of people with food insecurity in the midst of the pandemic. This successful short-term intervention could serve as a model for other community pharmacy settings. Larger community pharmacies, such as Walgreens, CVS, or Walmart, are also traditionally located alongside food resources and may offer delivery in certain areas, which presents an opportunity for similar initiatives. Hospital pharmacies offering medication delivery services and with access to food services could also use a similar model in times of need.	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$1000 Indiana Association for Diabetes Care and Education Specialists (IN ADCES) COVID Relief Fund	- Gonzalvo JD, Schumann C. Increasing Access to Food through a Rural Community Pharmacy Initiative. Navigating Careers in the Academy: Gender, Race, and Class. 2020;3(2).

*Student; **Resident

Understanding Pharmacy-Related Barriers to Care in Medication-Assisted Treatment Therapy: Perspectives from Peers, Providers, and Pharmacists			Status: Ongoing
Investigators: Rakhi Karwa, Kathryn Comanici [^] , Carol Ott, Molly Nichols [^] , Cathy Scott, Stephanie Arnett			
Description		Outcomes	
Opiate use disorder treatment presents many barriers to patient care. Studies show that the community pharmacy acts as one of these barriers. This program and preliminary study hope to identify the perspectives of providers, pharmacists and peer recovery workers on the community pharmacy in the opiate use disorder treatment model. This project will work in both urban and rural healthcare settings		<ul style="list-style-type: none"> - Identify the barriers to opiate use disorder care at the community pharmacy - Understand the perspective of providers, pharmacists and peer recovery workers - Identify opportunities for improvement in this care model - Disseminate the knowledge gained to key stakeholders - Create relationships with national organizations to understand how the knowledge gained can be integrated on a larger scale 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	CHEqI Grant Program – applied and pending Gloria Niemeyer Francke Pharmacy Practice Advancement Grant Program: applied and pending	None

[^]Fellow

Health Disparities in Marginalized Populations

Long-term outcomes of pharmacist-managed cardiovascular risk reduction services in Federally Qualified Health Centers			Status: Complete
Investigators: Jasmine Gonzalvo, Ashley Meredith, Lauren Pence, Michael Peters, Sonak Pastakia, Andy Schmelz, Jessica Triboletti, Todd Walroth, Madi Eberle*			
Description		Outcomes	
<p>Reductions in hemoglobin A1c (HbA1C) have been associated with improved cardiovascular outcomes and savings in annual medical expenditures. One effective approach has been to involve pharmacists in the care of patients within primary care settings. The primary objective was to assess the change in HbA1C from baseline after 3-6 months of follow up in pharmacist-managed cardiovascular risk reduction (CVRR) clinics. This retrospective cohort chart review took place across eight pharmacist-managed CVRR clinics that are part of the county health system of a metropolitan area in Indiana. All patients seen by a CVRR pharmacist between 1/10/2015-2/28/2020 were evaluated for inclusion. Patients were included if they had > 2 completed visits with the pharmacist and the initial visit was on or before October 28, 2019, had a diagnosis of Type 2 diabetes mellitus (T2DM), and an initial HbA1C >8%. Patients were excluded if their initial HbA1C was <8% or if they did not have a diagnosis of T2DM. Data collected include: demographic characteristics, smoking status, and clinical markers (HbA1C, SBP, DBP, LDL, non-HDL, 10-year ASCVD risk) between baseline and 3-6 months of follow-up.</p>		<p>The primary outcome evaluation included 445 patients. Over 36 months of evaluation, 3,803 encounters were described. Compared to baseline, HbA1C was reduced by a mean of 1.6% (95%CI -1.8, -1.4, p<0.01) after 3-6 months of CVRR care. Reductions in HbA1C persisted at 6-9 months with a mean reduction of 1.8% ([95%CI -2.0, -1.5] p<0.01). Our study augments the existing literature by demonstrating the sustained benefits of pharmacist-managed CVRR clinics within FQHCs. Additional studies exploring the expansion of similar models may amplify the impact of pharmacist-managed CVRR services in outpatient primary care sites.</p>	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	None	- Dec 2020: Submitted to Journal of Public Health

*Student; **Resident

CVRR model vs usual care in SMI		Status: Ongoing	
Investigators: Jay Hamm, Jasmine Gonzalvo, Carol Ott, Andrew Wakefield**			
Description		Expected outcomes	
<p>The purpose of the study is to compare cardiovascular risk reduction (CVRR) management and coinciding outcomes in patients with serious mental illness (SMI) and diabetes mellitus who receive standard primary care (physician or midlevel provider) vs. those who receive clinical pharmacy CVRR services in addition to standard primary care. The retrospective cohort study involves a chart review and chart abstraction for data collection using the electronic medical record of Eskenazi Health. No researcher-patient interactions will exist. The data collection and data analysis will occur from the time of IRB approval to June 15, 2021. Data will be secondary use data that will be protected by HIPAA and will not allow for subject data to be readily identifiable to the actual subject.</p>		<p>- To determine whether patients with diagnoses of SMI and diabetes that receive clinical pharmacy CVRR services in addition to standard primary care services have more significant A1c reduction and other CVRR outcomes compared to those who do not receive clinical pharmacy CVRR services.</p>	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	None	None

*Student; **Resident

Disparities in Outpatient Management of Type 2 Diabetes			Status: Ongoing
Investigators: Jasmine Gonzalvo, Jessica Triboletti, Chandler Howell**, Shelby Albertson, Jay Hamm, Ashley Meredith, Lauren Pence, Andrew Schmelz			
Description		Expected outcomes	
<p>After the 2018 ADA guideline update, there was a shift to considering glucagon-like peptide-1 (GLP-1) agonists and sodium glucose co-transporter 2 (SGLT-2) inhibitors as second line treatment after metformin. GLP-1 agonists and SGLT-2 inhibitors have proven beneficial in weight loss and kidney disease. Secondary analysis of the Look AHEAD study determined that SGLT-2 inhibitors, GLP-1 agonists, and dipeptidyl peptidase-4 (DPP-4) inhibitors are disproportionately prescribed at higher rates to White patients compared to Black patients. Pharmacists are uniquely suited to mitigate racial disparities in prescribing rates of these agents due to their knowledge of patient savings programs, copay cards, and other resources for medication access. Objectives of this study include: 1) To evaluate if a disparity exists between the prescribing of SGLT-2 inhibitors and GLP-1 agonists between white patients and black patients and 2) to evaluate if a difference is seen, if the involvement of a pharmacist working with a physician in medication management eliminates this difference</p>		<ul style="list-style-type: none"> - Determine to see if a difference in prescribing rates are seen at a safety net hospital - Examine to see if pharmacist have a potential in playing a crucial role in eliminating this gap - Identify if other factors play a role in difference such as insurance status and SMI 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	None	- Nov 2020: Abstract submitted to Vizient Annual Conference

*Student; **Resident

Diabetic retinopathy in LatinX/Hispanic population			Status: Ongoing
Investigators: Ashay Bhatwadekar, Jasmine Gonzalvo, Andy Schmelz			
Description		Expected outcomes	
<p>Diabetic retinopathy (DR) is a progressive, sight-threatening long-term complication of diabetes. Diabetes disease management reduces the risk of developing or progression to a severe form of DR. However, there are no reports of the potential role of pharmacists in DR progression. For this study, a retrospective data analysis will be performed on LatinX/Hispanic patients with diabetes seen at cardiovascular risk reduction services provided by pharmacists with an objective to determine the potential role of pharmacists in the DR progression. These services involve pharmacists working in collaborative drug therapy management (CDTM), using a collaborative practice agreement (CPA) with primary care providers. Patient records and ophthalmological notes were collected for 317 individuals seen by the pharmacists (intervention group) and 320 individuals seen only by a provider (control).</p>		<ul style="list-style-type: none"> - An assessment of retinopathy progression and risk in patients managed by pharmacist (intervention group) versus those seen by a provider (control group). - This project could provide a proof-of-concept that pharmacists-managed care possesses a potential role in protection from DR for the LatinX/Hispanic community, and paves a way for future pharmacists managed care with an emphasis on reducing diabetic complications. 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	None	None

Gender Diverse Care: curricular content, community pharmacists, continuing education		Status: Ongoing	
Investigators: Jasmine Gonzalvo, Carol Ott, Madi Eberle*, Andrew Wakefield**			
Description		Expected Outcomes	
<p>This state-specific needs assessment aims to assess:</p> <p>1) the frequency of community pharmacists in Indiana who have received formal training in providing trans-inclusive care to the transgender, transsexual, and gender nonconforming community</p> <p>2) the interest in participating in such training programs</p> <p>3) and the preferred format of delivery for such training programs.</p>		<ul style="list-style-type: none"> - To determine the greatest areas of geographical need - To determine specific topics surrounded by a considerable lack of knowledge. - Identified topics requiring substantial focus, as well as other basic knowledge will be developed into curriculum to be proposed into Purdue's College of Pharmacy. - Following the development of an instructional outline, pre and post curriculum surveys will be created. These surveys would contain knowledge evaluation focused questions, thus data collected from said surveys allows for evaluation of student knowledge both prior to and after receiving education. 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	\$1500 College of Psychiatric and Neurologic Pharmacists (CPNP)	- Jan 2021: Abstract to be submitted to College of Psychiatric Neurologic Pharmacists (CPNP)

*Student; **Resident

Community-based Participatory Design of a Human Papillomavirus (HPV) Rapid Diagnostic Test for Cervical Cancer Screening in Underserved Populations			Status: Ongoing
Investigators: Natalia Rodriguez, Luke Brennan*			
Description		Expected outcomes	
The goal of this study is to adapt a rapid HPV test prototype, tailor it to user- and stakeholder-informed target technical specifications to suit the specific needs of medically-underserved communities in South Florida, and train local community health workers (CHW)s to use it for community-based cervical cancer screening.		<ul style="list-style-type: none"> - Create rapid HPV test prototype to fit medically-underserved communities - Train community health workers for cervical cancer screening 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$844,345	None

Implementation of an HIV Rapid Diagnostic Test in Underserved and High-risk Populations			Status: Ongoing
Investigators: Natalia Rodriguez, Jackie Linnes, Doug Satoski*, Justin Macneill*			
Description		Expected outcomes	
The goal of this study is to engage diverse stakeholders, including people who inject drugs and community health workers in Tippecanoe County, Indiana in a participatory study to inform the usability and design of a rapid HIV test, as well as its feasibility, acceptability, and implementation strategies in this community.		<ul style="list-style-type: none"> - Inform the usability and design of a rapid HIV test - Examine the feasibility, acceptability, and implementation strategies of a rapid HIV test 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$15,000	None

*Student; **Resident

Homelessness during COVID-19: CBPR to inform pandemic responsiveness for marginalized and vulnerable populations			Status: Ongoing
Investigators: Natalia Rodriguez, Lexi Lahey*, Nina Teo*, Justin MacNeill*			
Description		Expected outcomes	
The goal of this study is to examine the risks and challenges of the Tippecanoe County homeless population and the organizational- and system-level responses to COVID-19 prevention and impact mitigation in homeless service settings.		<ul style="list-style-type: none"> - Examine the risks and challenges of the homeless population in Tippecanoe county caused by the COVID-19 pandemic to better future pandemic and disaster responses - Analyze the effectiveness of organizational- and system-level responses for the homeless population in Tippecanoe county for the COVID-19 pandemic 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$10,000	None

*Student; **Resident

Point of Care Endothelial Dysfunction Testing to Enhance Identification and Management of Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome (ME/CFS) and Long COVID			Status: Ongoing
Investigators: Sonak Pastakia			
Description		Expected outcomes	
Endothelial dysfunction has been proposed as a potential biomarker which is implicated in the pathogenesis of two increasingly common, yet poorly understood diseases, Myalgic Encephalomyelitis / Chronic Fatigue Syndrome (ME/CFS) and Long COVID. Because of the growing body of evidence, EndoPAT testing could help identify a 1) biological link between ME/CFS and Long COVID and 2) generate additional evidence on the potential role of point of care endothelial dysfunction assessment in the diagnosis, management, and monitoring of ME/CFS and/or Long COVID.		<ul style="list-style-type: none"> - Assess the potential role of EndoPAT in diagnosing ME/CFS by comparing the Reactive Hyperemia Index (RHI) scores from patients confirmed to have ME/CFS via the recommended symptom based diagnostic algorithm to patients receiving routine primary care without symptoms of ME/CFS - Assess the potential role of EndoPAT in differentiating patients with COVID-19 who experience normal recovery without prolonged symptoms versus those who present with symptoms of Long COVID weeks after documented infection. - Examine the potential biological link between patients with Long COVID compared to patients with ME/CFS 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Position pharmacists in all practice settings to optimize patient outcomes	Request for \$154,000 pending	None

Technology Innovations to Address Healthcare Disparities: The Next Giant Leap in Engineering-Medicine Partnership			Status: Ongoing
Investigators: Tamara Kinzer-Ursem			
Description		Expected outcomes	
<p>The COVID-19 pandemic has laid bare entrenched health disparities that contribute to increased risk of morbidity and mortality and disproportionate access to economic potential for large swaths of the US population. According to the US Health and Human Services report, Indiana ranks in the lowest third of all states in health disparities. Bold efforts to reduce these disparities include the \$500 million NIH Rapid Acceleration of Diagnostic - Underserved Populations (RADx-UP) to assess and expand COVID-19 testing for underserved populations. Highlighting need for technology development to be effectively disseminated to have an impactful role in disease diagnosis, delivery of treatments, and distribution of resources that will consequently improve health outcomes for vulnerable populations far beyond this pandemic. To this end, the launch of the Technology Innovations to Address Health Disparities Initiative will: (1) develop innovative engineering solutions that can be readily implemented to improve health in traditionally underserved populations through community engagement and reciprocal innovation, (2) create an academic-community partnership that brings together Purdue researchers and centers, Purdue's HHS extension, and IU School of Medicine/AMPATH to address health disparities through technology innovation, and (3) train a diverse and multidisciplinary engineering workforce to address significant problems in medical technology development and implementation using community-based approaches.</p>		<ul style="list-style-type: none"> - Improve health outcomes for Hoosiers and increase Indiana's rating in health equity. These technology solutions for Indiana's underserved communities can be rapidly translated to underserved and low resource US communities and throughout the globe. - Establish focus under the Engineering-Medicine Partnership to make Purdue at the forefront of developing, commercializing, and translating innovations to address health disparities in underserved populations. - Create an cadre of engaged and industry-ready workforce that can deliver uniquely successful technology solutions by involving engineering students in all aspects of the process from engineering design, needs-finding, and implementation. - Examine to see if pharmacist have a potential in playing a crucial role in eliminating this gap - Identify if other factors play a role in difference such as insurance status and SMI 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	None	None

Student Initiatives

CHEqI Student Representatives			Status: Ongoing
Investigators: Jasmine Gonzalvo, Rakhi Karwa, Madi Eberle*, Hanna Persha*, Moises Martinez*, Lexi Lahey*, Nick Howard*, Ameer Patel*			
Description		Expected outcomes	
The Student Representatives of CHEqI are a committed group of PharmD students determined to increase awareness of health disparities and understand the needs of underserved populations locally and globally. Student Representatives manage special projects under faculty and community partners as well as lead a university club with the same goals.		<ul style="list-style-type: none"> - Create and implement interdisciplinary projects centered around improving health equity - Educate students about health disparities - Provide experience in health equity within the community 	
Strategic Area	Goal	Funding	Scholarship
Achieving Excellence in Student Experience & Success	<ul style="list-style-type: none"> - Provide and encourage opportunities for meaningful faculty mentorship of students to allow all students affiliated with the College of Pharmacy to develop and mature personally, academically, and professionally - Challenge and empower students to become role models, advocates, and leaders in their profession, and support opportunities to play meaningful roles in the local, state, national, and international recognition of their area of practice or science 	None	None

*Student; **Resident

Health Equity Content in the Curriculum		Status: Ongoing	
Investigators: Jasmine Gonzalvo, Hanna Persha*			
Description		Expected outcomes	
This project seeks to evaluate health equity content in the pharmacy curriculum. Surveys for both students and faculty have been created to evaluate their perception of health equity content as well as their experience with it. Course syllabi will also be analyzed to identify these themes.		<ul style="list-style-type: none"> - Identify how much health equity content is in pharmacy curriculum - Identify what students and faculty perceive is lacking from the curriculum in terms of health equity - Implement changes to the curriculum in the future to include more health equity content 	
Strategic Area	Goal	Funding	Scholarship
<p>Achieving Excellence in Academic Programs</p> <p>Achieve Excellence in Student Experience & Success</p>	<ul style="list-style-type: none"> - Exceed Professional Program Outcomes, with emphasis on effective communication, empathy and integrity, advocacy for the profession and patients, progressive pharmacy practice, and evidence-based decision making - Provide innovative didactic and experiential curricula aligned with contemporary pharmacy practice models - Create an inclusive environment that supports opportunities for excellence and expanded diversity in the student body, as well as staff and faculty - Challenge and empower students to become role models, advocates, and leaders in their profession, and support opportunities to play meaningful roles in the local, state, national, and international recognition of their area of practice or science 	None	None

*Student; **Resident

Spanish-track for Pharmacy Curriculum		Status: Ongoing	
Investigators: Jasmine Gonzalvo, Ellen Schellhase, Hanna Persha*, Madi Eberle*, Moises Martinez*			
Description		Expected outcomes	
CHEqI leaders and PharmD students examined the potential benefit of integrating a separate Spanish track into the PharmD plan of study. A Spanish curriculum was created that integrates both the Spanish language and culture. The main goal of the Spanish-track is to introduce more intentional opportunities for students who are already pursuing a Spanish minor to use Spanish in applicable Spanish-speaking settings.		<ul style="list-style-type: none"> - Introduce web-based, asynchronous instruction in Spanish for Purdue PharmD students - Integrate Hispanic/LatinX cultural immersion experiences into the Purdue PharmD curriculum - Graduate fluent, language-concordant PharmD candidates - Establish a cultural exchange program with Universidad de Antioquia in Medellin, Columbia 	
Strategic Area	Goal	Funding	Scholarship
<p>Achieving Excellence in Academic Programs</p> <p>Achieve Excellence in Student Experience & Success</p>	<ul style="list-style-type: none"> - Exceed Professional Program Outcomes, with emphasis on effective communication, empathy and integrity, advocacy for the profession and patients, progressive pharmacy practice, and evidence-based decision making - Provide innovative didactic and experiential curricula aligned with contemporary pharmacy practice models - Create an inclusive environment that supports opportunities for excellence and expanded diversity in the student body, as well as staff and faculty - Challenge and empower students to become role models, advocates, and leaders in their profession, and support opportunities to play meaningful roles in the local, state, national, and international recognition of their area of practice or science 	<p>\$5000</p> <p>VEIL Award Application</p>	<p>None</p>

*Student; **Resident

Student Service Learning Grant to address Mental Health in Street Youth			Status: Ongoing
Investigators: Sonak Pastakia, Carolyn Wartman, Grant Perschke**			
Description		Expected outcomes	
Because of the mental health issues many street youth face, a service learning project was started to establish a mental health service for street youth at Tumaini		<ul style="list-style-type: none"> - Identify mental health status of youth participating in the Tumaini Innovation Center - Create opportunities to improve mental health of youth participating in Tumaini Innovation Center - Create sustainable approaches to understanding, monitoring and managing mental health issues at Tumaini - Improve staff knowledge on mental health issues among youth and create tools to promote positive mental health 	
Strategic Area	Goal	Funding	Scholarship
Achieving Excellence in Student Experience & Success	Challenge and empower students to become role models, advocates, and leaders in their profession, and support opportunities to play meaningful roles in the local, state, national, and international recognition of their area of practice or science	\$10,000 Service-Learning grant NIH R01 submission is being planned on mental health issues for vulnerable children	One publication on service learning in general is in press

*Student; **Resident

Alumni Initiatives

Health Equity Alumni Spotlight Features		Status: Ongoing	
Investigators: Jasmine Gonzalvo, Hanna Persha*			
Description		Expected outcomes	
This project seeks to identify any Purdue pharmacy graduates currently working in health equity. The goal is to create a database and include their information on our website to not only showcase their work, but also potentially work with them on future projects.		<ul style="list-style-type: none"> - Identify Purdue pharmacy graduates working in health equity - Create relationships with alumni in health equity as a foundation for future projects - Invite alumni to deliver presentations to and engage with students interested in pursuing health equity careers 	
Strategic Area	Goal	Funding	Scholarship
Achieving Excellence in Alumni Engagement	Tailor engagement efforts to recognize alumni lifecycle to increase participation in philanthropy, advocacy, and/or volunteerism	None	None

*Student; **Resident

Funded Grants and Other Sources of Funding

Virtual Experiential Intercultural Learning Grant, Purdue International Programs: Development of a Spanish Language Training Pathway for Pharmacy Students			
Investigators: Jasmine Gonzalvo, Ellen Schellhase			
Description		Expected outcomes	
<p>PUCOP and UdeA have been collaborating for the past several years. PUCOP has an established Advanced Pharmacy Practice Experience (APPE) in Medellin. This four-week experience is focused on patient care in in-patient and ambulatory settings, medical Spanish, and understanding of the local healthcare setting. At this time, there is not an established curricular pathway for PUCOP students interested in growing and utilizing their Spanish language skills. While there are a few opportunities for students (ie. the APPE at UdeA) there has not been a consistent, strategic pathway to support students in developing Spanish-language patient care skills.</p>		<ul style="list-style-type: none"> - Establish a Spanish language training pathway within the College of Pharmacy - Develop a collaborative seminar series for students (and faculty) from PUCOP and UdeA 	
Strategic Area	Goal	Funding	Scholarship
Achieving Excellence in Academic Programs	Exceed Professional Program Outcomes, with emphasis on effective communication, empathy and integrity, advocacy for the profession and patients, progressive pharmacy practice, and evidence-based decision making	\$5000	None

Indiana Clinical and Translational Sciences Institute (CTSI): Indiana Community Health Workforce Development Institute			
Investigators: Jasmine Gonzalvo, Ashley Meredith, Natalia Rodriguez, Yumary Ruiz			
Description		Expected outcomes	
<p>The Institute will carry out the following core functions:</p> <p>1) Sector-based workforce development to create sustainable community health worker (CHW) jobs throughout Marion County at numerous clinical, community-based, and academic partner organizations.</p> <p>2) Support CHW training that is accessible and affordable, ensuring core competencies and sector-specific skillsets needed and identified by partner organizations, and creating a path to certification for reimbursement eligibility in Indiana.</p> <p>3) Rigorous research and evaluation to support evidence-based policy for formal integration of CHWs at a systems level and improved public and private reimbursement mechanisms for all CHW services on levels that are commensurate with a living wage.</p>		<ul style="list-style-type: none"> - Enhanced capacity of academic, community-based and clinical institutions to provide context-specific service delivery - Increased sectors (CBO, faculty, clinical) working in CHW lead opportunities that are writing grants - Expanded engagement of INCHWA membership and partner organizations - Increased understanding of current needs in Hoosier communities to inform and define the potential role and impact of CHWs - Increased access to certification and educational content for CHWs - Increased capacity of CHWs to perform these functions - Increased CHW employment/advancement opportunities and earnings - Policy changes that recognize and promote CHWs as a critical workforce to address health promotion needs in underserved and marginalized communities, as well as emergent needs during disaster response (e.g.; pandemics) - Address CHW identified needs relevant to the profession 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$5000	<ul style="list-style-type: none"> - Abstract submitted to 2021 Indiana Rural Health Association Annual Conference - Dec 2020: Featured in Indiana Business Journal

COVID-19 QALY study			
Investigators: Sonak Pastakia			
Description		Expected outcomes	
The COVID-19 pandemic has had many impacts on our society at large beyond the objective toll on the number of people infected, hospitalized, or succumbing to infection. This study focuses on the toll on the quality of life for Purdue university and Brown University students. This pilot data has informed our recently submitted r01 which proposes a much larger scale up of this approach to Mexico, Kenya, India, and the US.		- Quantify the impact the COVID-19 pandemic has had on communities in Mexico, Kenya, India, and the US	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$5,000 Purdue internal funding NIH R01 submission under review (Funding request of ~\$525,000 per year)	Paper submission planned for early 2021

Center for Health Equity and Innovation (CHEqI) Office of Engagement Grant Program 2020-2021			
Description		Expected outcomes	
The mission of the Center for Health Equity and Innovation (CHEqI) is to address the needs of underserved populations locally and globally (see page 5 for CHEqI focus areas). This grant opportunity is offered in collaboration with the Purdue University Office of Engagement.		- The objective of the CHEqI-Office of Engagement Grant Program is to support both student researchers and faculty advancing the Scholarship of Engagement in health equity research and issues pertinent to addressing health inequities.	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stake holders in the healthcare value chain	\$10,000 Purdue Office of Engagement	None

IN ADCES COVID Fund Relief: JR Pharmacy Food Box Delivery			Status: Complete
Investigators: Jasmine Gonzalvo, Claire Schumann*			
Description		Outcomes	
A small team of four doctoral pharmacy students lead by Dr. Gonzalvo to address temporary food insecurity needs during the early stages of the COVID-19 pandemic. This team reached out to independent pharmacies providing medication delivery services to their clients. The intent was to utilize the existing infrastructure of medication delivery for food box distribution to those who were most in need (homebound or economic hardship). In total, 36 food packages were distributed to Hoosier families in Terre Haute.		36 families provided with temporary food assistance in an area with increased numbers of people with food insecurity in the midst of the pandemic. This successful short-term intervention could serve as a model for other community pharmacy settings. Larger community pharmacies, such as Walgreens, CVS, or Walmart, are also traditionally located alongside food resources and may offer delivery in certain areas, which presents an opportunity for similar initiatives. Hospital pharmacies offering medication delivery services and with access to food services could also use a similar model in times of need.	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$1000 Indiana Association for Diabetes Care and Education Specialists (IN ADCES) COVID Relief Fund	- Gonzalvo JD, Schumann C. Increasing Access to Food through a Rural Community Pharmacy Initiative. Navigating Careers in the Academy: Gender, Race, and Class. 2020;3(2).

*Student; **Resident

College of Psychiatric and Neurologic Pharmacists (CPNP): Assessing the need for Gender Inclusive education amongst practicing community pharmacists			
Investigators: Jasmine Gonzalvo, Madi Eberle*, Madison Modany*, Amanda Huntsman*			
Description		Expected outcomes	
<p>This state-specific needs assessment aims to assess:</p> <ol style="list-style-type: none"> 1) the frequency of community pharmacists in Indiana who have received formal training in providing trans-inclusive care to the transgender, transsexual, and gender nonconforming community 2) the interest in participating in such training programs 3) and the preferred format of delivery for such training programs. 		<p>Following the completion of all telephone-based surveys, collected data will be analyzed in order to determine the greatest areas of geographical need and to determine specific topics surrounded by a considerable lack of knowledge. Identified topics requiring substantial focus, as well as other basic knowledge will be developed into curriculum to be proposed into Purdue's College of Pharmacy. Following the development of an instructional outline, pre and post curriculum surveys will be created. These surveys would contain knowledge evaluation focused questions, thus data collected from said surveys allows for evaluation of student knowledge both prior to and after receiving education.</p>	
Strategic Area	Goal	Funding	Scholarship
Achieve Excellence in Student Experience & Success	Create an inclusive environment that supports opportunities for excellence and expanded diversity in the student body, as well as staff and faculty	\$1500	- Jan 2021: Abstract to be submitted to College of Psychiatric Neurologic Pharmacists (CPNP)

*Student; **Resident

Becton Dickinson/NACHC: A Pharmacist, Community Health Worker Collaboration to Improve Cardiovascular Outcomes in a Federally Qualified Health Center			
Investigators: Jasmine Gonzalvo			
Description		Expected outcomes	
<p>A novel community-centered approach by integrating a community health worker (CHW) could augment telephone-based clinical pharmacist services. The CHW hired to assist with the implementation of this project will serve as an extension of the clinical pharmacist services and provide educational, behavioral, and social support for the 50+ participants. This project will ultimately broaden the impact of pharmacist-managed services by integrating a CHW who will directly address the social determinants of health contributing to persistent health inequities faced by the predominantly black and LatinX populations relying on FQHCs for care. A dedicated CHW will work with patients to follow up on recommendations from the CVRR clinic, including blood glucose monitoring, medication recommendations, and addressing access barriers (insurance coverage, transportation, and employment opportunities). This proposed approach introduces a novel model of care to broaden the impact of pharmacist-managed CVRR services, seeking to directly address multiple social determinants of health and persistent health inequities. The addition of the CHW is intended to help mitigate the many socio-environmental barriers faced by patients already receiving CVRR services.</p>		<ul style="list-style-type: none"> - Evaluate the impact of telephone-based clinical pharmacist cardiovascular risk reduction services - Evaluate the impact of the integration of a community health worker into the telephone-based clinical pharmacist cardiovascular risk reduction service model - Evaluate patient and clinician perceptions of the CHW services provided 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$150,000	None

McKinley Foundation			
Investigators: Jasmine Gonzalvo			
Description		Expected outcomes	
<p>A novel community-centered approach by integrating a community health worker (CHW) could augment telephone-based clinical pharmacist services. The CHW hired to assist with the implementation of this project will serve as an extension of the clinical pharmacist services and provide educational, behavioral, and social support for the 50+ participants. This project will ultimately broaden the impact of pharmacist-managed services by integrating a CHW who will directly address the social determinants of health contributing to persistent health inequities faced by the predominantly black and LatinX populations relying on FQHCs for care. A dedicated CHW will work with patients to follow up on recommendations from the CVRR clinic, including blood glucose monitoring, medication recommendations, and addressing access barriers (insurance coverage, transportation, and employment opportunities). This proposed approach introduces a novel model of care to broaden the impact of pharmacist-managed CVRR services, seeking to directly address multiple social determinants of health and persistent health inequities. The addition of the CHW is intended to help mitigate the many socio-environmental barriers faced by patients already receiving CVRR services.</p>		<ul style="list-style-type: none"> - Evaluate the impact of telephone-based clinical pharmacist cardiovascular risk reduction services - Evaluate the impact of the integration of a community health worker into the telephone-based clinical pharmacist cardiovascular risk reduction service model - Evaluate patient and clinician perceptions of the CHW services provided 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$15,000	None

Submitted Grants

Hormonal contraceptive Access via Pharmacist-Prescribing Implementation (HAPPI)			
Investigators: Ashley Meredith, Sally Rafie, Jenny Beal			
Description		Expected outcomes	
<p>The District of Columbia and 12 states have passed specific legislation to allow pharmacists to prescribe hormonal contraceptives. Despite strong interest from both patients and pharmacists, uptake of pharmacist-prescribed contraception services is impeded by various barriers to implementation, including inadequate billing mechanisms, training, workflow integration, and patient awareness of the service. The intention of allowing pharmacist-prescribed contraception services is to improve patients' access by allowing direct, convenient access to an array of prescription-only contraception methods within their local community. When implemented effectively, positive outcomes are demonstrated. However, widespread effective implementation has not been realized. An implementation package designed to overcome common barriers to pharmacist-prescribed contraception services would address the current gap in knowledge and practice. Without an implementation package to improve and increase implementation of pharmacist-prescribed contraception services, patients, particularly those facing the most barriers to obtaining contraception, may not have the option of benefitting from this service.</p>		<ul style="list-style-type: none"> - Complete a landscape assessment to characterize and describe existing technology, tools, and resources for pharmacist-prescribed contraception services. - Conduct a participatory, multiple stakeholder analysis to assess perceived needs to implement pharmacist-prescribed contraception services. - Design an implementation package prototype - Refine the implementation package prototype(s) based upon additional feedback from the multi-stakeholder advisory panel. 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$243,000 Submitted Jan 2021 to NIH CDC SBIR	None

Contraceptive Access through Pharmacist Prescribing (CAPP) Project			
Investigators: Ashley Meredith, Tracey Wilkinson, Nicole Noel, Mary Ott			
Description		Expected outcomes	
<p>College-age women 18-24 years old have the highest rates of unintended pregnancies in the United States. As an essential service during the pandemic, pharmacies have remained open and adapted procedures to minimize COVID-19 transmission, making pharmacist contraceptive prescribing a COVID-19 sensitive way to safely expand access. Not only does pharmacist prescribing increase convenience, expand geographic reach and eliminate barriers to access such as transportation and limited clinic hours, it also decreases COVID-19 risk by eliminating one clinic visit and decreasing patient contact. Surveys of women document high levels of interest in pharmacist contraceptive prescribing. Despite the promise of expanded access through pharmacist prescribing, only a small number of pharmacies have actually implemented the service, with the greatest implementation barriers at the level of the pharmacy itself, which include a lack of prescribing algorithms, counseling materials, cost structures, example CDTMs, guidance for staffing and workflow, and referral resources. Pharmacists need evidence-informed tools to support implementation. Using the Consolidated Framework for Implementation Research (CFIR), we will develop a set of pharmacy tools for contraceptive prescribing and examine the implementation of this “toolkit” in a campus pharmacy setting.</p>		<ul style="list-style-type: none"> - Examine pharmacist-identified barriers, facilitators, and solutions to the development and implementation of a pharmacist contraceptive prescribing toolkit within a campus pharmacy setting, with attention to COVID-19 related safety and restrictions. - Use pharmacist and client focus groups from multiple campus pharmacies to develop a toolkit. - Use quality improvement (QI) data and pharmacist input to adapt and finalize the toolkit. - Examine client uptake and acceptability of campus pharmacist contraceptive prescribing after toolkit implementation using QI methodologies. - Using pharmacy data and run charts, describe changes in pharmacist contraceptive prescriptions over an 18-month period. We hypothesize that changes made as a result of the QI cycles will increase use of pharmacist prescribing over time. - Using client surveys, describe acceptability and continuation of the pharmacist contraceptive prescribing service. 	
Strategic Area	Goal	Funding	Scholarship
Innovations in Pharmacy & Healthcare	Enhance the relevance and accessibility of the pharmacy profession to all stakeholders in the healthcare value chain	\$93,042	None

QALY Effort			
Investigators: Sonak Pastakia			
Description		Expected outcomes	
The COVID-19 pandemic has had many impacts on our society at large beyond the objective toll on the number of people infected, hospitalized, or succumbing to infection. This study focuses on the toll on the quality of life for Purdue university and Brown University students. This pilot data has informed our recently submitted r01 which proposes a much larger scale up of this approach to Mexico, Kenya, India, and the US.		- Quantify the impact the COVID-19 pandemic has had on quantity of life in communities in Mexico, Kenya, India, and the US	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$2,400,000 NIH R01	None

USAID ASHA grant for Tumaini			
Investigators: Sonak Pastakia			
Description		Expected outcomes	
This grant would be used to provide a new building to serve as an innovative engineering center.		- Construction of an educational engineering innovation campus and production of relevant workshops	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	\$900,000	None

Fellowships

Health Equity and Global Health Fellowship			Status: Ongoing
Investigators: Rakhi Karwa, Sonak Pastakia, Monica Miller, Ellen Schellhase, Christine Malati			
Description		Expected outcomes	
<p>Purdue University College of Pharmacy (PUCOP) through its Purdue Kenya Program (PKP) in conjunction with AMPATH and USAID developed a two-year Health Equity and Global Health Fellowship. The Fellowship program provides opportunities for Fellows to split their time working with AMPATH (Eldoret, Kenya), at Purdue University College of Pharmacy Department of Pharmacy Practice (Indianapolis, IN) and at USAID Office of HIV/AIDS (Washington, DC). The Fellowship's main goal is to train pharmacists in health equity care and policy to aid their ability to work in a variety of settings either within the US or abroad. The Health Equity and Global Health Fellowship is a two-year, focused learning opportunity created from a partnership with Purdue University and USAID.</p>		<ul style="list-style-type: none"> - Care for patients in inpatient and outpatient settings - Fellows participation in health equity and implementation science research with the goal of one presented professional poster and publication each year. - Evaluating concepts and methods of social and behavioral sciences relevant to the identification and solution of public health problems - Building and leveraging epidemiological concepts in a population health - Appraise current and relevant health policies 	
Strategic Area	Goal	Funding	Scholarship
N/A	N/A	Lilly Endowment (50%) Sustaining Technical and Analytic Resources (STAR) Project Public Health Institute	N/A

Publications

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Presentations

Partnerships for Impact (virtual). Purdue University President's Council. West Lafayette, IN. July 2020. Jasmine Gonzalvo, Sonak Pastakia.

Pharmacist Role in Health Equity Initiatives (virtual). Tenth International Conference on Health, Wellness, & Society. Université de la Sorbonne Nouvelle, Paris, France. September 2020. Jasmine Gonzalvo, Ashley Meredith.

Purdue University Center for Health Equity and Innovation (virtual). Health By Design, Health Equity Action Team (HEAT) meeting, Indianapolis, IN. September 2020. Jasmine Gonzalvo.

Assessing Health and Wellness Outcomes of Medicaid-Enrolled Infants Born to Adolescent Mothers. Toyya A. Pujol, Anna Smith, Nicoleta Serban, Melissa Kottke, Julie Swann

Contraception Connection. Pharmacists Association Spring Conference. Indianapolis, IN. June 2020. Ashley Meredith.

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