

Enhancing Cultural Humility through a Longitudinal APPE Exchange Program

Section I. What is your research question?

There is a movement among pharmacy schools to incorporate diversity, equity, inclusion, and antiracism efforts into school policies, procedures, and curricula.¹⁻² This academic emphasis on diversity and antiracism ultimately serves to help mitigate health disparities for our patients. The CDC calls for systemic changes to help healthcare providers “deliver all health-related services in a culturally appropriate way” and “ensure providers show awareness of and respect for culture when providing care.”¹ Pharmacy schools have the responsibility to prepare future pharmacists to be agents of change who see the systems responsible for health inequities and work throughout their career to mitigate these disparities and transform the practice of pharmacy.

Empowering student pharmacists to be change agents who reduce health disparities, systemic racism, and provider bias requires unique educational approaches. **The University of Pittsburgh and Howard University partnered to form a longitudinal APPE exchange program. The goals of this exchange are to 1) increase the cultural humility of pharmacy students by intentionally diversifying their APPE rotation experiences and facilitating weekly self-reflection debriefs and 2) enhance student leadership and career readiness by engaging in research on and discussions about systemic racism, health disparities, and transformative pharmacy practice.** We hypothesize that the longitudinal APPE exchange will increase students' cultural humility and enhance student leadership and career readiness.

Providers' implicit bias is one of the many factors shown to perpetuate health inequities.² Multiple studies performed on pharmacy students show that pharmacy students have implicit biases against people of color, but most pharmacy students are unaware of these biases.³⁻⁵ Mitigating implicit bias in healthcare professionals requires a multi-directional approach that begins at the educational level and continues throughout one's career.

At the educational level, didactic approaches to mitigating bias in pharmacy students provide essential training and a baseline knowledge on cultural humility and the Social Determinants of Health.^{1,6-10} Intentionally diversifying experiences and developing cultural humility and responsiveness are important strategies as well.¹¹ “Students should be exposed to diverse groups of learners and patients as a tool to mitigate bias. Delivery of care to diverse groups has been shown to have a significant positive impact on reducing bias.”¹²

Geographic limitation imparts a natural bias into the diversity of patients students encounter on experiential rotations. A longitudinal APPE exchange program was developed by HUCOP and Pitt Pharmacy and will be implemented in fall 2023. This collaboration between a historically black college in Washington, DC, and a predominantly white institution in Pittsburgh, PA, utilizes each school's strengths to provide diverse rotation experiences centered in cultural humility and therefore increase students' workforce readiness and change agency.

Existing APPE exchange programs are limited.^{13,14} To our knowledge, this is the first formal APPE Exchange program between two pharmacy schools and their partnering academic medical centers, and the first that focuses on enhancing students' lifelong commitment to cultural humility. In this era of increasing competition between pharmacy schools, we believe partnering with schools and leaning on each other's strengths will be mutually beneficial for our students, faculty, and ultimately our patients.

This longitudinal APPE exchange directly addresses AACP's Strategic Priority #2 because it implements innovative curricular methods to meet contemporary learner needs. This project serves to assess educational outcomes of this new APPE model, prepare learners to engage in

transformation of pharmacy practice, and expand the profession through educational research.

Section II. How will you test your idea?

Teaching and Learning Design

A partnership between Pitt Pharmacy and HUCOP offices of experiential learning was formed in fall 2022. This partnership was sought out due to the similarities of their APPE calendars and the demographic differences between the cities of Washington, DC, and Pittsburgh, PA. This APPE exchange was co-built by these two institutions, and was named after a graduate from each institution who had a profound impact on health disparities at the systemic (Chauncey Ira Cooper) and individual (Ella P. Stewart) levels. Students from Pitt Pharmacy and HUCOP applied for admittance into the inaugural 2023 class of the Cooper-Stewart Longitudinal APPE Exchange Program. Interviews took place in November, 2022.

Three students from each school were selected in December, 2022. All 6 students will be completing two consecutive 5-week APPE rotations at the opposite institution in Blocks 5-6 (October through December, 2023). Specific rotation category and focus will be determined based on student preference and faculty preceptor availability. Students will complete at least one Core rotation category, as defined by the ACPE 2016 Accreditation Standards, and the other rotation would be a Research or Teaching Elective. Rotations will be completed at the schools and their partnering academic medical centers, Howard University Hospital (HUH) and the University of Pittsburgh Medical Center (UPMC). Care will be taken to select rotations and faculty preceptors that cultivate cultural competency in accordance with the Georgetown University National Center for Cultural Competence's (NCCC) Experiential Learning Checklist.¹⁵

An increase in cultural humility is expected by exposing students to different patient demographics.^{12,16} To supplement this growth, Investigators will hold weekly Zoom meetings with all 6 students. These weekly meetings will contain a debrief, self-reflection, and topic discussions.

- Debrief: Students will have the chance to debrief with Investigators and faculty preceptors on the health inequities and structural racism they see on rotation.
- Self-Reflection: Self-reflection is an essential component of mitigating bias and developing cultural humility. Facilitated and individual self-reflection will occur weekly.
- Topic Discussions: Literature reviews and "topic discussions" will be conducted on culturally responsive care and identifying and addressing systemic racism in pharmacy and healthcare. This serves to stimulate thinking about transformative pharmacy practices and the future of healthcare in mitigating health disparities.

In addition, students will work with pharmacy faculty at each institution on research related to health disparities, SDOH, care for underserved populations, global health, or related fields to gain perspective on how one can bring awareness and change to systemic issues. At minimum, research will be a longitudinal component of the program and may also include a 5-week elective rotation in this area, depending on student interest. Research work leading to a poster or journal article will be encouraged, to build student experience and marketability post-graduation. Faculty will also work with the 6 students on career readiness, including CV review, interview prep, career planning discussions, and exposure to post-doctoral training available at the partner institution.

A longitudinal (10-week total) design was chosen to enhance student learning and independence at the partner school and academic medical center. Longitudinal, weekly debriefs facilitate the formation of a self-reflection routine. This is significant because the development of cultural humility does not have an end, but is rather an ongoing process of debriefing, self-reflection, and self-improvement. Development of this internal process is essential to continuous professional development and lasting change.

Resources from this grant will be used to support student participants and long-term program success. The most significant factors affecting rotation selection are location, peer-review, and cost/housing.¹⁷ Student cost of living scholarships will enable students to participate in this exchange program, ensuring program equity by helping to offset costs incurred by completing out-of-area rotations. Funds from this grant will help demonstrate the success of this innovative educational model to future donors and investors, ensuring program longevity. Funds will also be used to share the results of this program with the academy and beyond (Figure 1).

Program Assessment

The primary objective is to increase the cultural humility of pharmacy students by intentionally diversifying their APPE rotation experiences and leading regular self-reflection exercises. Cultural humility is an ongoing internal process, and thus there is a paucity of cultural humility assessments. Therefore we will use a mixed-methods approach to assess the primary objective: combine a validated cultural competence assessment with reflective journaling based on the NCCC Experiential Learning framework.¹⁵ The Central Vancouver Island Multicultural Society (CVIMS) Cultural Competence self-assessment survey will be given at the beginning, middle, and end of the longitudinal experience.¹⁸ Though the survey has been studied in healthcare professionals, it has not been validated in pharmacy students, but results will help inform future use.¹⁹ Student responses will be matched using a unique identifier that is anonymous but can be recalled by the student. Changes in students' cultural competence will be described using descriptive statistics and p values will be determined using appropriate statistics (Wilcoxon rank sum test, Friedman ANOVA), though it may not be possible to determine significant changes given the small sample size of 6 students in the inaugural class. Reflective journaling responses will be matched using the same unique identifiers, coded by Investigators, and major themes will be reported.

The secondary objective is to enhance student leadership and career readiness by engaging in research on and discussions about systemic racism, health disparities, and transformative pharmacy practice. The secondary objective will be assessed via a quantitative and qualitative survey developed by the Investigators. This mixed methods survey will also be given at the beginning, middle, and end of the longitudinal experience, and responses will be matched via the student-chosen, anonymous identifier. A validated survey tool will not be used for this portion of the program assessment, given the unique nature of this pilot program and the need for specialized program feedback for continuous quality improvement. However, collection of both qualitative and quantitative data strengthens the validity and richness of the outcome data. A mastery scale will be developed for students' self-assessment of career readiness and leadership skills. Care will be taken to reflect the new 2022 COEPA Outcomes in this self-assessment, especially Sub-Domains 2.1 Problem Solver, 2.2 Communicator, 2.3 Ally, 2.5 Advocate, 2.8 Promoter, 2.9 Leader, and 3.2 Self-Aware, as these are the areas expected to be most impacted by this longitudinal rotation. Quantitative assessment will occur via open-ended survey questions. These responses will be coded by study Investigators and major themes will be reported.

Next Steps

With pharmacy admissions declining nation-wide, schools are looking for ways to set themselves apart and develop effective ways to meet the needs of contemporary learners. Results from this innovative APPE exchange program can be used to justify exchange programs among other schools nationwide. This collaborative approach can be used to support schools during these admissions difficulties. This experiential learning exchange can be used as a model for other schools looking to establish partnerships with complementary institutions.

Both Pitt Pharmacy and HUCOP are interested in expanding the number of students and/or the length of this exchange program in the future. Funds from this grant will help ensure student participation, program success, and sharing educational outcomes with the profession.

Figure 1. Grant Budget Overview

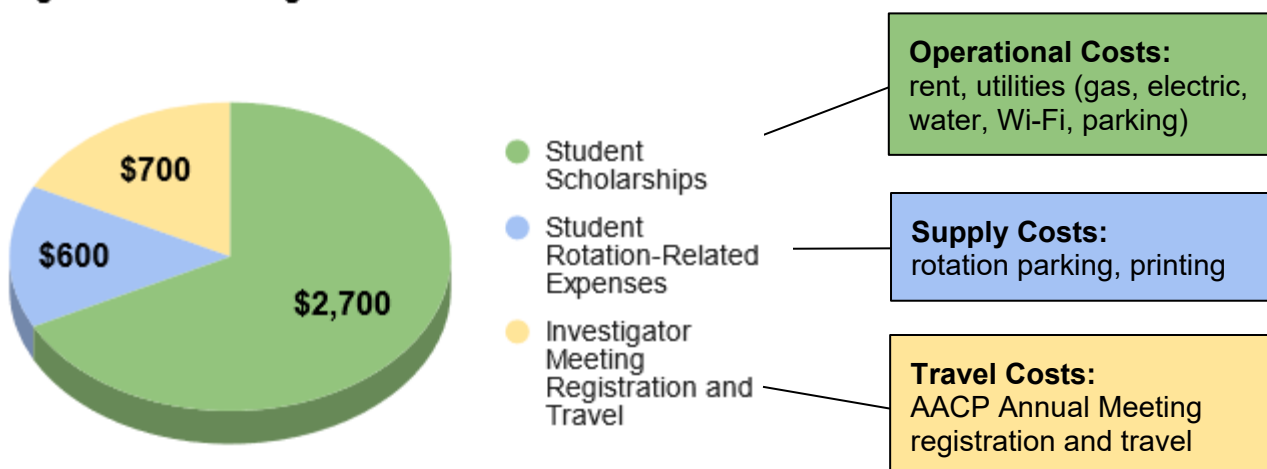


Table 1. Project Timeline

January 2023	IRB Submission Student Rotation Finalization
May 2023	Awardees Notified Submit IRB Approval
Summer 2023	Provide more in-depth preceptor education/orientation to exchange program Ensure student housing is complete Finalize student schedule (days/times for weekly meetings, research projects)
Oct-Dec 2023 <i>Rotation Commences</i>	Investigator-Student weekly meetings Data collection
Spring 2024	Data analysis Interim report due
Summer 2025	Discuss changes for 2024 Cohort based on outcomes from 2023 Cohort
Fall 2024	Propose presentation at AACP 2025 Annual Meeting
Spring 2025	Preparation and submission of Final Report

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