

Value-Driven Pharmacy Student-Led Rapid Cycle Process Engagement in Experiential and Didactic Settings

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Beyond the Academic Conversation: When learners are engaged as active contributors in established clinical environments, valuable and symbiotic relationships can develop between educational institutions and healthcare organizations. On-site, practical, team-based learning provides opportunities to apply “theory in action” and demands real-time critical thinking, interprofessional collaboration, and the self-awareness of all parties involved.

Introduction

Northeast Pennsylvania-based, community-focused educational organizations — Wilkes University, The Wright Center, and Geisinger Commonwealth School of Medicine — are partnering to develop a pipeline of interprofessional healthcare workforce.

Wilkes University's Nesbitt School of Pharmacy (Wilkes-Barre) aims to develop pharmacists who will provide high quality healthcare and make contributions to the science and practice of pharmacy.



The Wright Center (Jermyn) is a safety-net educational and healthcare consortium hosting residents/fellows and caring for 16,000+ each year in Patient-Centered Medical Home (PCMH) venues.



Geisinger Commonwealth School of Medicine (Scranton) educates aspiring physicians and scientists using a patient-centered, interprofessional and evidence-based model committed to inclusion, discovery and innovation.



Practice-Based Learning and Improvement (PBLI) and systems-based practice improvement was previously established within The Wright Center, an ACGME-accredited institution. The partnership with Wilkes further poised the spread of best practice around the “Plan. Do. Study. Act.” (PDSA)-driven Quality Improvement (QI) management system, promoting interprofessional workforce development and specifically addressing Standards 4 and 11 from **Standards 2016: Self-awareness, Leadership, Innovation and Interprofessional Education**.¹

The Institute of Healthcare Improvement (IHI) places emphasis on empowering clinical personnel to become effective system improvers.² The American Society of Health-Systems Pharmacists' Strategic Planning Forecast also highlights the importance of pharmacists engaging in QI as system improvers.³ Thoughtful inter-professional education results in high-impact leaders who can cross organizational and departmental boundaries, care bi-directionally, and share lessons learned in pursuit of the Quadruple Aim.

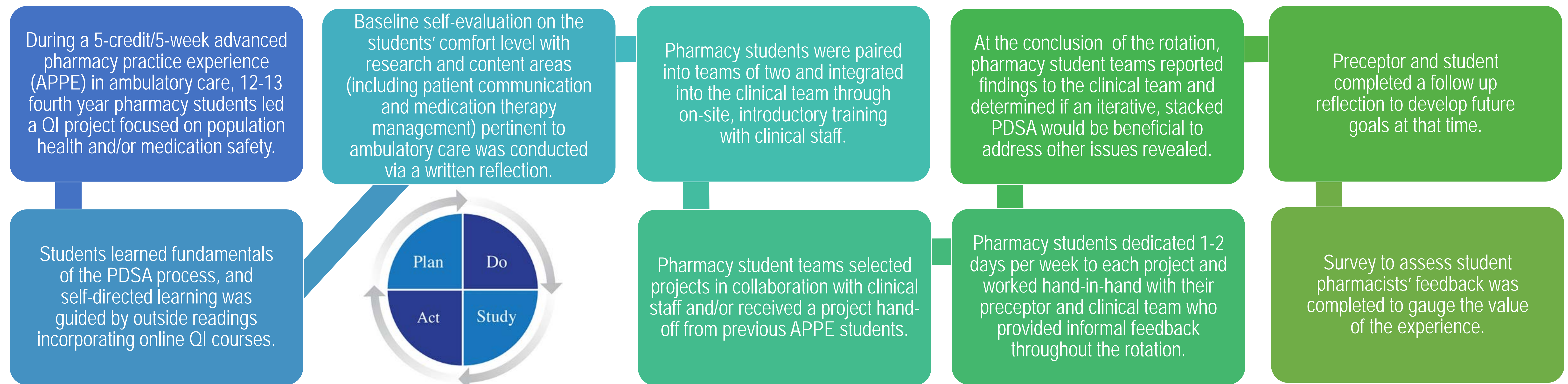
Research Objectives

- Identify the value (to organizations and to learners) in student pharmacist-led rapid cycle QI projects using the PDSA model in didactic and experiential settings.
- Shift the mindset of the future interprofessional workforce, specifically Pharmacists, from “afflicted” to “empowered” leaders and innovators.
- Promote skillsets necessary to identify opportunities for, and drive measurable change to improve population health while pursuing the Quadruple Aim.
- Summarize improvements realized by student pharmacists and define the value proposition of interprofessional development opportunities in clinical settings.
- **Link Standards 2016 Personal and Professional Development Elements Standards such as Self-Awareness, Leadership, Interprofessional Education, and Innovation to PDSA engagement within experiential settings.**
- Promote an understanding that small, iterative improvements can lead to wide-scale impact.



To learn more about this project and the team, scan this QR code or visit: [wilkes.edu/academic/schools/nesbitt-college-of-pharmacy](https://www.wilkes.edu/academic/schools/nesbitt-college-of-pharmacy)

Methods



Results

Results revealed that pharmacy students can not only add, but catalyze value in an organization while meeting competencies needed for the modern pharmacist.

43 pharmacy student participants to date
41 pharmacy-student led rapid cycle PDSAs
10 PDSAs earned local or national recognition (approx. 25% of participants)

Measurable improvements on population health were noted,

including the following highlights from various pharmacy student-led PDSAs:

- over half of high risk patients not at goal blood pressure met goal within 4 months; 85% achieved goal within 9 months
- an average of 3.1 potential adverse events/adverse events identified and addressed per patient in 18 months
- the number of interventions for adverse drug events decline when pharmacists and students are not present
- 54% of patients achieved lower blood glucose levels (A1C<9%) at 18 months
- 82% of patients sustained lower blood glucose levels (A1C<9%), once achieved, in a chosen 8-month interval

100% of APPE students surveyed “strongly agreed/agreed” the rotation was a worthwhile experience and noted the value of exposure to interprofessional collaboration.

Conclusions

Student pharmacist leadership of QI projects helps to satisfy some of the more challenging Center for the Advancement of Pharmacy Education (CAPE) and Standards 2016 Domains⁴ of Leadership and Innovation, Entrepreneurship, Interprofessional Education, and Self-Awareness.

Academic institutions have a unique opportunity to engage healthcare institutions as learning environments and partners. Establishing symbiotic relationships within community-based care models with a commitment to interprofessional development leverages learners as resources to identify and address unmet population health needs.

The PDSA process can be used to facilitate the American Council for Pharmacy Education (ACPE) self-study of faculty, staff, and student perceptions toward achievement of outcomes related to curriculum content, delivery, and assessment.

The PDSA process can be applied to drive measurable quality improvement within any educational or healthcare organization, requiring minimal resources.

REFERENCES: 1. ACPE. Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree (Standards 2016). <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>. Accessed June 29, 2017. 2. IHI 90-Day R&D Project Final Summary Report: Approaches to Training Faculty at Academic Medical Centers to Ensure That Clinical Trainees Become Effective Improvers. Cambridge, MA: Institute for Healthcare Improvement; October 2011. Zellmer WA, ed. 3. Pharmacy forecast 2017: Strategic planning advice for pharmacy departments in hospitals and health systems. Am J Health-Syst Pharm. 2016; 73:e617-43. 4. Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes. Am J Pharm Educ 2013; 77:8.