"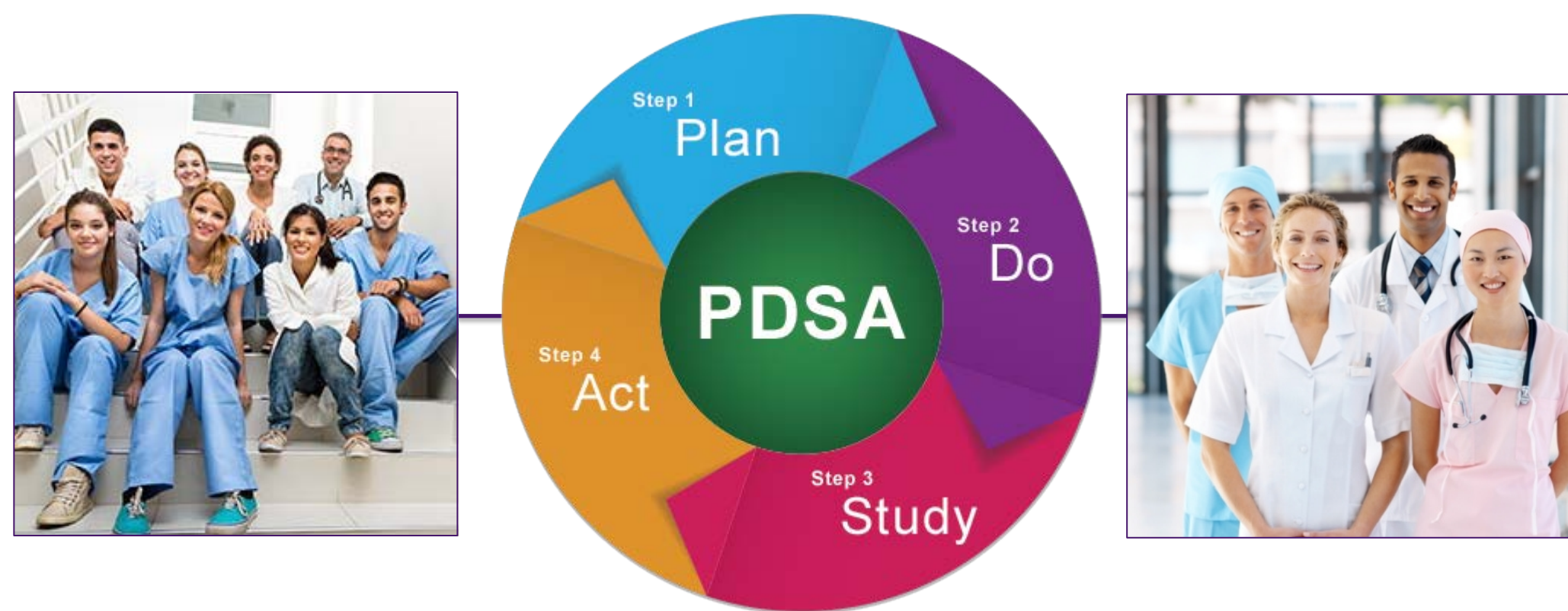First Do No Harm": Incorporating Patient Safety Concepts into a Longitudinal Curriculum Bridging Undergraduate Graduate Medical Education

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Innovation Identified

Since the first Institute of Medicine (IOM) report, it has been well known that errors occur in health care and there is consensus that it is the responsibility of every health care provider to help prevent errors and their recurrence.

This project aims to provide student and resident physicians with vital content knowledge and specific tools so they can effectively initiate patient safety improvements in their clinical practice settings.

Need/Gap Addressed

To date, little effort has been made to address the need to educate medical students at the undergraduate level on concepts related to patient safety and quality improvement processes and tools. Furthermore, no effort has been made to use a curriculum that bridges the transition from medical student to resident in such training. Last, while residents are regularly required to complete patient safety training, little effort has been made to develop or implement tools that aid residents interested in completing patient safety research initiatives. Numerous external sources identify these gaps as critical and recommend the development and adaptation of both undergraduate and graduate curricula to address these perceived gaps, including the Association of American Medical Colleges ('Core Entrustable Professional Activities for Entering Residency'), the Accreditation Council for Graduate Medical Education ('CLER Pathways to Excellence'), the National Institutes of Health ('Protecting Human Research Participants') and the Department of Health and Human Services ('Healthy People 2020').

Stakeholder Input

Students were asked to rank their confidence in knowledge about and application of patient safety concepts prior to the curriculum and then again after it. It was interesting to note that students' perceived confidence about issues related to patient safety actually decreased after experiencing the curriculum. Student comments suggested they found the small group activities helpful and faculty comments indicated they felt the curriculum was designed at an appropriate level for the learners with solid content and reinforcing activities.

Resident physicians who underwent the pilot curriculum (a modified and updated version of the student curriculum) found the main IHI modules to be valuable, but felt there was some overlap with existing hospital training. More interesting was the lack of strong faculty 'buy in' for the curriculum initially. We perceived that this due to their short training times.

We recommend finding faculty and resident 'champions' as well as identifying sufficient time to complete the core curricular elements from the IHI (4-6 weeks, based on the feedback provided). We would also recommend a faculty 'train the trainer' session for review and Q&A prior to implementation at the residency level.

Resources Needed and Potential Barriers

Necessary resources for project implementation include access to the Internet and an online learning management system like Desire2Learn. Access to the IHI modules and to faculty with dedicated faculty time to and training in small group facilitation and QI project mentorship is critical. Access to templates on conducting patient safety research are also helpful.
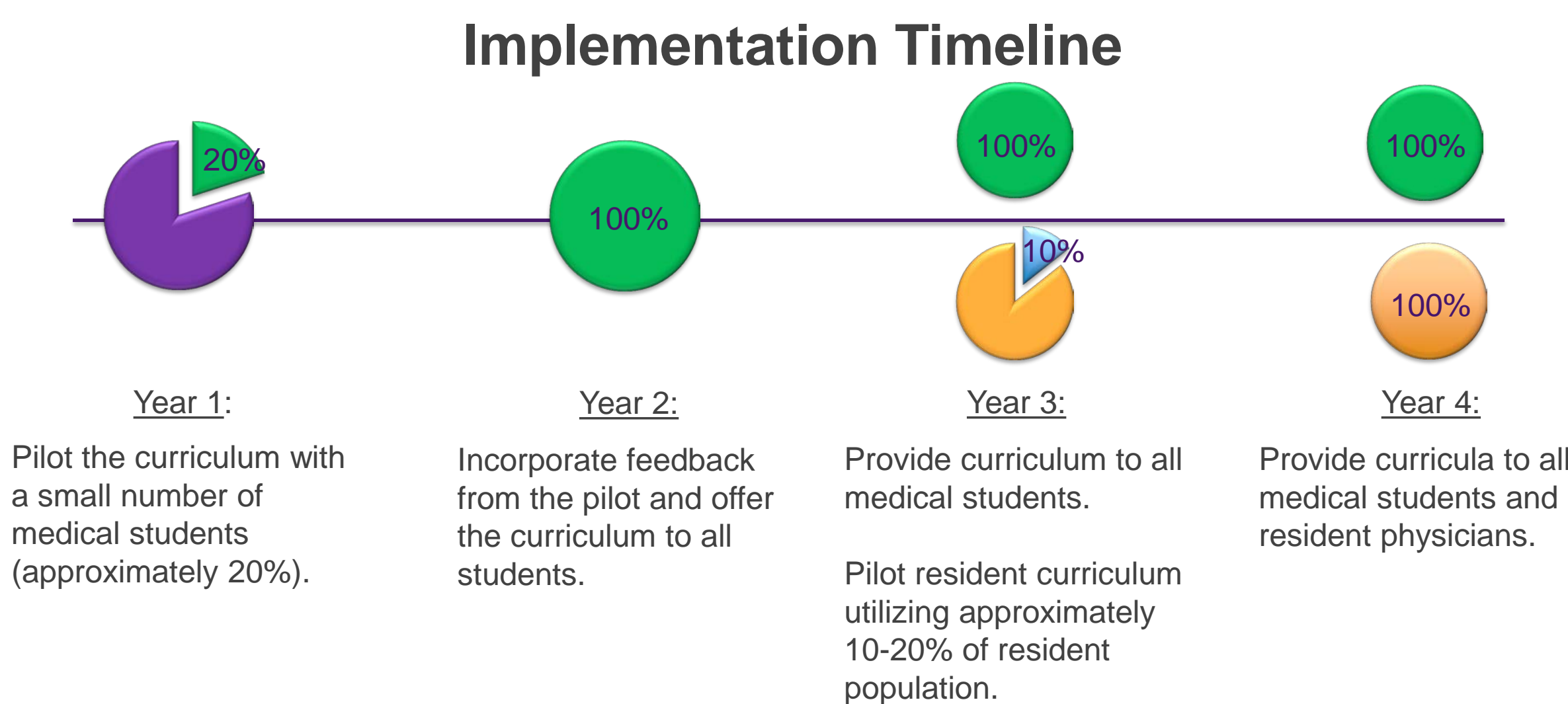
Potential barriers include faculty and program director buy-in at the college and hospital levels. Limited faculty availability and experience in navigating the QI process can also impact curriculum effectiveness.

Timeline Proposed

Developing a timeline for implementing a curriculum like this is dependent on your institutional culture. Accreditation requirements help create a need for this type of innovation; however, developing buy-in can take time if it's not supported by institutional leaders.

In our system, it took one year to develop\ the curriculum and to train faculty. It took an additional year to develop a resident curriculum with tools geared toward conducting QI projects focused on patient safety, all while working with program directors to create the buy-in necessary for the innovation to be successful.

Implementation Timeline

Year 1:
Pilot the curriculum with a small number of medical students (approximately 20%).

Year 2:
Incorporate feedback from the pilot and offer the curriculum to all students.

Year 3:
Provide curriculum to all medical students.

Pilot resident curriculum utilizing approximately 10-20% of resident population.

Year 4:
Provide curricula to all medical students and resident physicians.

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