**Evaluation of a Summer Healthcare Improvement Program (SHIP) in Undergraduate Medicine Education**

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**Background, Problem Statement and Goal Statement:** Quality Improvement (QI) science is quickly becoming an effective and acceptable approach for teaching physicians how to inspire and lead positive change in healthcare. QI supports patient safety, improves systems efficiency and medical students are recognizing QI as an integral principle for their future as physicians (Teigland et al., 2013).

**Problem Statement:** Currently, across Canada there is minimal experiential education for undergraduate medical students regarding quality improvement. Students learn little about how they can change the systems that they will work in and are missing out on exposure to the leadership potential of their roles. In a response to this opportunity, the UA DoM, AHS and UA UME developed the Summer Healthcare Improvement Program (SHIP).

**Goal Statement:** To achieve this, the Summer Healthcare Improvement Program (SHIP) was created, and aims to:

1. Provide basic QI literacy, real time QI application/experience within a clinical setting and mentorship by a QI specialist and Physician QI lead
2. Explore how we may teach undergraduate students QI principles effectively and whether undergraduate students are interested in learning QI
3. Empower a group of passionate students with QI tools and experience early in their career
4. Evaluate the effectiveness of any changes made through this program and how it may be improved

This project aims to evaluate the effectiveness of the SHIP program over 3 years (2017-2019), to determine whether educating undergraduate medical students on QI is beneficial and achievable over the summer (May-Aug) months.

**Evaluation of EPIQ Training (Survey Results)**

- **2018 Post SHIP Results**
  - **Knowledge and skills improved after EPIQ:**
    - 71% of respondents thought their QI skills were improved in future practice, 71% had the opportunity to learn more about QI and were engaged when given the opportunity to learn more. It was felt that EPIQ and SHIP demonstrated the need for QI education earlier in medicine.

**Evaluation of SHIP Program (Survey Results)**

92% of students who responded to the surveys in 2017-2019 thought their peers could benefit from participating in SHIP (4 or above). Students described EPIQ as an engaging and effective tool for teaching QI.

**Lessons Learned:**

- **Students seek education on QI principles and are empowered to learn more about how to effectively implement and assess sustainable change**
- **Students prefer hands-on learning over didactic lectures, and appreciate being involved in QI projects**
- **EPIQ is an effective platform for teaching undergraduate students QI principles**
- **Having medical students lead QI projects can be difficult given the quick pace of QI and the limited flexibility of student schedules**
- **Medical Students can make substantial impact on QI projects within the timeframe of a summer**

**Future Direction:**

- We hope to continue to offer the SHIP program to provide medical students with an in-depth QI experience and introduce them to concepts in healthcare leadership
- UoA DoM and UME will continue to explore ways of educating undergraduate students on QI principles
- We hope to develop a driver diagram to better assess what measures we should evaluate for the SHIP program and how we can improve

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**References and Acknowledgments**


Special thanks to all medical students who participated in the program and provided feedback frequently; the University of Alberta Department of Medicine for supporting students participating in the program; the Endeavour Foundation for coordinating and providing funding; and the Alberta Health Information and Alberta Open Data. University of Toronto Department of Medicine. (n.d.). Training & Education. Retrieved from http://www.depts.med.utoronto.ca/training-education.