The aim of the Foundational Improvement Science Curriculum (FISC) program at Oregon Health & Science University (OHSU) is to:

- educate faculty in improvement science (IS) and project coaching;
- have faculty participants develop a relevant IS curriculum for their academic program(s);
- enable academic programs to meet accreditation requirements related to improvement science;
- enable programs to prepare their learners to work in complex improvement systems wherever they may rotate or work after graduation by delivering foundational IS knowledge.

**Background**

- Priorities for teaching quality and safety concepts across the continuum of medical education have been identified.\(^1\)
- Knowledge domains for IS have been specified\(^2\) and detailed competencies for quality and safety education in nursing have been articulated.\(^3\)
- Variable curriculum content in IS across health professions education programs continues despite accreditation requirements. Common barriers to IS instruction include a shortage of experienced faculty and competing demands for time in existing curricula.
- New health professionals often lack the improvement competencies required by the health systems workplace.

IS education is essential in improving the care our patients receive and the system in which that care is delivered. In order to meet the needs of patients, learners, and program accreditation requirements, OHSU School of Medicine leadership recognized the need for faculty and educational leader development for IS curriculum development.

**Action Taken**

FISC is a unique OHSU program that was created in 2015 to respond to the variability in improvement science education across OHSU health professions education programs. FISC was designed to build faculty and educational leader IS competency, broaden the network of faculty prepared to teach IS to health professionals, and achieve institutional goals for performance excellence while meeting accreditation requirements.

**Program Description**

The FISC faculty team developed an interprofessional faculty development program. It includes eight in-person sessions over 10 months, supplemented by readings, IHI Open School modules, and improvement projects. Sessions include brief didactics, group activities, planning, and feedback on curriculum development.

**Key Program Elements**

- Experiential, project-based learning
- Applicable across disciplines
- Introduction to improvement science fundamentals and resources
- Application of improvement methods and tools
- Exploration of best practices to teach/coach foundational improvement science to learners at all levels
- Strategies to assess learner competencies/milestones related to improvement science
- Directed to identified or rising leaders in health services improvement
- Curriculum builds upon 2-10 years of experience in OHSU residency programs in Family Medicine, Pediatrics, Internal Medicine and Preventive Medicine

**Cohort 1: 2015–2016**

The first FISC cohort consisted of 25 faculty and education leader participants from 16 Graduate Medical Education (GME), Undergraduate Medical Education (UME), and graduate nursing programs.

**Deliverables**

Each participant or program team identified tools and resources relevant to their learners and developed an IS curriculum tailored for their program. FISC faculty provided feedback and coaching to support their progress.

Curricula developed during FISC are implemented in the following academic year. FISC faculty provide coaching and mentoring.

**Assessment**

Participants receive hands-on experience using The Model for Improvement through the design and completion of a personal improvement project. Participants are able to practice using change concepts, graphical tools, and providing coaching and feedback to each other.

**Conclusion**

Four competencies were created to assess demonstrating knowledge, applying knowledge, creating curriculum, and developing a scholarly agenda. Participants self-assessed at three points: baseline, mid-program and at FISC completion. Competency maps were designed for each of the competencies to assess gains in knowledge and expertise (adapted from Dreyfus/Benner) as well as in application in practice.

**Summary of Results**

Baseline competency assessments revealed limited IS knowledge and experience. At the end of the program, the averages and self-reported competency improved across all four competencies.

**Conclusions**

An institutionally supported faculty development program can build IS competency and curriculum development, broadening the network of faculty prepared to teach health professionals. Preparing leaders with foundational skills in IS across the institution positions them for success in practice and creates synergies to achieve institutional goals for performance excellence while meeting accreditation requirements.

**Next Steps: 2016–2017**

In August 2016, a second cohort of 18 interprofessional faculty and educational leaders across eight GME, two UME and six graduate nursing programs began the FISC program.

FISC faculty are supporting the success of the first cohort implementing their IS curricula in 2016-2017. With support of an OHSU School of Medicine Innovations in Education Mini-Grant, the FISC team is engaging with FISC Cohort 1 to:

- foster peer feedback through a FISC alumni listserve;
- host check-in lunches where FISC graduates will share successes, brainstorm solutions to barriers, and obtain coaching from FISC faculty;
- facilitate a poster session showcasing and celebrating their work to disseminate efforts in IS curriculum implementation and promote IS education to all OHSU health professional education programs.

Continued evaluation of the performance of the first cohort will contribute to the ongoing study and improvement of FISC.

Structured focus groups with participants at the end of the year will contribute to the program evaluation and identify opportunities for curriculum revision and implementation, as well as input on the coaching process.

---

5. For further information contact FISC Program Faculty Lead Dr. Sherril Gelmon at gelmons@pdx.edu

---

**Figure 1: FISC Competency Map Example**

---

**References**


[5] For further information contact FISC Program Faculty Lead Dr. Sherril Gelmon at gelmons@pdx.edu