From Knowledge to Outcomes:
Assessing Educational Interventions for Quality and Safety Improvement

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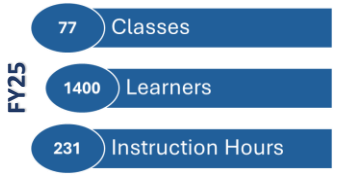
Background

At UM Health, the central Quality Department is dedicated to equipping the organization with the knowledge, skills, tools, and methods necessary for improved quality and safety outcomes. In recent years, the infrastructure to provide education has evolved steadily, enabling us to expand our reach significantly. It is important we have robust processes to measure the impact of education on our learners and on business and clinical outcomes.



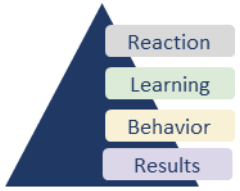
Previous Evaluation Process

Before we redesigned our processes, hard copies of evaluations were distributed and collected at the end of class. Instructors would usually review the evaluations soon after, then the forms were scanned and filed. There were many opportunities for improvement to our evaluation process:

- Measured mostly reactions, vs impact.
- No visibility to longitudinal data.
- Unstructured review and PDCA processes.
- Incomplete, unorganized, inconsistent data.
- Required significant manual effort to tally survey data and compile feedback summaries.

Kirkpatrick Model

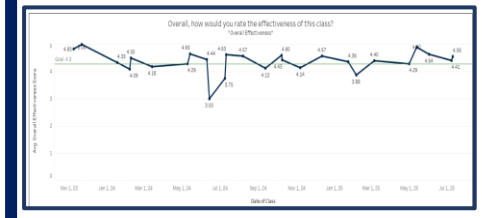
Kirkpatric Model for Evaluation



In 2023, a team was commissioned to review and improve methods for evaluating the effectiveness of quality and safety improvement education programs. An early step was to identify best practices. The team selected the Kirkpatrick model as a guiding framework. Introduced n 1959, Kirkpatrick's framework for evaluation goes beyond immediate reactions of participants (level 1) to include assessment of learning, behavior, and results (levels 2-4).

Smidt A, Balandin S, Sigafoos J, Reed VA. The Kirkpatrick model: A useful tool for evaluating training outcomes. J Intellect Dev Disabil. 2009 Sep;34(3):266-74. doi: 10.1080/13668250903093125. PMID: 19681007.

Example Data for Level 1: Reaction

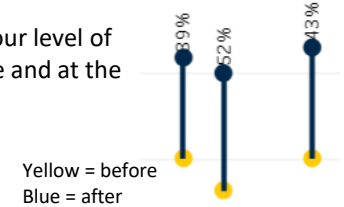


Question: Rate the overall effectiveness of the class.

- ✓ Standardized questions
- ✓ Longitudinal data

Example Data for Level 2: Learning

Question: Rate your level of confidence before and at the end of the class.



Yellow = before
Blue = after

- ✓ Measures perceived change in competence
- ✓ Automated visualization of data

Example Data for Level 3: Behavior

Question: What change to your work or practice do you intend to make?

- ✓ Captures intentions for behavioral changes

"As a leader, staff bring their problems to me regularly. I plan to make a conscious effort to use humble inquiry skills with them, and with providers from other areas to promote trust and to resist the knee-jerk reaction to solve the problem." *--Participant from Create Trust class*

Example Data for Level 4: Results

Multiple education interventions contributed to reductions in Pressure Injuries (PIs)

Pressure Injuries

20%

- A3 problem-solving class and coaching support
- Mini-teaches on general quality and safety topics
- Facilitation support for unit-based councils
- Sharing sessions for teams working on PIs

Other Improvements

In addition to adopting Kirkpatrick's model for evaluating effectiveness of education, the team implemented several other improvements:

- Standard evaluation questions for all classes.
- Standard robust review and PDCA processes.
- Automatic feed of evaluation responses and administrative data into a dashboard.
- Improved and standardized administrative data.

- ✓ Class
- ✓ Date
- ✓ # of learners
- ✓ # of late drops

- ✓ # of no shows
- ✓ Fill rate
- ✓ Response rate

Summary & Next Steps

The improvements to our evaluation processes has enabled data-driven decisions about our portfolio. It provided the foundation to quantify the tangible impact of education on quality and safety outcomes, similar to the cases presented in NAHQ-ROI-Q_Report_FINAL-spreads.pdf.