

Swimming with the Sharks: Teaching Residents Value Based Medicine Through Resident-Led, Faculty Mentored Projects

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INTRODUCTION

- The ACGME and CLER expect housestaff to incorporate cost-awareness and risk-benefit analysis in care.
- Medical education struggles with how and where to incorporate housestaff into Quality Improvement, VBM and hospital finance.
- Quality Improvement and Patient Safety are often taught apart from the clinical and financial context of the medical center

PURPOSE

- Create an experiential curriculum in VBM that integrates Quality, Patient Safety, and Cost-awareness into a project development and implementation plan that is led by housestaff with faculty mentorship.
- Align housestaff innovations in care delivery and improvement with system-wide VBM initiatives
- Convert housestaff project plans into fully realized VBM projects with support from Quality, Safety, Value, Informatics and Financial leadership

METHODS

This two-week curriculum included:

- Core lectures: Problem Identification and Chartering
- Project development with mentorship by faculty and VBM team with data support from Informatics and Finance
- “Shark Tank” pitch to clinical and financial leadership
- Project support and mentorship to implement projects
- Evaluation: Residents surveyed after each block, and progress of projects tracked

PROJECT OUTLINE & EVALUATION RUBRIC

Identify a Project: Problem Identification

- Using national data and local data
- Assisted by VBM, Informatics, and Finances

Understand Root Cause: Problem Analysis

- Process mapping
- Unit observations & Stakeholder Interviews

Propose a Solution: Chartering

- Background
- Determine Metrics of Success
- Estimate Value-Add
- Plan for data collection/pilot

Present to Hospital Leadership

- Presentation Skills
- Response to Live Feedback

Category	Description
Originality/ Creativity	The idea is innovative and exciting
Ease of Implementation	The idea will not be too difficult to study or implement
Cost of Implementation	The idea will not cost a tremendous amount to implement. The return on investment (ROI) is worthwhile.
Timeline	The idea has an acceptable timeline for implementation and will not take multiple years to complete
Projected Impact	The idea will provide significant qualitative or quantitative benefit and the submission demonstrates the measurement of this impact.
Vertically Coordinated	This idea is in line with VBM goals of the Department of Medicine
Feasibility	The idea can be accomplished by trainees within the course of their training and will not require resources and skills not available to medicine trainees

Why 97% of Resident Participants Recommended the Course:

“[Now] when I see a problem on the wards (of which there are many), I will think of solutions and possibly reach out to an attending in an attempt to analyze and improve.”

“First introduction to VBM projects as LEADERS”

“The opportunity to be connected to mentors/stakeholders in a streamlined way.”

“It was exciting to discuss these issues with hospital leadership and hear their thoughts.”

“Working together with co-residents on projects that affect our patients and our practice.”

“It is imperative for residents to understand/participate in value, quality improvement and safety projects - this is the future of medicine!”

EXAMPLE RESIDENT PROJECTS

L-TAPP Initiative

Problem: When bedside procedures are referred to IR, medicine residents miss out on learning opportunities, and patients receive fragmented and inefficient care without improved outcomes.

Solution: Train hospitalists to supervise ultrasound-guided bedside procedures.

Status: Hospitalists training ongoing. Will go live in November

Team PANC

Problem: We perform early CT scans in many patients with acute pancreatitis that do not aid in diagnosis or management.

Solution: Develop a decision support algorithm integrated into order-entry system to promote evidence-based use of imaging.

Status: Interdisciplinary team convened and working together to finalize algorithm for approval by Medical Board.

XPERT-TB Testing

Problem: Ruling out active pulmonary tuberculosis uses 3 respiratory isolation bed days per patient, an expensive and limited resource.

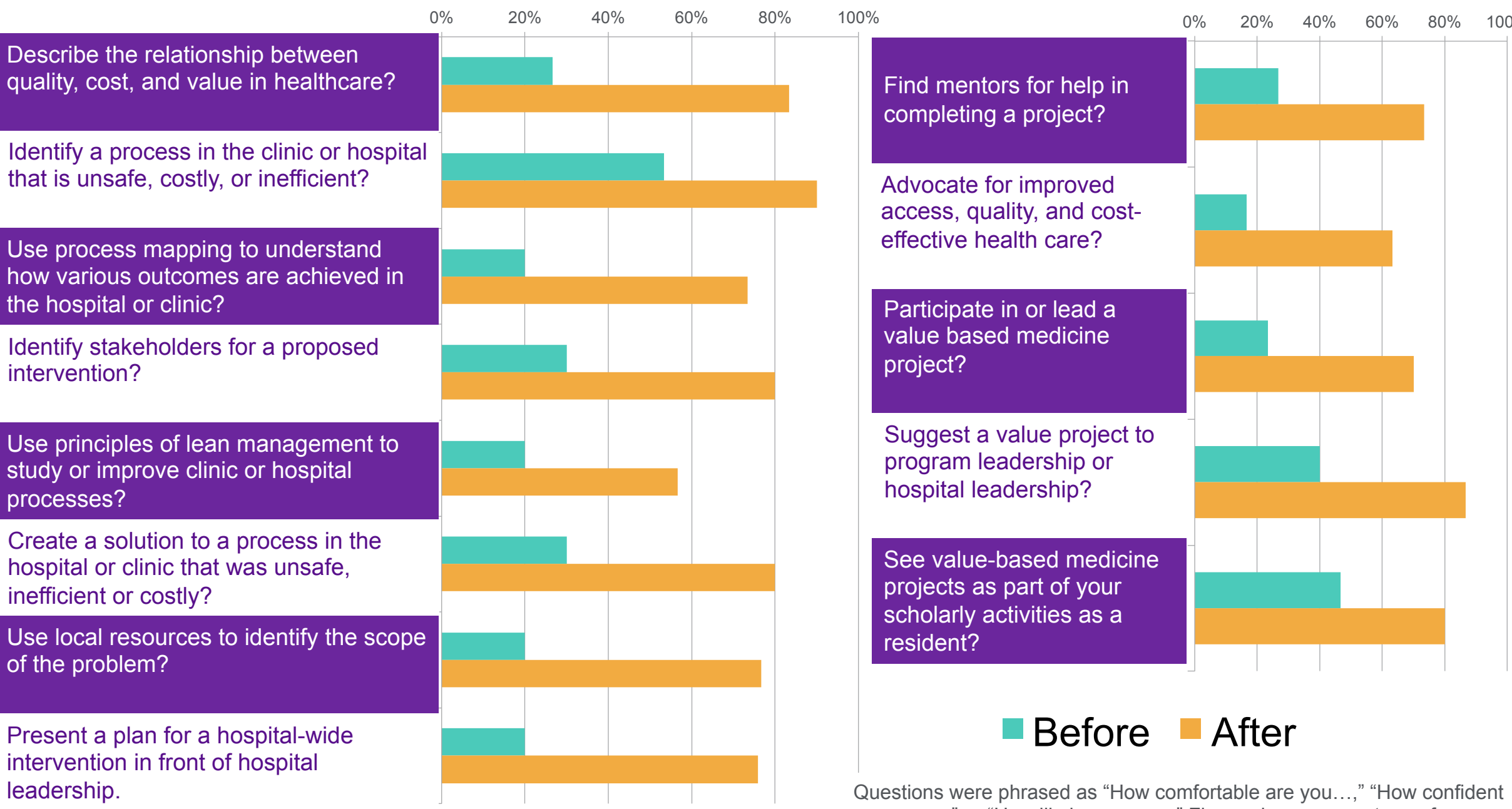
Solution: Use XPERT machine to rule patients out with two sputums in 8 hours as approved by FDA and NYC Department of Health.

Status: Approved by Medical Board, implementation expected soon, with replication at Bellevue in planning stages.

RESULTS

Knowledge and Skills Gained

Resident Engagement



Metric	Before (%)	After (%)
Describe the relationship between quality, cost, and value in healthcare?	20	85
Identify a process in the clinic or hospital that is unsafe, costly, or inefficient?	55	90
Use process mapping to understand how various outcomes are achieved in the hospital or clinic?	20	75
Identify stakeholders for a proposed intervention?	30	85
Use principles of lean management to study or improve clinic or hospital processes?	20	60
Create a solution to a process in the hospital or clinic that was unsafe, inefficient or costly?	30	85
Use local resources to identify the scope of the problem?	20	75
Present a plan for a hospital-wide intervention in front of hospital leadership.	20	85
Find mentors for help in completing a project?	20	75
Advocate for improved access, quality, and cost-effective health care?	15	65
Participate in or lead a value based medicine project?	20	75
Suggest a value project to program leadership or hospital leadership?	40	90
See value-based medicine projects as part of your scholarly activities as a resident?	45	75

Questions were phrased as “How comfortable are you...,” “How confident are you ...,” or “How likely are you...” Figure shows percentage of participants answering likely/very likely.

CONCLUSIONS

- Our VBM curriculum integrates quality, patient safety, and cost-awareness into an interactive project development and implementation plan led by housestaff with faculty mentorship.
- Residents worked with faculty to generate VBM projects in line with institutional goals, learned important skills in project management, and continued their projects outside of the two week block.
- Keys for replication include buy-in from hospital leadership and faculty mentors, protected time for resident teams to work on projects, and support from informatics and finances to help collect data and estimate costs and projected value-add to the institution.

REFERENCES

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