



*The BCH Academy's
Professional Development in Clinical Teaching Seminar Series*

Capturing the Interchange Between Educational Activities and Continuous Quality Improvement

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Session Objectives:

BY THE END OF THIS SESSION, LEARNERS WILL BE ABLE TO:

1. Describe a Continuous Quality Improvement (CQI) framework in the context of health professions education
2. Identify specific steps in a data-driven educational QI cycle (goals, metrics, intervention, outcome)
3. Apply CQI principles to address a specific educational challenge you face in your own work as an educator



Who is in the room today?

Go around your table and introduce yourself:

- your name
- your field/specialty
- the nature of your educational role at BCH

3 mins total!



Session Overview

- 1) **OVERVIEW OF EDUCATIONAL CQI**
- 2) **THREE CASE EXAMPLES**
- 3) **HANDS ON EXERCISE**
- 4) **WRAP-UP & KEY TAKE-AWAY'S**



What is...

QUALITY IMPROVEMENT?



QUALITY IMPROVEMENT



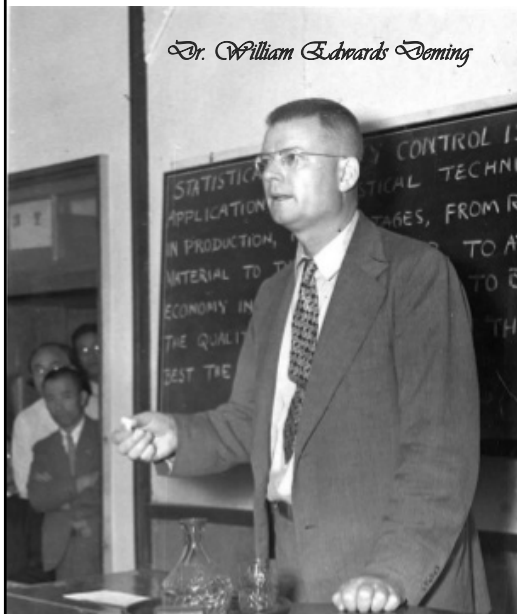
- Agreed upon standard
- Observable
- Measurable

QUALITY IMPROVEMENT



- Progress over time
- To advance ever-higher goals

The “father of the field” of Quality Management



“Without data, you’re just another person with an opinion.”

“You can’t manage what you don’t measure.”

“Information is not knowledge.”

“A bad system will beat a good person every time.”

“A leader is a coach not a judge.”

SOURCE: <https://www.slideshare.net/Dooyuk/10-quotes-on-quality-w-edwards-deming>



Quality Assurance vs Quality Improvement

?



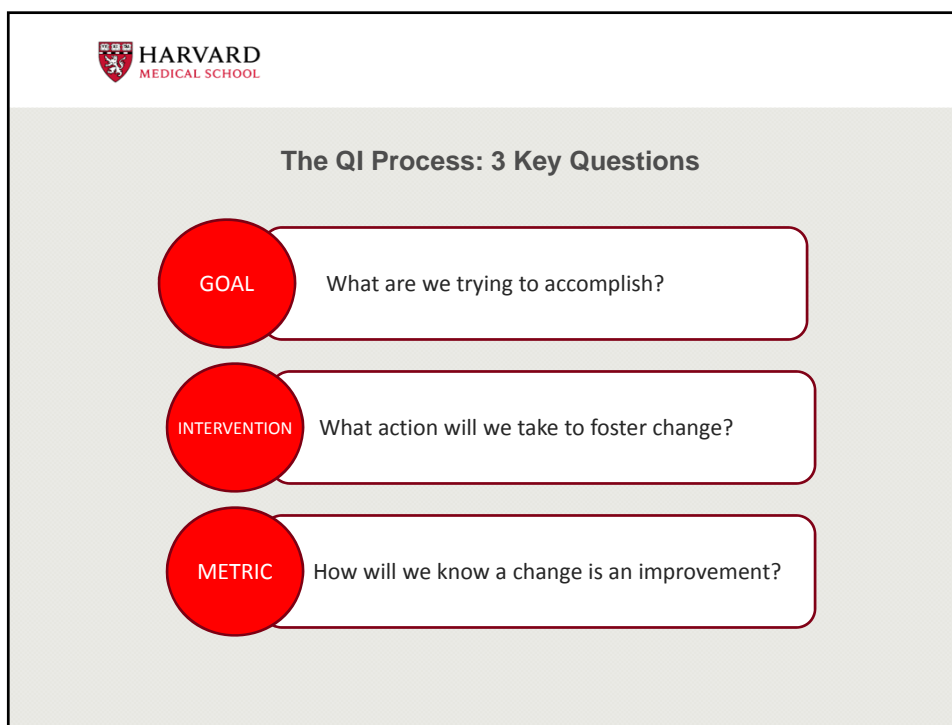
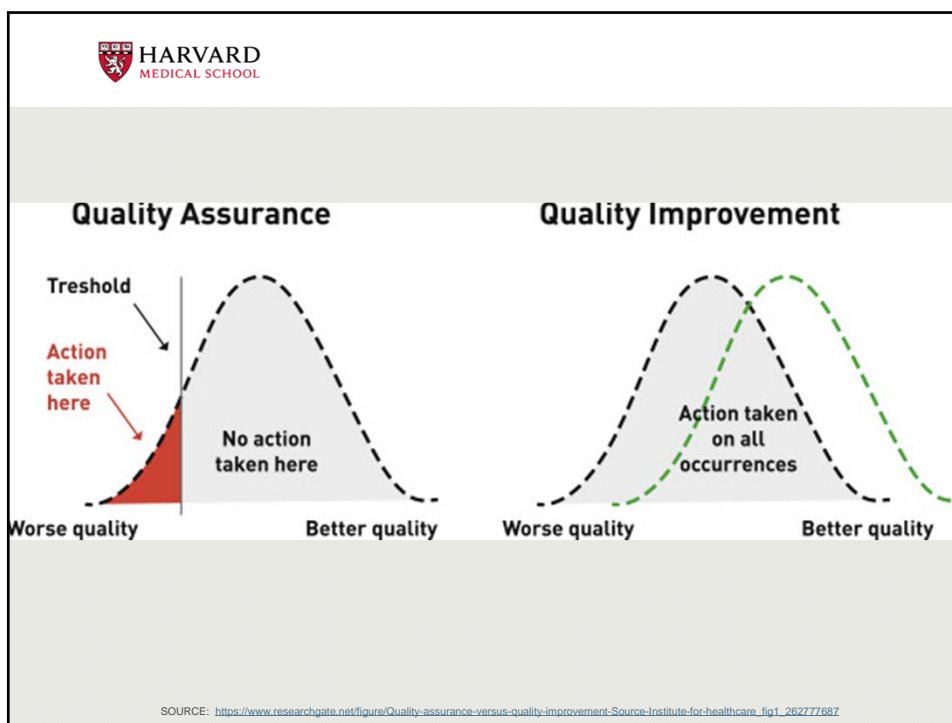
Quality Assurance vs Quality Improvement

- | | |
|---|---|
| <ul style="list-style-type: none">• reactive• corrects specific problems• top-down• compliance-focused | <ul style="list-style-type: none">• proactive• focuses on systemic improvement• participant-driven• nurtures iterative improvement |
|---|---|

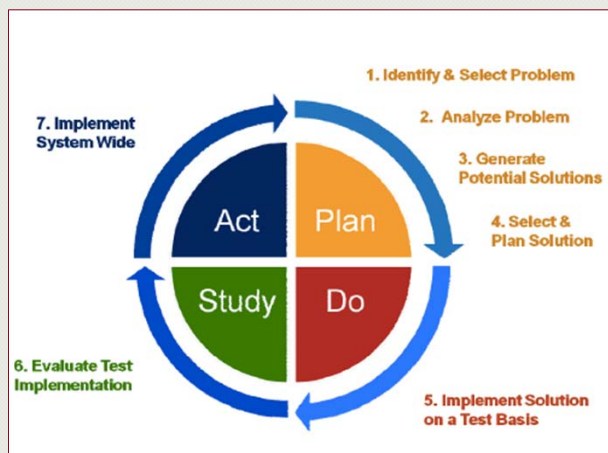
"What went wrong?"

"How can we get better?"

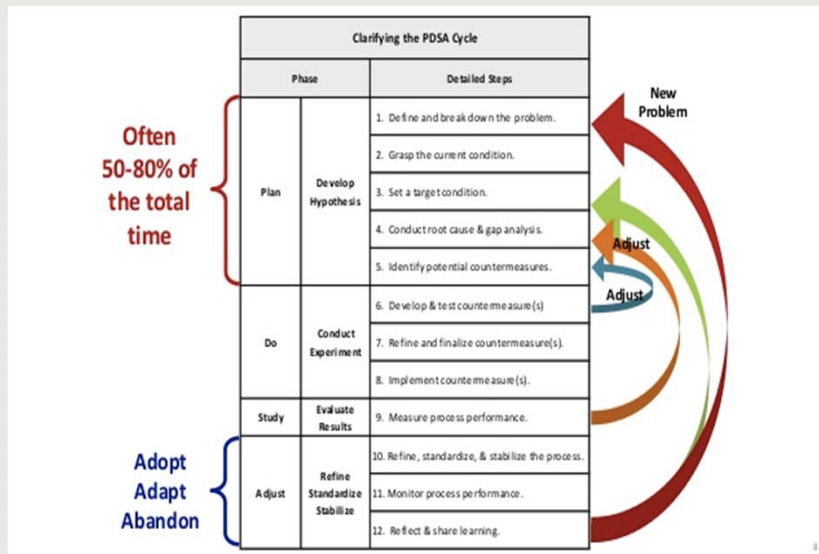
Adapted from: <https://www.slideshare.net/MnSavita/quality-assurance-76251124>




Deming's PDSA Model of Continuous Quality Improvement



SOURCE: https://link.springer.com/chapter/10.1007/978-3-319-54760-2_3




SOURCE: https://www.slideshare.net/KarenMartinGroup/problem-solving-the-p-in-pdsa-432583709-9Detailed_Steps1_Define_and_break



HARVARD
 MEDICAL SCHOOL

PDSA Example from a Statistics Class


PLAN		<p>Problem: Students in a statistics class were not doing the reading</p> <p>Problem Analysis: Students prioritized problem sets because they were graded</p> <p>Potential Solution: Find a way to hold students accountable for readings as well as problem-sets</p>
DO		
STUDY		
ACT		



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STUDY	{	<p>Assess: Treatment/control groups. Students self-report time spent on readings.</p> <p>FINDINGS: ?</p>
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PDSA Example from a Statistics Class

PLAN

Problem: Students in a statistics class were not doing the reading

Problem Analysis: Students prioritized problem sets because they were graded

Potential Solution: Find a way to hold students accountable for readings as well as problem-sets

DO

Intervention: Require students to submit a short web-post reflecting on the readings before class. Completion of these web-posts were graded, like problem-sets.

STUDY

Assess: Treatment/control groups. Students self-report time spent on readings.

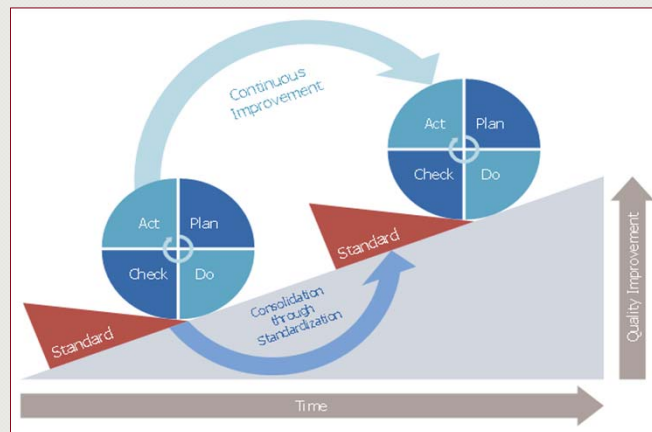
FINDINGS: Treatment increased time spent on readings at the expense of problem-sets, yet student performance on exams was flat or declined.

ACT

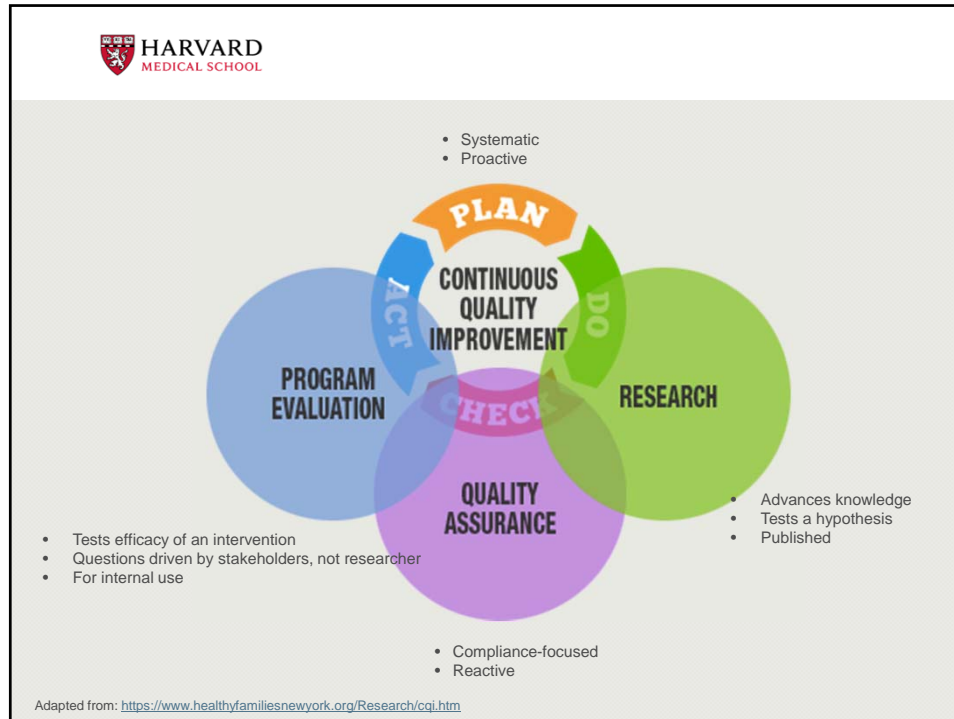
Action: Treatment was discontinued because readings did not perform better than problem-sets in helping students demonstrate knowledge on assessments.



Deming's PDSA Feedback Loops Repeat to Foster Continuous QI



SOURCE: <https://www.slideteam.net/sy-pdca-process-chart-continuous-improvement-cycle-flat-powerpoint-design.html>



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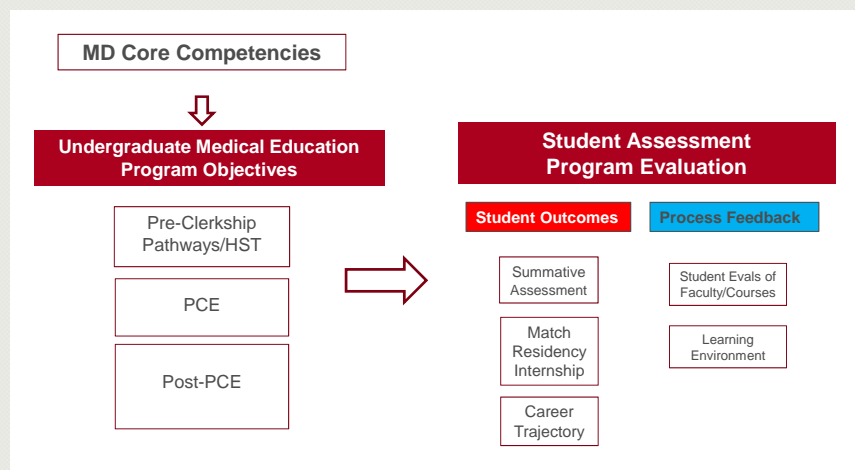
Using CQI in Education

HMS Office of Educational Quality Improvement (OEQI)

- Combined our former “Center for Evaluation” and “Academy” (*Faculty Development*) into a single unit
- Plan, implement, monitor the educational quality improvement process, linking information gleaned from student, course and program evaluations and assessment data with quality improvement and faculty development initiatives



MD Core Competencies Inform Curriculum ... and Outcomes



Key Areas of Inquiry:

How do students perform in this phase of the curriculum?

How do students experience courses, clerkships, and faculty?

Are students adequately prepared to succeed in future phases of the curriculum?
...in match and their careers?

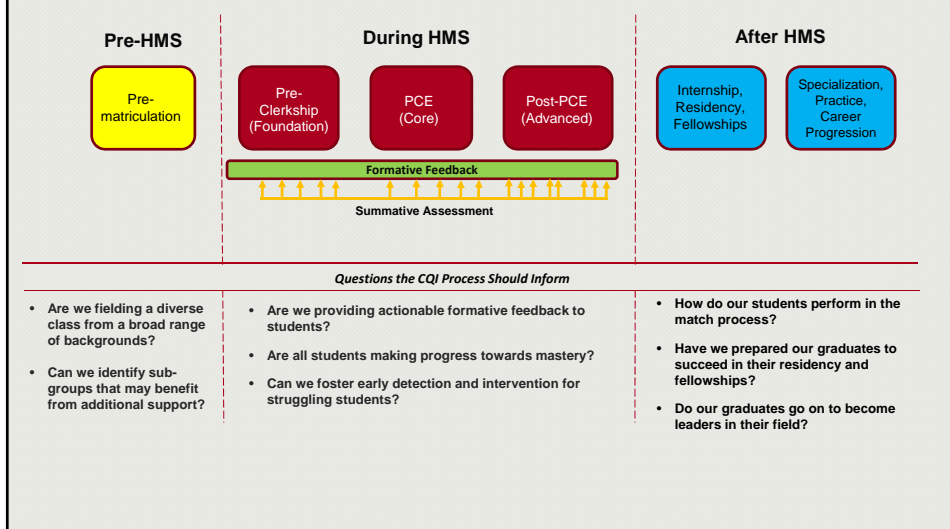
Are we fostering a supportive learning environment / growth (versus performance) mindset?
Is the advising system positioning students to succeed?



Using Data to Inform Educational CQI




CQI throughout the Student Lifecycle






SCENARIO A: Getting to the Root Cause

Trainees in your program must take and pass standardized tests in order to advance to the next phase of the curriculum. These tests are multiple choice questions that test their fund of knowledge. You have seen a gradual but sustained uptick in the share of students who are not passing these tests. Before you can test interventions, you need to identify the root cause.



Possible Causes of Uptick in Low Test Results

- test-taking anxiety
- poor study habits
- over-confidence
- content never really clicked
- content not covered in class
- learning disability
- health problem



Student Attitudes

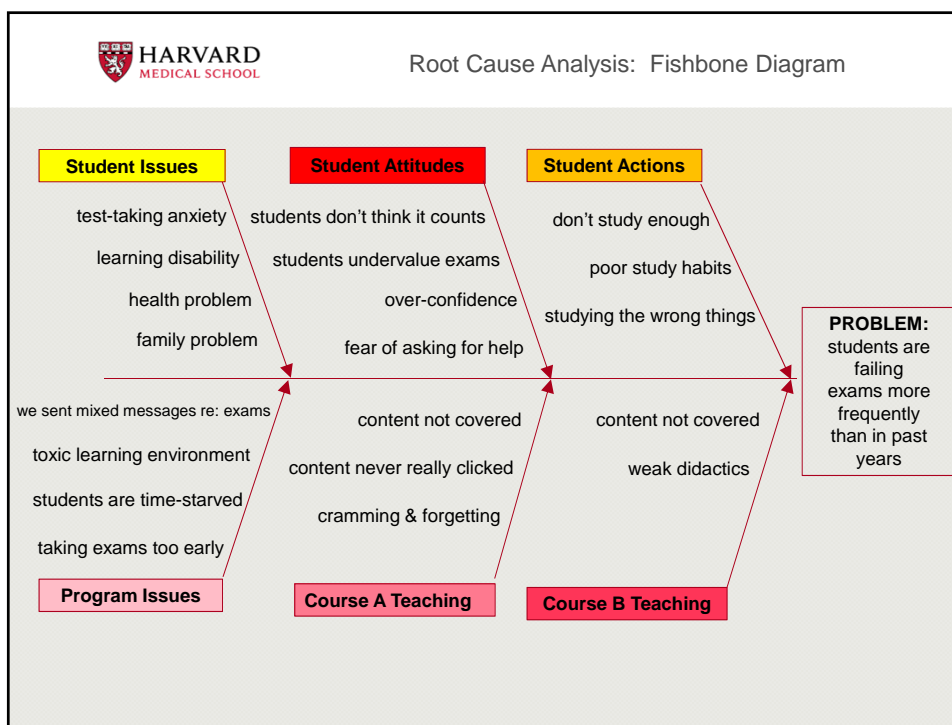
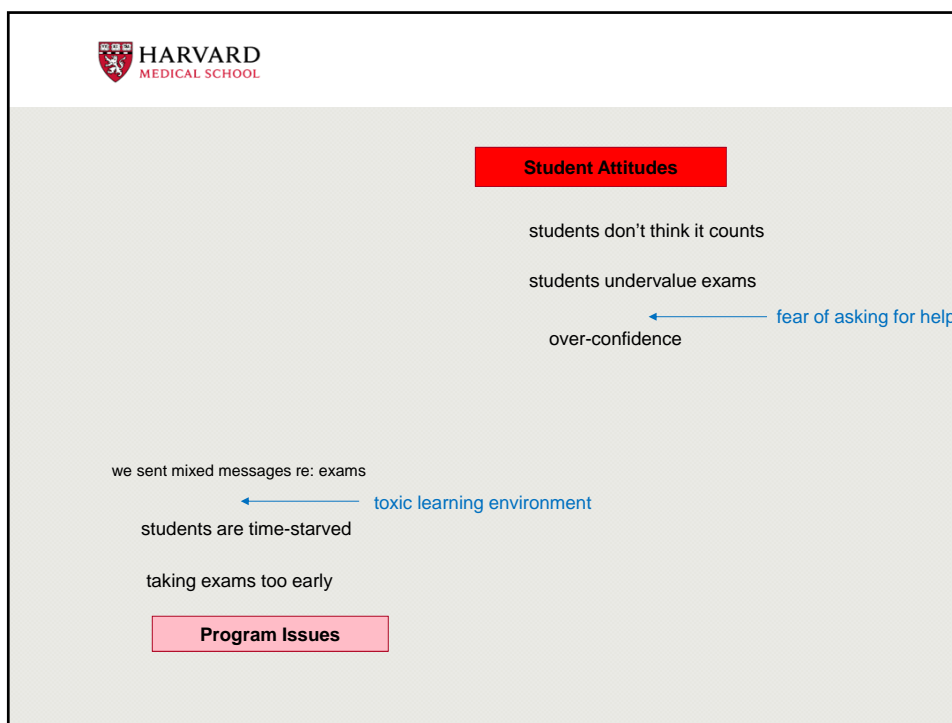
- students don't think it counts
- students undervalue exams
- over-confidence

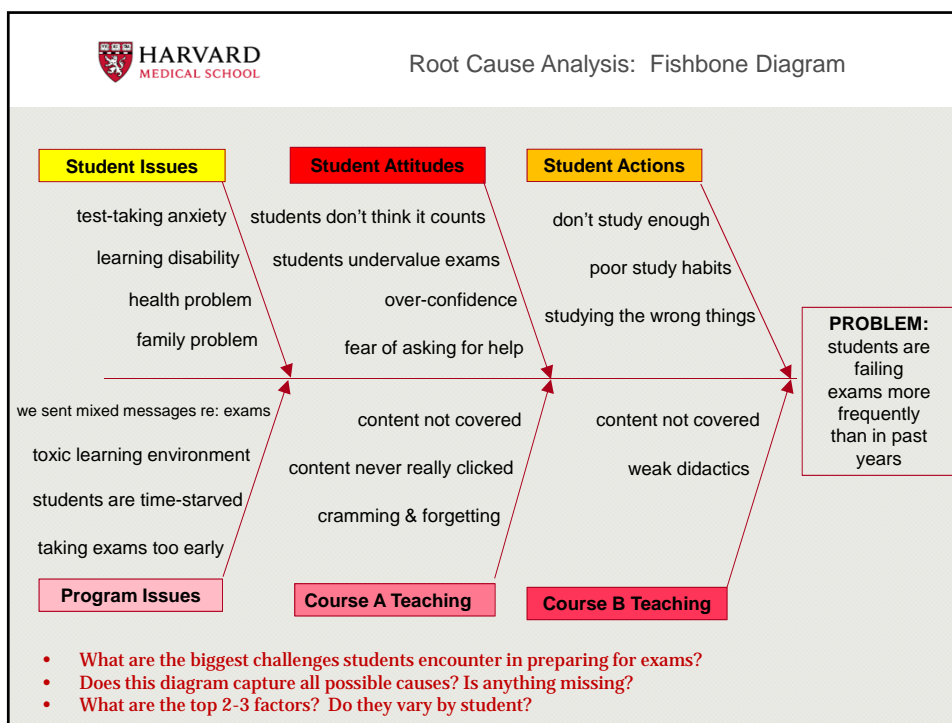
we sent mixed messages re: exams


students are time-starved

taking exams too early

Program Issues

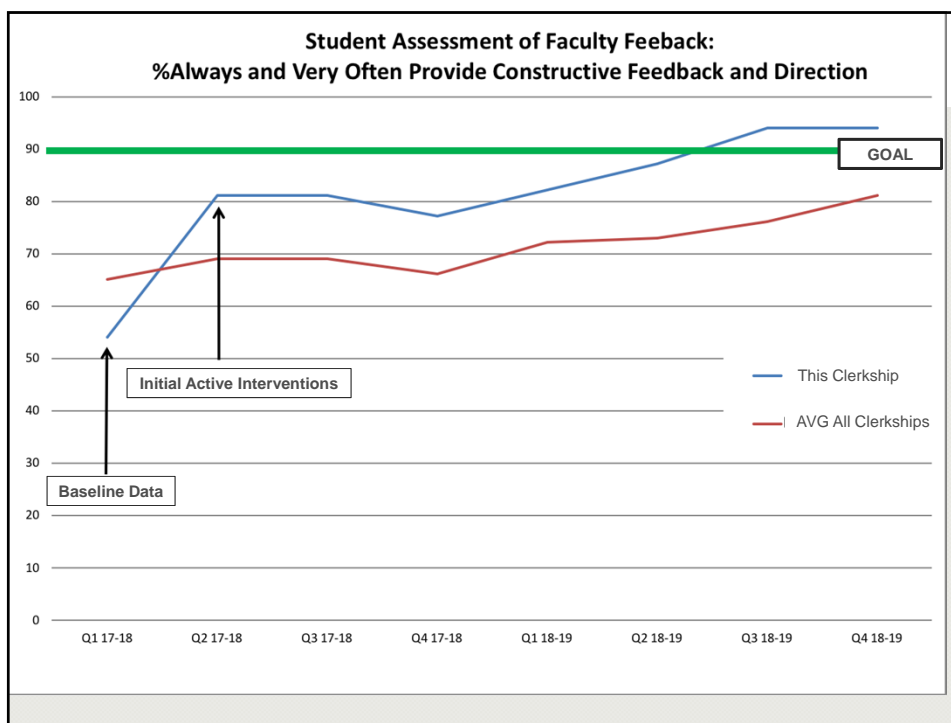




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SCENARIO B: Spreading Best Practices

Your institution aims to foster a supportive learning environment for your trainees, yet student surveys reveal substantial room for improvement in the learning environment in many courses/clerkships. Luckily, one clerkship has shown a remarkable improvement in this metric. You reach out to the clerkship director to see if you find some best practices to scale out to other clerkships.



	INTERVENTIONS					METRIC: Faculty Provide Constructive Feedback & Direction (% ALWAYS & VERY OFTEN)	
						this site	all sites
AY 2017-18							
Q1	Kick-Off meeting: Share Initial Benchmark Data	Assess Current Practices & Plan				54	65
Q2	Share Data with Faculty; Ask them to provide Face to Face Feedback to all Students	Create required form for student feedback				81	69
Q3	Start reading quotes from attendings to students	Create QR codes so forms are easier to pull up	Share Benchmark Data with Residents	Academy Session on Writing Effective Narratives		81	69
Q4	Add module on feedback at student orientation	Changed feedback form for Residents: Keep Doing, Change, Start Doing	Add tips for effective feedback to feedback request emails to residents	Train Residents on Writing Effective Narratives	New mid-clerkship form with prompts to remind students to seek feedback.	77	66
AY2018-19							
Q1	Present LE Benchmark Data					82	72
Q2						87	73
Q3	Academy Session on Cultivating Effective Feedback Seeking Behaviors					94	76
Q4	Training on Writing Effective Narratives					94	81

	INTERVENTIONS					METRIC: Faculty Provide Constructive Feedback & Direction (% ALWAYS & VERY OFTEN)	
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Reflection Exercise (3 mins)

Working alone, please identify 1 or 2 educational challenges you are currently facing in your work where QI may help and note them on your worksheet



Educational CQI in the HMS MD Program

Refining Curricular Content

- Is the volume / pace of material manageable?
- Are there redundancies / gaps?
- Are the course materials effective?
- Are the students able to build on prior material?
- Are they ready for the next phase?

Assessing and Improving Pedagogy

- Are faculty providing timely and actionable feedback to learners?
- How can instructors foster an inclusive learning environment?
- What common teaching challenges do instructors face?
- Which instructors might benefit from peer coaching?

Assessing Student Progress

- How can we consistently rate levels of student mastery in clinical skills?
- How can we assess student progress over time (trajectory)?
- How should we set thresholds for advancement?

Advising & Learning Support

- How can we identify learners who could benefit from additional support without "labelling" students?
- How can we foster student ownership of their areas for improvement?
- What is the best approach to providing learning support?



Group Exercise (10 mins)

- Please share ONE of the educational challenges you've identified with your table
- Each table should select among the 3-6 challenges shared and focus on ONE educational challenge to work on as a group
- As a group, please use the frameworks in your handout to flesh out key steps in the educational QI cycle for the ONE project you selected



Implementing Educational CQI: Common Challenges

- Finding time for CQI
- Resisting the Urge to Jump to Solutions...
when you may have the wrong root cause
- Accessing data
- Poor quality data
- Analytical capacity
 - > framing questions
 - > using data
- Building buy-in/avoiding finger-pointing
- Implementing tested solutions consistently & universally



Next Steps:

- Chances are you are already pursuing QI. It only requires a small step to surface/formalize/measure it using the QI framework... and you can publish it!
- Mentally commit to one follow-up step – note it on your worksheet!
- Connect with the **BCH Academy** if you'd like guidance in framing a QI project BCHacademy@childrens.harvard.edu
- Please fill out your session evaluation (to be sent via email)

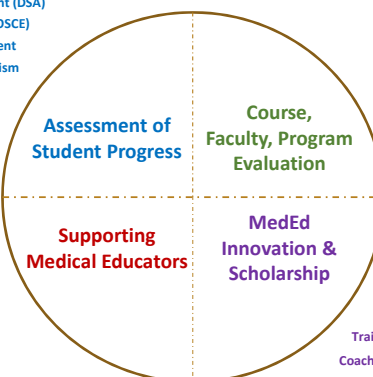
Thank You!
Questions?



Office of Educational Quality Improvement

Competency-Based Assessment (EPA's & narratives)
 Departmental Summative Assessment (DSA)
 Objective Structured Clinical Exam (OSCE)
 Core Faculty - Clinical Skills Assessment
 Teaching and Assessing Professionalism
 Learning Support System
 Standard setting
 E-Portfolio

CBCL Training
 Resident as Teacher
 HMS Academy Events
 HMS Academy Fellowships
 Web-based & Online Resources
 Faculty Peer Observation
 Masters in Med Ed Project Support
 Student Ed Rep & Consultants
 Course/Clerkship Directors Seminars
 Evidence-based Teaching Workshops



Coding & Visualizing Faculty/Course Narratives
 Mapping Learning Objectives & Outcomes
 Monitoring Long-Term Student Outcomes
 Monitoring Cross-site Comparability
 LCME-related Monitoring (GQ, Y2Q)
 Course, Phase, Program Reviews
 Monitoring Teaching Metrics
 EDW & Dashboard Reports

IRB exemptions for QI
 Supporting Course Directors
 Using Data to ID Strengths and Challenges
 Training Educators to Frame Research Questions
 Coaching and Support for Writing and Publications
 RCA, Framing Options, Designing & Assessing Pilots
 Analytical Support: Surveys, Focus Groups, Quantitative Analysis



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 Educational Quality Improvement