



Creating a Longitudinal, Integrated Curriculum in Quality and Patient Safety at The Commonwealth Medical College

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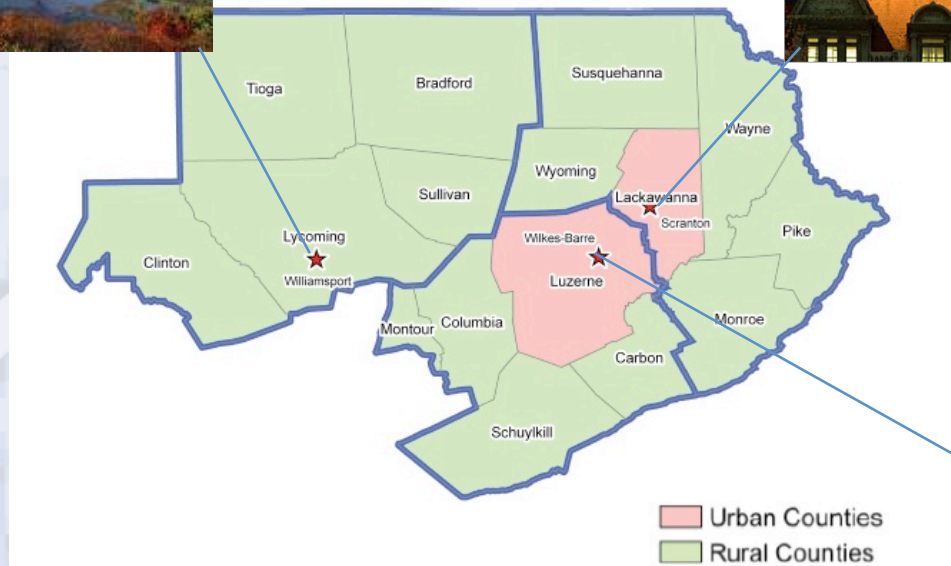
The Commonwealth Medical College

The Commonwealth Medical College

- A new, allopathic medical college serving a 13 county region in Northeastern PA
- LCME accreditation received October 2008
- Enrolled first class August 2009
- Regional, community based structure



TCMC's regional structure



Mission and Values

The Commonwealth Medical College will educate aspiring physicians and scientists to serve society using a *community-based*, patient-centered, *inter-professional* and *evidence-based* model of education that is committed to inclusion, promotes discovery and utilizes *innovative* techniques.

Values: Quality

“prepare our students to understand the process of quality improvement in the practice of medicine.”

Goals and objectives

- ✓ Fulfill mission to teach quality and patient safety
- ✓ Do with limited resources
- ✓ Innovative, evidence based methodology
- ✓ Create community collaborations
- ✓ Improve on past models
- ✓ Do it in a way that can be measured and disseminated
- ✓ Eventually, create a framework for faculty development as well
- ✓ Enhance healthcare quality in the region?

Year 1 curriculum overview

Cellular and Molecular Basis of Life	Community Week	Human Structure and Function	Community Week	Human Structure and Function	Community Week	Brain, Mind & Behavior
Case-Based Learning		Case-Based Learning		Case-Based Learning		Case-Based Learning
Profession of Medicine		Profession of Medicine		Profession of Medicine		Profession of Medicine
Physician and Society		Physician and Society		Physician and Society		Physician and Society

←-----40 Weeks-----→

Community weeks: continuity mentors, clinical experiences and
Community Health Research Projects

Year 2 curriculum overview

Intro to Pathology, Pharmacology, Microbiology, Immunology	Community week #1	Cardiovascular	Hematology	Community week #2	Nervous System	Community week #3	Endocrine	Oncology
		Respiratory	Reproductive		Gastrointestinal		Renal	Infectious Disease
The Art & Practice of Medicine		The Art & Practice of Medicine			The Art & Practice of Medicine		The Art & Practice of Medicine	

-----37 Weeks-----

Community Weeks: Continuity Mentors, Clinical Experiences and “Quality Improvement Activity”

Vertical “Threads”

- Quality and Patient Safety
- Medical Informatics
- Bioethics
- Inter-professional Education
- Health Economics
- Cultural Competency/Health Disparities

So...how to best teach quality to medical students?

- Process began with a literature search
- Interviews with some of the lead authors on the more pertinent works
- Key realization: decide what you want to teach, then how you want to teach it.
- Vision statement, objectives flowed from there

Vision statement

“TCMC will deliver a four year, integrated, longitudinal curriculum in quality improvement and patient safety that will inspire our graduates, whatever their career path, to deliver outstanding patient care through and understanding of health systems improvement and an application of the tools needed to bring about that improvement.”

Planned Scope and Deliverables

- Four Year Curriculum- *longitudinal*
- *Integrated* into each course, not stand alone
- Based on evidence-based principles of adult education
- Seek funding
- Robust faculty development plan
- Measurement, Evaluation and Dissemination Plan

Objectives: what we want them to learn

- Quality improvement
- Evidence-Based Care
- Patient Safety
- Interpersonal and communication skills
- Systems-based practice
- Infection control
- Medication safety

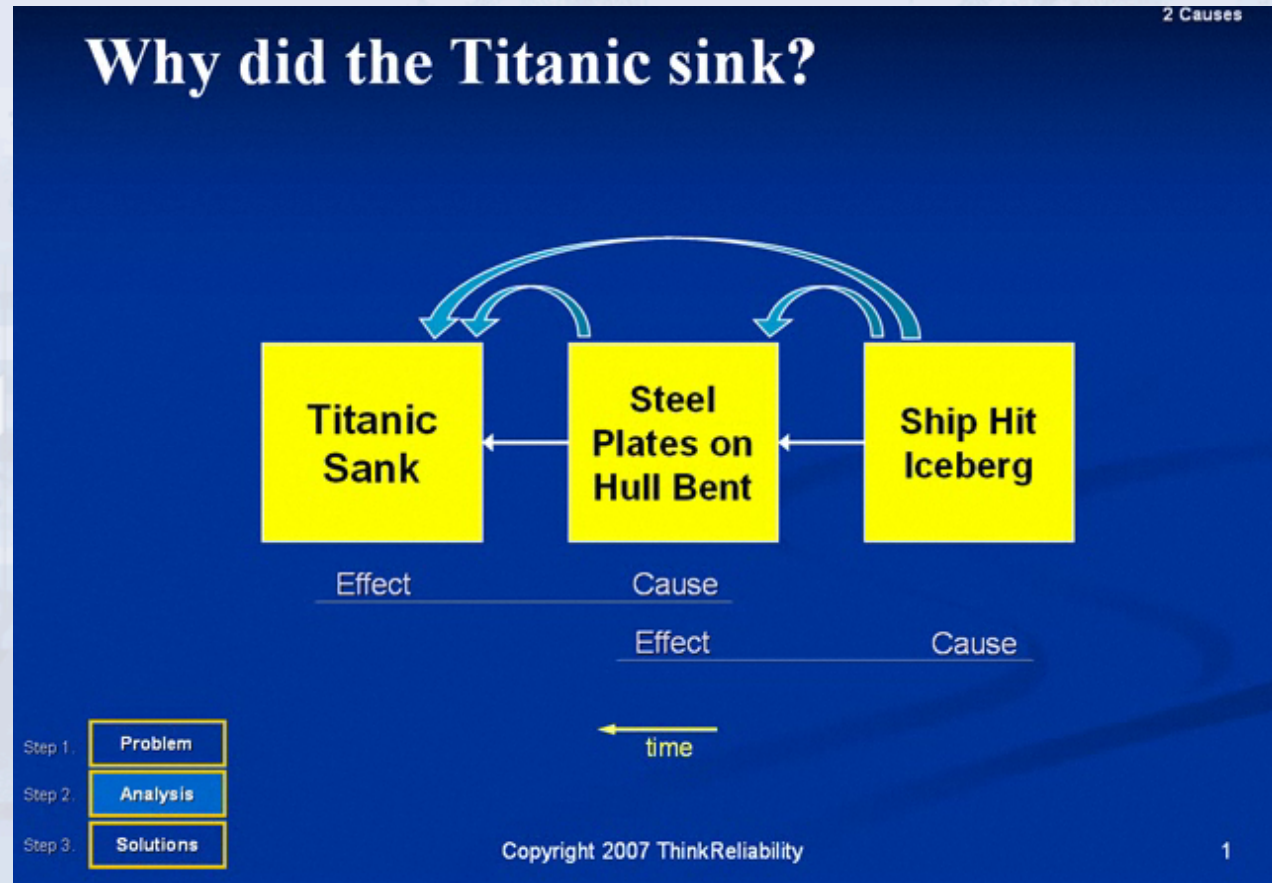
Curriculum “map”

Quality and Safety		Area of the Curriculum	Year	Instructor	Teaching Method	Assessment
Students must be prepared to provide patient care that is safe, effective, patient centered, timely, efficient, and equitable and understand their role as a critical member of the health care team in working to transform healthcare.						
I. Quality Improvement						
A. Use data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of health care systems.						
Pre-clerkship						
	1	Students will describe the basic principles of quality improvement	Profession of Medicine	1	Weber	Lecture
	2	Students will understand the methods and tools for improving the quality of health care.	Profession of Medicine	1	Weber	Lecture
	3	Students will understand variation is inherent to health care systems	Profession of Medicine	1	Weber	Lecture
	4	Students will understand the links between quality and cost in health care systems.	Profession of Medicine	1	Weber	Lecture
**	5	Students will map the process of care from a patient's point of view for a clinical encounter (flowchart)	Community Experience	2	Weber	Didactic
**	6	Students will be able to define the Plan-Do-Study-Act Cycle as a method for learning, testing, and implementing change.	Community Experience	2	Weber	Didactic
**	7	Students will identify the key elements of an effective aim statement, and develop one for their own personal QI project.	Community Experience	2	Weber	Didactic
**	8	Students will understand why measurement is so important in improvement.	Community Experience	2	Weber	Didactic
**	9	Students will develop an effective measurement tool, and utilize it in their own personal QI project.	Community Experience	2	Weber	Activity
**	10	Students will be able to identify approaches to coming up with ideas for change. (brainstorm, cause and effect diagram)	Community Experience	2	Weber	Activity
**	11	Students will be able to test changes within their own PI project.	Community Experience	2	Weber	Activity
**	12	Students will implement their own PDSA cycle and learn from the results of their study.	Community Experience	2	Weber	Activity
**	13	Students will present their QI project utilizing the PDSA methodology in a storyboard format.	Community Experience	2	Weber	Activity
	14	Students will demonstrate the ability to identify examples of each of the three major classes of quality problems (overuse, underuse, and misuse).	Art and Practice of Medicine	2	Weber	Lecture
	15	Students will demonstrate an understanding of how overuse, underuse, and misuse lead to harm in patients.	Art and Practice of Medicine	2	Weber	Lecture
Advanced						
	1	Students will know the 6 dimensions of health care (IOM Report 2001)	Profession of Medicine	1	Weber	Lecture
	2	Students will be familiar with the national agenda on quality and the organizations who are key stakeholders in the agenda.	Transitional Block	2/3	Weber	Lecture
	3	Students will be familiar with the individual agendas of the identified stakeholders. (E.g. IOM, Joint Commission, Quality Insights, Leap Frog Group, ect.)	Transitional Block	2/3	Weber	Lecture

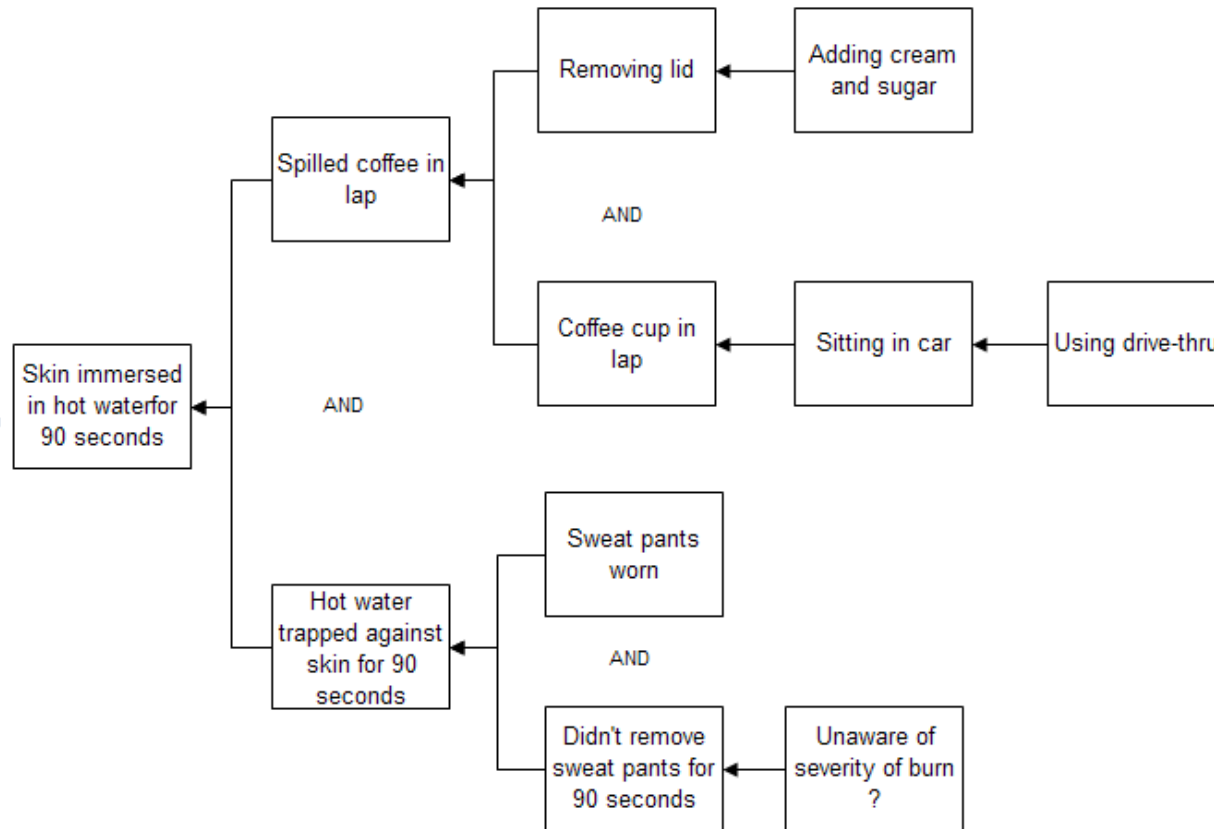
The Four Year Map

First Year	<ul style="list-style-type: none">•Physician and Society Course•Cased Based Learning Course	<ul style="list-style-type: none">•Introduction to Quality and Patient Safety – Lecture, Workshop•Case Based Learning session
Second Year	Three One week Community blocks	“QuICCs” – Quality Improvement Community Collaboratives
Third Year	Transitional Block and three one-week blocks	Sessions on infection control, medication safety, medical simulation, OSCEs
Fourth Year	QI/Informatics Elective	VAH, GHS

The First Year curriculum



The First Year Curriculum – Lecture and Workshops, Case Based Learning



Beth Israel Wrong Side Surgery

You Make the Call

Imagine that you are the CEO or the physician senior vice president for health care quality at Beth Israel Deaconess Medical Center on June 30, 2008. Within hours of learning about the incident, you have determined these key facts:

- 1) The surgeon did not notice the mark indicating the correct side for the procedure because he was "distracted by thoughts of how best to approach the case."
- 2) The team of medical workers did not conduct a "time out" before the procedure (they were busily addressing last-minute details), thus neglecting a well-known, hospital-wide safety measure.
- 3) The patient suffered discomfort as a result of the mistake, but no "life-threatening deficit or permanent organ damage."

Quality Case Based Learning Class

CASE #13

Quality Care and Improvement

April 27, 2010



Facilitator Copy

Integration into courses – example year 1

- Brain/Mind/Behavior course – Sleep unit – Standardized patient exercise – patient seen in clinic with excessive daytime sleepiness and uncontrolled HTN despite med rx – students must do med reconciliation and realize that med error occurred – Klonopin given instead of Clonidine ordered
- Inter-professional education – students had to call pharmacy student who was part of the standardized scenario

Integration into courses – examples year 2

- Pharmacology unit: Standardized patient exercise – Hospitalized patient with increased somnolence, concerned family – students must do medication reconciliation and realize patient receiving opioid overdose (IV morphine was not discontinued as ordered when fentanyl patch placed)

The Second Year – QuICCs

“Quality Improvement Community Collaborative”

CORE ACTIVITIES OF YEAR 2 COMMUNITY WEEKS -
QUALITY IMPROVEMENT COMMUNITY
COLLABORATIVE (“QICCs”)

COMMUNITY WEEK ONE				
Monday	Tuesday	Wednesday	Thursday	Friday
Lesson 1 Quality Improvement Introductory Session then break into groups of 4 to meet community partners <i>Will need community partners present from 11-12.</i>	Quality Improvement: Lessons 2 and 3 PDSA Cycles and Flow process diagrams - how to	Report in - each group will post process flow diagram in conference room and report out Lesson 4 - Identifying the problem - constructing a 'fish bone' diagram	Quality Improvement Team meet with team to report out process diagram and do fishbone brainstorming session. <i>Will need to have team meeting in practice environment 8:30-12</i>	Report in - show fishbone diagrams Lesson 5 - How a literature review can help plan an intervention - clarify assignments for week 2
Clinical Experience/Continuity Mentor Spend first hour of session observing a patient experience from check in to check out, then writing reflective piece (evening)	Quality project - travel to QI environment to meet team, observe process and create a process flow diagram Student group will be in team environment observing but community partner need not be present	Clinical Time/Other	Clinical Time/Other	Wrap up and travel

The basics

- What is quality improvement? Why is it needed?
Observation exercise and reflective piece
- What type of framework can I use to produce change?
 - PDSA cycles – introduction and exercise (paper airplane building)
- What types of tools can help me along the way?
 - Flow diagram - lecturette and assignment (flow diagram of patient in ambulatory setting)
 - Brainstorming/fishbone diagram – lecturette and assignment
 - Reporting back in and information-sharing

Now, apply these tools to your projects

- Prework in the practices:
 - Aim statement developed
 - Baseline data gathered
- To start the projects:
 - They will do flow diagram and use fishbone to generate interventions
 - They will conduct 2-3 PDSA cycles with measurement in between over the course of the year

Project Teams

Williamsport	Wilkes –Barre	Scranton
<i>4 teams</i>	<i>5 teams</i>	<i>7 teams</i>
Hand Hygiene - SHS	Hand Hygiene - VA	Hand Hygiene – Community Medical Center and Mercy Hospital
Employee Flu vaccination - SHS	Employee Flu vaccination - VA	Employee Flu Vaccination – Community Medical Center and Moses Taylor Hospital
Diabetes – Dr James Redka, Family Medicine	Hypertension – Dr Mary Beth Sokach, Family Medicine	Diabetes – Dr Anthony Parry, Internal Medicine
Hypertension – Dr Guy Giordano, Family Medicine	Diabetes – Dr Jay Charabati, Family Medicine	Geriatric depression screening – Dr Michael Kondash, Family Medicine
	Geriatric Depression – Dr Mary Beth Sokach, Family Medicine	Geriatric depression screening – Dr John Guzek, Wright Graduate Medical Education Center, Scranton

Evaluation Plan



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Quality & Safety Curriculum Evaluation

Please indicate your level of agreement for each statement below using the following scale :

0 - N/A 1 - Strongly Disagree (SD) 2 - Disagree (D) 3 - Neither Agree nor Disagree (N) 4 - Agree (A) 5 - Strongly Agree (SA)

	N/A	SD	D	N	A	SA
I. Quality Improvement						
I can use data to monitor the outcomes of care processes to continuously improve quality and safety of healthcare systems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can use improvement methods to design and test changes to continuously improve the quality and safety of healthcare systems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand my role as a critical member of the health care team in working to transform healthcare.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
II. Safety						
I understand the safety factors that minimize risk of harm to patients and providers through both system effectiveness and individual performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
III. Patient Care						
I communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I work as a member of multi-disciplinary health care teams to provide patient-focused care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IV. Evidence-Based Care						
I critically evaluate the knowledge base supporting good patient care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the gap between existing practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the steps necessary to close those gaps between existing practice and evidence-based care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am an active participant in closing the gap between existing and best practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
V. Interpersonal and Communication Skills						
I know how to create and sustain a therapeutic and ethically sound relationship with patients in order to effectively communicate their healthcare needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am capable of handling situations involving sensitive, technically complex, or distressing information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have actively participated as an effective member of a team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VI. Systems-Based Practice						
I function effectively in teams within a larger organizational structure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the complex interaction between the healthcare environment, doctor, and patient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am aware of the larger context and system of healthcare and of the resources available within the system to provide optimal care to individual patients and groups.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VII. Infection Control						
I understand my role in the prevention and spread of infections.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the impact that infections have on the outcomes of patients (quality, cost).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I actively participate in the prevention and reduction of the spread of infections.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VIII. Medication Safety						
I understand safe practices that reduce the risk of medication errors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I recognize the impact that medication errors have on the outcomes of patients (quality, cost).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the safety factors in practicing safe medication prescribing and administration.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Project conclusions

- We hope for a few failures along the way – for greater learning and opportunities for multiple PDSAs
- Process more important than results
- End of year project storyboards with invitation to wider medical community and medical school

Curricular PDSAs.....

- External advisor: Bruce Gould, MD
- He had tried this before
- For first year in particular, need to have experienced faculty who have ‘drunk the kool-aid’
- No major faculty development plan in year 1

Cost/Funding sources

- Negotiated for needed resources within medical school budget
- Department of Quality and Patient Safety
 - Hired Director



Questions?

