We will be using a back channel communication tool with today's webinar. This will enable the audience to post questions during the webinar which will be answered at the end prior to opening up the phone line for live questions.

To participate:

Go to:

https://todaysmeet.com/IAMSEWebinarMarch31

In the "Nickname" field type your name, then press enter.

In the "Say" field type your question and press enter.

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Applying quality improvement principles to advance faculty development

Using clinical CQI tools in program evaluation
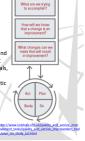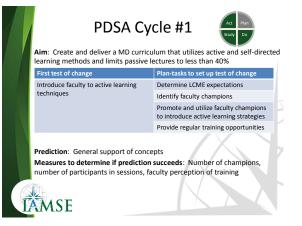
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Background

LCME ED-5A

A medical education program must include instructional opportunities for active learning and independent study to foster the skills necessary for lifelong learning.

LCME Standard Element 1.1

A medical school engages in ongoing planning and continuous quality improvement processes that establish short and long-term programmatic goals, result in the achievement of measurable outcomes that are used to improve programmatic quality, and ensure effective monitoring of the medical education program's compliance with accreditation standards.
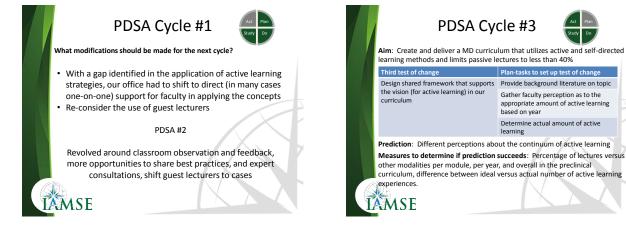
What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

Act Plan Study Do

http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/plan_do_study_act.html

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PDSA Cycle #1

Act Plan Study Do

Aim: Create and deliver a MD curriculum that utilizes active and self-directed learning methods and limits passive lectures to less than 40%

First test of change	Plan-tasks to set up test of change
Introduce faculty to active learning techniques	Determine LCME expectations
	Identify faculty champions
	Promote and utilize faculty champions to introduce active learning strategies
	Provide regular training opportunities

Prediction: General support of concepts

Measures to determine if prediction succeeds: Number of champions, number of participants in sessions, faculty perception of training

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PDSA Cycle #1

Act Plan Study Do

What happened when we ran the test?

Champions identified, 2

Non-champions, 25

- 3 workshops hosted by champions

- 76% participation rate, with most faculty attending at least 2 sessions each

- General observations from group discussions: Faculty support the idea of utilizing active learning strategies in the classroom!
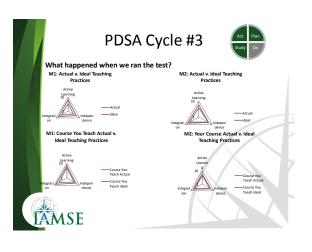
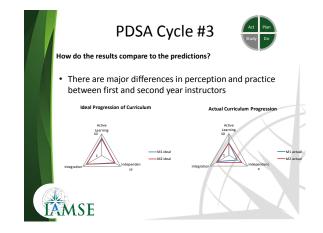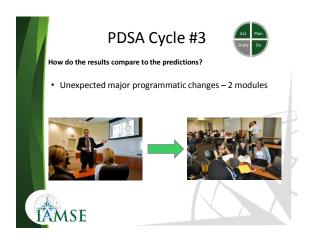**IAMSE**

PDSA Cycle #1

Act Plan Study Do

How do the results compare to the predictions?

- Process outcomes – predictions held true

- Program evaluation measures – gap in what expected to achieve and what was achieved

- General observations from group discussions: Faculty support the idea of utilizing active learning strategies in the classroom!
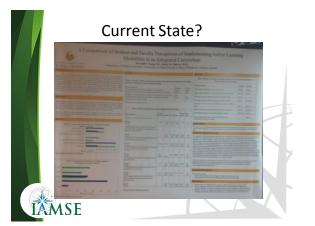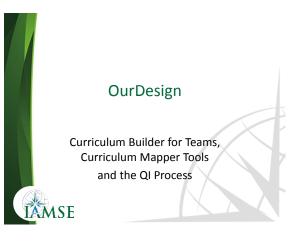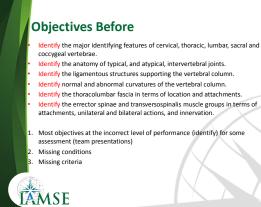
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PDSA Cycle #1

Act | Plan | Study | Do

What modifications should be made for the next cycle?

- With a gap identified in the application of active learning strategies, our office had to shift to direct (in many cases one-on-one) support for faculty in applying the concepts
- Re-consider the use of guest lecturers

PDSA #2

Revolved around classroom observation and feedback, more opportunities to share best practices, and expert consultations, shift guest lecturers to cases

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PDSA Cycle #3

Act | Plan | Study | Do

Aim: Create and deliver a MD curriculum that utilizes active and self-directed learning methods and limits passive lectures to less than 40%

Third test of change	Plan-tasks to set up test of change
Design shared framework that supports the vision (for active learning) in our curriculum	Provide background literature on topic
	Gather faculty perception as to the appropriate amount of active learning based on year
	Determine actual amount of active learning

Prediction: Different perceptions about the continuum of active learning

Measures to determine if prediction succeeds: Percentage of lectures versus other modalities per module, per year, and overall in the preclinical curriculum, difference between ideal versus actual number of active learning experiences.

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PDSA Cycle #3

Act | Plan | Study | Do

What happened when we ran the test?

M1: Actual v. Ideal Teaching Practices

M2: Actual v. Ideal Teaching Practices

M1: Course You Teach Actual v. Ideal Teaching Practices

M2: Your Course Actual v. Ideal Teaching Practices

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PDSA Cycle #3

Act | Plan | Study | Do

How do the results compare to the predictions?

- There are major differences in perception and practice between first and second year instructors

Ideal Progression of Curriculum

Actual Curriculum Progression

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PDSA Cycle #3

Act | Plan | Study | Do

How do the results compare to the predictions?

- Unexpected major programmatic changes – 2 modules

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PDSA Cycle #3

Act | Plan | Study | Do

What modifications should be made for the next cycle?

MILE

Consider other factors:
Student evaluations of faculty

Peer observations/evaluations

Other opportunities to come….

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Current State?

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OurDesign

Curriculum Builder for Teams,
Curriculum Mapper Tools
and the QI Process

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Performance Support Tools

- Provide support to faculty after development workshops
- Give prompts and guidance to faculty while they are creating their course goals, objectives, sessions and assessments
- All this information feeds into our curriculum mapper and eventually to the curriculum inventory report

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Objectives Before

- Identify the major identifying features of cervical, thoracic, lumbar, sacral and coccygeal vertebrae.
- Identify the anatomy of typical, and atypical, intervertebral joints.
- Identify the ligamentous structures supporting the vertebral column.
- Identify normal and abnormal curvatures of the vertebral column.
- Identify the thoracolumbar fascia in terms of location and attachments.
- Identify the errector spinae and transversospinalis muscle groups in terms of attachments, unilateral and bilateral actions, and innervation.

1. Most objectives at the incorrect level of performance (identify) for some assessment (team presentations)
2. Missing conditions
3. Missing criteria

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Objectives After Worskshop Alone

- **Back Region**
- In the back region, given a patient, cadaver or medical images, students will:
- Identify vertebrae and components and regional characteristics

- Apply knowledge of systemic anatomy as applied to high yield clinical conditions such as nerve root compression, scoliosis, low back pain, and neural tube defects, herniated discs

1. Improved levels (verbs) for presentations
2. Missing condition
3. Missing criteria

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Objectives After Performance Support

- **Module goal:** Given a clinical scenario students will predict the impact of clinically relevant changes in homeostasis on the structure and function of the nucleus.
- **Session Objectives:** Given a clinical scenario, students will explain the significance of telomere length in aging and cancer in an active learning module assessed by individual and group assessments. RIME-Manager
- Given a clinical scenario students will predict the effect of antibiotics targeting DNA replication of prokaryotes in an active learning module assessed by individual and group assessments. RIME-Manager
- Given a clinical scenario, students will predict the clinical, biochemical, and pathological consequences of disorders of nucleotide metabolism including folate deficiency in an active learning module assessed by individual and group assessments. RIME-Reporter

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Create a Goal

Review Goal

Create Objectives

Objective Summary

Plan Sessions

Linking

Plan Assessments

Review

Curriculum Suite

- Our Design Curriculum Mapper
  - Began as an Access Database
  - Made into an online web based tool
- Feeds into the CMAP curriculum mapper
  - Created in Access
  - Uses XML to feed the CIR for AAMC
- Then we realized we needed to create virtual cases for our new curriculum

Virtual Families
In the Careforward Curriculum
Don Robison, Ph.D., CPT