The Next Generation of Medical School Curricula: Exploring Curricular Innovation and Change

Facilitators:
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Learning Objectives

• At the conclusion of the session:
  – Identify factors that promote curriculum change and the principles guiding the development of a new curriculum, and summarize commonalities across medical schools
  – Describe at least one source of inspiration and its impact on the curriculum adopted by each medical school
  – Report on challenges faced by medical schools in the adoption of a new curriculum and institutional responses to these challenges
  – Discuss response to curricular reform planning and implementation by various stakeholders
  – Discuss four lessons learned by the panelists related to implementing a new curriculum.
Session Timeline

• Introductions (5min)
• Panelist presentations (25min)
• Structured Q &A (20min)
• Audience Questions and Wrap up (25min)

__________________________________________
(75min)
Mission
Through a supportive and dynamic learning community, Rush Medical College nurtures the development of empathic, proficient physicians dedicated to continuous learning, innovation, and excellence in clinical practice, education, research and service.

Vision
Rush Medical College will be the global leader in student-centered, future-oriented medical education.

Rush Medical College Roles
Practitioner  Leader
Communicator  Collaborator
Advocate  Professional
Educator  Scholar
M1M2 Major Basic Tenets:

• Single pass curriculum (combine normal and abnormal)
• Anchor around clinical cases, small group sessions
• Case content from all core clinical disciplines: pediatrics, gynecology
• Integrate all basic science and clinical components
• Flipped Classroom- no lectures
• Frequent formative assessment with real time feedback and coaching
Key Contributors

Committee members
- Medical College Administration
- Basic scientists
- Clinicians
- Students

Working Groups
- Administration
- Objectives
- Curricular Design
- Educational Design
- Assessment
- Student Advisory

Timeline:
- 1/2016 Planning begins
- 9/2017 Premier M1 curriculum

40+ faculty
40+ students
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Giulia Bonaminio, PhD
Associate Dean for Medical Education
University of Kansas School of Medicine
Who am I? Where am I? Where have I been?

- PhD and post-doc in Molecular Genetics

1992-1997
- University of Kentucky COM
- Biomedical Curriculum Specialist
- New curriculum

1997- today
- University of Kansas SOM
- Associate Dean for Medical Education
- Director, Office of Medical Education
- Research Professor, Department of Family Medicine
Why change the curriculum?

Internally:
• Content audit/consultant reports, internal review, AAMC GQ, internal evaluations, LCME self-study/site visit, new Dean

National emphasis on:
• Competency-based training, interprofessional teams, high use of technology, self-directed learning

What changed?
• vertical & horizontal integration
• centralization & standardization
• active learning, didactic sessions, SG learning
• early clinical exposure & clinical skills/simulation
• Enhanced Learning Communities with dedicated Coaches
• formative assessments & frequent summative assessment
• P/F Years 1+2, PWD/P/F Year 3, Honors track
• Tracking of competency achievement


http://www.kumc.edu/school-of-medicine/education/ace-curriculum/the-curriculum.html
How did we do it?

• Discussions and planning started in 2014
• More bottom up/faculty driven than previous revisions
• Working groups (assessment, clinical skills, etc.)
• Extensive student involvement
• Final recommendations to curriculum committee in 2015
• SOM $ for planning to faculty/departments
• Allocation model incorporates teaching effort
• Educational administration increased
  • Discipline leaders, thread heads, block directors
  • More central OME support
• New HEB in KC, new building in Salina
• Faculty development = before launch, $ from Alumni Assoc.
• 2016 Legacy pilot projects (learning activities, coaching)
• ACE Strategy Team - huddle every Friday morning
• July 2017 M1, July 2018 M2, May 2019 M3, June 2020 M4

http://www.kumc.edu/school-of-medicine/education/ace-curriculum/timeline.html
The University of Illinois
College of Medicine (UICOM)
Curriculum Overview

Abbas Hyderi, MD MPH
Former Associate Dean for Curriculum, UICOM-Chicago

Current Senior Associate Dean for Medical Education
Kaiser Permanente School of Medicine(pending accreditation)
Map colors reflect population density:
- Dark Green = <10 people per sq mile
- Bright Red = > 5,000 people per sq mile
A Completely New MD Curriculum – Why?

✓ Significant UICOM educational innovations (Team-Based Learning™, “Assessment for learning,” M4 Pathways, Growth of clinical simulation)

✓ Further advances were constrained by the “Chicago vs. UPR Track” structure, and by differences in approach from campus to campus

✓ Concomitant with plans for a new, separate school in Urbana:
  ✓ Restructured to become a three-campus, single MD curriculum
  ✓ Leveraged resources across the campuses, retaining uniqueness of each
  ✓ Added the M1 year in Peoria and Rockford, with capital investments of over $4 million
Structural Principles of the New MD Curriculum

✓ Each campus offers a four-year, fully resourced curriculum, with content developed collaboratively by faculty at all sites

✓ Synchronization across all campuses with respect to:
  ✓ Learning objectives
  ✓ Exam/assessment methods
  ✓ Academic calendar for both courses and clerkship rotations

✓ Teaching/learning methods will differ to some degree across the campuses; campuses share many materials via “flipped classroom” approaches

✓ Resources, including clinical rotations, at each campus are available to students from other campuses

✓ Transition to clerkships (Phase 1 to Phase 2) occurs in spring of M2
Educational Principles of the New MD Curriculum

**Integrate** formal learning with clinical experience
- 5 Themes integrated through all courses
- “Scaffolding” throughout the curriculum

**Standardize** learning outcomes
**& Individualize** the learning process
- Entrustable Professional Activities
- Assessment *for* learning

**Focus on progressive formation of professional identity**

**Develop habits of inquiry & improvement**
Curriculum Transformation Timeline

- 2013: 3 Curriculum Committee Task Forces
- 2015: Carle-Illinois College of Medicine approval expedited launch
- 2017: Launch
- 2018: LCME Site Visit

It takes a village
- Educational Affairs Group Leaders (EAGLs)
- Over 150 faculty, staff, and students
- Student Curricular Board (SCB)
The Next Generation of Medical School Curriculum: Exploring Curricular Innovation and Change at UConn School of Medicine

Suzanne Rose, MD, MSEd
Senior Associate Dean for Education & Leader of Curriculum Reform
University of Connecticut School of Medicine: June 2011-February 2018

Senior Vice Dean for Medical Education
Perelman School of Medicine: February 2018 - present

MDelta: Motivation for Change

• Prior revision - 25 years ago
• Legacy Curriculum: traditional two (pre-clinical) plus two (clinical) curriculum - (nearly 900 lecture hours)
• Student feedback:
  • Lack of continuity, clarity, uniformity in instruction and materials
  • Information overload; First two years were a “hurdle to conquer” in order to advance to the much anticipated next stage of training.
• Student attendance declined, 98% watching recorded lectures remotely
• Upcoming LCME site visit provided urgency to address critical feedback in evaluations and in the GQ’s
| **Patient and Student-centered Content** | • Basic science and biopsychosocial topics embedded in clinical cases  
• Use of virtual patients  
• Elimination of all lectures  
• Adoption of a TBL pedagogy |
| **Health Systems Science** | • VITALS program threads health systems science topics throughout four years of the curriculum  
• Clinical Home course where students travel to clinical sites each week interacting with interprofessional partners in various healthcare settings  
• Immersion in health systems sciences |
| **Assessment** | • Two-week intersessions between blocks (LEAP) for intense assessment and feedback, content enhancement or individualized learning |
| **Public Health Certificate** | • Social Determinants of Health and Disparities (requirement for all MD students as of Class of 2021) |
MDelta: How did we do it?

- 5-year plan
- Purposeful engagement of faculty and students allowed for powerful change: retreats, lunch discussions, departmental meetings
- Governance required 2 general faculty votes (mission/goals followed by curricular template)
- Curriculum Reform Steering Panel directed reform, with periodic presentations and votes by EC; no single high stakes vote at the end
- Ongoing feedback, faculty development and communication
- Branding the curriculum built enthusiasm and emphasized direction of change
The Shared Discovery Curriculum

Who/Where/Why/What/How?
Dianne Wagner and many others
Michigan State University
College of Human Medicine
Who? And Where?

Michigan State University College of Human Medicine

- Two 4 year campuses/7 total
- Early community based education
- Early problem based format adoption
- Biopsychosocial model
- Strong social mission
Why? Hopes and Dreams

• Maximal time with patients, faculty or both
• Usefulness for our learners
• Faculty and students “on the same team”
• Assessment of what really matters
  • Excellent patient care skills
  • Passage of licensing exams
  • Team and safety behaviors
  • Active, lifelong learning skills
• Excellent data streams for CQI
  • Programmatic
  • Student performance in the workplace
• Joy! (we dared to dream it.....)
What? The CHM Five

1. *Early, ongoing clinical experiences* where students are useful
2. *Chief Complaints and Concerns* – integrative end-competencies place learning and the patient on the same page
3. *Academy/Learning Society* structure for small group learning, coaching, relationship-building and faculty development
4. *Progress Testing* across 4 years – less frequent summative assessment, neutralize “binge and forget”
5. *JustInTimeMedicine* curricular/assessment software to fuel curriculum and assessment
• 2007: Lunch discussions about possibilities but no reality testing required
• 2010: Curriculum Design Group meets weekly: literature review, musings/hopes/dreams, blue sky poster session
• 2013: Pilot test of an Early Clinical Experience—reality tested and implementation fueled by success of best elements
• 2015: Fielded the team and designed in earnest
• 2016: Admitted inaugural Shared Discovery Curriculum Class
Structured Q&A:
Planning Phases

• Prompt Question 1:
  – How long has it been since your last new curriculum was implemented?
  – What prompted a new curriculum?
  – What concerns or challenges drove development and implementation of a new curriculum?
  – How did you structure leading change and how did that fit into the culture of the school?
Structured Q&A:
Timeline & Implementation

• Prompt Question 2:
  – How long did it take?
  – When did planning start and when did implementation begin?
  – How did you test the new curriculum?
  – How did you implement it?
Structured Q&A: Inspirations

• Prompt Question 3:
  – What were the inspirations for your new curriculum?
    • Programs at other schools?
    • Innovations in the medical education literature?
    • White papers and reports from professional organizations?
Structured Q&A: Challenges & Resistance

• Prompt Question 4:
  – What is your biggest challenge to date in your implementation?
    • How did you meet this challenge?
  – What was the effect of curricular change on students in the legacy curriculum?
  – What strategies were employed to overcome resistance?
Prompt Question 5:

All of you represent schools that are in the early-ish adoption phase of your new curriculum...

– To what extent has your experience so far changed your downstream planning?

– Looking back, what would you have done differently?
Thank you