Changing a Curriculum: Lessons from the Field

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Disclosure Information

- I have no financial relationships to disclose.
- I have had the opportunity to be involved in curricular changes at four US medical schools and have used them for my field studies.
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The schools.....

1925

UNIVERSITY OF MINNESOTA

Medical School

Driven to Discover℠

1888

1843

FAU

CHARLES E. SCHMIDT
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Historical perspective

- 1765-late 1800's Apprenticeship model
- 1871 Discipline-based model
  - Original goal was to focus on critical thinking, self-directed learning, active learning, and medical problem-solving (not encyclopedic knowledge of facts!!)
  - Beliefs became codified in curriculum structures
    - Flexner (1910): Clinical competency is built on two ***uninterrupted*** years of basic science knowledge acquisition.

Papa and Harasym Acad Med 74:154, 1999.

Newer models for the “pre-clinical” years

- 1951 Organ system-based model
  - Curriculum organized by organ system, with integration of basic science and clinical information; change in locus of control from departments to curriculum committees
- 1971 Problem-based model
  - Curriculum organized around clinical problems, using small group tutorials (PBL) with student-centered, active learning
- 1991 Clinical presentation-based model
  - Curriculum organized around the ways patients present to physicians, with focus on enhancing processes of structuring knowledge

The last frontier – the clerkship years

- Traditional specialty-specific clerkships based on time
  - Why did it work for so long?
    - Continuity for the students!
      - Attendings, residents, teams, patients, peers, health care systems
  - Why has it been so hard to change?
    - Stakeholders
      - Department chairs, attendings, residency directors, students
- Approaches
  - Modify clerkships to decrease overall time by "integration" of two related disciplines
  - **Longitudinal Integrated Clerkships**

Levels of curricular change

- Individual courses or clerkships – content and/or teaching methods
- Overall curriculum or a component of the curriculum – content, teaching methods, and/or assessment of students
- Paradigm shifts
  - Organ Systems at CWRU; BPSM at Rochester; PBL at McMaster and New Pathway at Harvard; Outcomes-Based Spiral Curriculum at Dundee; Double Helix Curriculum at Rochester; CCLCM at CWRU; Competency-Based Progress at the University of Minnesota
  - **Longitudinal Integrated Clerkships**

Key things to consider

- Values – *Criteria that determine priorities and decisions*
- Processes – *Patterns of interaction, coordination, communication and decision making*
  - *Formal (defined and documented)*
  - *Informal (ways of doing things that evolve over time)*
- Resources - *People, physical infrastructure, reputation, money, technology, intellectual property*

What forces drive curriculum changes?

- **Internal forces** (institutional priorities and culture, vision of leadership, demands of students and faculty, resources)
  - Examples: Rochester, CWRU, Minnesota…
- **External forces** (international/national/local trends and reports, governmental or other mandates, accreditation and licensure requirements, resources)
  - Examples: Rochester, CWRU, Minnesota, FAU….
- Educational and cognitive sciences research
  - "Evidence-based" applies to research and clinical care

Stages of change

- Planning – establishing need, designing a vision
- Initiation or adoption – introducing the innovation
- Implementation – modification and adjustments
- Institutionalization – innovation becomes the new way of doing things

Planning

- Workshops/retreats to establish a vision
  - Plan them carefully with the product in mind
    - What is the goal for each retreat?
    - Don't waste people's time!!
  - Include everyone
    - Make sure naysayers are at the table
  - Bring in experts (people from out of town with slides!) when you need them
  - Condense/consolidate the results
    - What were the key issues? What seemed to matter the most?
- Create guiding principles and a strategic theme (with a visual if possible)

Introducing the innovation

- Set a [somewhat] realistic launch date and stick with it
- Don't wait too long to start – perfect is the enemy of good!
- Have timelines for everything – include a cushion for unforeseen problems
- Be adaptable (not flexible, but adaptable)
  - Have a Plan B, C, and X
- Always return to the guiding principles or vision when deciding what can be modified

Adhering to the plan

- Once a vision has been established – someone (the leader of the change) needs to keep it on track
  - If the faculty commit to the value of teamwork – does competitive grading make sense?
  - If the faculty commit to the value of protected time for independent study – can it be used for "optional reviews" before an exam? Can it be used for student affairs activities?
  - If the faculty commit to the value of self-directed learning – should faculty objectives be distributed before the PBL case?
  - If the faculty endorse continuity with patients in integrated clerkships – can "white space" time be taken away to increase the half days on inpatient surgery?

Other common challenges

- Manageable…
  - Faculty who undermine
    - A lecturer starts his/her lecture with following statement: “Last year, I had XX hours to cover this topic, but I've been cut back to ¼ XX – I have no idea how you are going to learn this for the boards.”
  - Students who worry
    - “All my friends at other schools have XX weeks of surgery and I only have ½ XX – how will I ever match?”
- Harder to manage…
  - Changes in key leadership positions

Modifications and adjustments

- Do your best to foresee consequences
  - Anticipate that you won't foresee them all!

- Build in regular meetings with students and faculty to avoid crisis meetings
- Stick to the plan – within reason
- Change the plan when necessary – in keeping with the guiding principles

Predictors of success: CONTEXT

- Compatible with institution's missions and goals
  - Smaller schools, with a focused mission, tend to do better at institution-wide innovations
- Successful history of change
- Politics
  - Strong, influential advocate
  - Broad internal networking
  - Resources
- Highly interactive organization (vs. “departmentalized” or “loosely coupled”)
  - Clear curricular governance (who owns the curriculum, the school or individual faculty?)

Bland *et al.*, Acad Med 75:575-594, 2000.

Implications

- Institution–wide curricular change requires integration and collaboration between departments
- This is not what most medical schools do well .....
  - Establish interdisciplinary curriculum task forces "outside the traditionally cumbersome, turf conscious education policy committee"*
  - Develop a separate innovative track running concurrently

*Cohen et al. Med Educ 28:350-360, 1994.

Predictors of success: CURRICULUM

- Appropriate scope (not too trivial, not overly ambitious) – large enough to justify the effort
- Institution-wide innovations are costly – time, energy, resources
  - There must be "widespread" agreement that the changes are needed
- There are advantages and disadvantages to "pilots" – they allow a phased-in process, but they can be shelved

Bland *et al.*, Acad Med 75:575-594, 2000.

Keys to success: PROCESS

- Cooperative work climate – respect, collaborative problem solving, rewards for risk taking
- Communication – frequent formal and informal communications, regular updates on progress, demonstrations, inclusion of dissenters
  - Planned redundancy
  - Numerous modalities, formal and informal – newsletters, e-mail, web postings, faculty forums, one-on-one interactions
  - Succinct, frequent, factual, substantive and timely
- Faculty development and rewards for participation
  - Salary, promotion and tenure, incentives that reward change, awards and other recognition

Bland *et al.*, Acad Med 75:575-594, 2000.

Leadership…..

- Usually the dean
- Stable and identifiable throughout the process, keeps the process moving
  - Most successful rely on *participative governance* (seeking input from others, providing support for members of the organization to accomplish the mission) and *value influence* in addition to organizational power behaviors
  - Share power without losing control, be visible and active without dominating, delegate responsibility but provide support, be flexible while maintaining integrity of the project

Bland *et al.*, Acad Med 75:575-594, 2000.

Take home questions

- What are the drivers for curricular change at your school?
- What are the characteristics of your school that will either impede or facilitate curricular change?
  - What are its underlying values? What do your faculty believe in?
  - How does the school go about its business? How does it do things?
  - What resources can the school bring to bear?
- Who is your innovative leader?