Science at the heart of medicine

Integrating clinical prevention and population health content into the undergraduate medical curriculum: Update on implementation process and lessons learned

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Disclosures

• None
Goals

• Describe the progress in the integration of Clinical Prevention and Population Health (CPPH) related content into an existing undergraduate medical curriculum.
• Provide a forum for collegial exchange
Roadmap

• Current state of CPPH education
• Approach to Curriculum Development
  ▪ Review of preliminary work
  ▪ Implementation/Assessment
  ▪ Anticipated next steps
• Lessons learned
• Discussion
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Current State of Clinical Prevention and Population Health (CPPH)

- Medical College Admissions Test (MCAT)
  - [https://www.aamc.org/students/applying/mcat/mcat2015/](https://www.aamc.org/students/applying/mcat/mcat2015/)

- United States Medical Licensing Exam (USMLE)
  - Step 1, Step 2 Clinical Knowledge (CK), Step 3
  - November 2014

- Liaison Committee on Medical Education (LCME)-Educational Objectives
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Kern’s Steps of Curriculum Development

Diagram showing the relationship between various steps in curriculum development:
- Problem Identification
- Targeted Needs Assessment
- Goals & Objectives
- Implementation
- Evaluation & Feedback

These steps are interconnected, indicating a cyclical process of curriculum development.
Setting

- Albert Einstein College of Medicine
- Bronx, NY
- ~180 students per year
- Traditional 2x2 year curriculum
- Just completed LCME site visit 2014
- Will be embarking on major curriculum reform
  - Current Mandate: No additional curriculum time allowed
- Einstein Competencies
Setting

- Physician as Healer
- Physician as Scientist
- Physician as Advocate
- Physician as Educator
- Physician as Colleague
- Physician as Role Model
- Physician as Life-long Learner

Science at the heart of medicine
Kern’s Steps of Curriculum Development

Problem Identification

Targeted Needs Assessment

Goals & Objectives

Implementation

Evaluation & Feedback

Educational Strategies
Problem Identification

- Demonstrated gaps in the curriculum related to CPPH
- Proved success in curriculum development with pilot elective sessions
- Established need for central oversight
- Created a working group comprised of CPPH members and additional content experts
Kern’s Steps of Curriculum Development

Problem Identification

Evaluation & Feedback

Targeted Needs Assessment

Goals & Objectives

Implementation

Educational Strategies


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Targeted Needs Assessment

- Surveyed Students
  - Knowledge and attitudes
- Surveyed Faculty
  - Willingness to engage with the working group
- Curriculum Mapping
- Focus Groups
- National Standards
Kern’s Steps of Curriculum Development
Goals and Learning Objectives

• Crafted measurable, competency-based learning objectives.

• Einstein Competencies

• Linked learning objectives to APTR framework
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Educational Strategies - Adult Learning Principles - Four Case Studies

• Health Disparities and Determinants of Health
• Inter-professional Team Education (IPE)
• Medical Economics and Health Care Systems
• Public Health and Medicine
Educational Strategies- Adult Learning Principles- Four Case Studies

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Health Disparities and Determinants of Health

- Renal Course Lecture
  - Lecture Content
  - Included an exam question last year
  - Case Conference to include Social Determinants of Health
- Musculoskeletal Course
  - Lecture Content
  - Case Conference to include Social Determinants of Health
  - Design exam questions this year
Health Disparities and Determinants of Health

- Implicit Bias
  - Enhanced existing 3rd year session
    - Pre-post survey of student attitudes
    - Developing a rubric for written reflections by students
  - First year orientation
    - Further sessions longitudinally and developmentally appropriate
  - Cardiovascular pathophysiology course
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Inter-professional Team Education (IPE)

**Family Medicine Clerkship**
- Columbia University nursing students and Einstein third year medical students
- Team-based learning sessions
  - Health Promotion and Shared Decision Making
  - Hypertension / Hyperlipidemia and Patient-centered Care
  - Diabetes and Continuous Quality Improvement

**Pediatrics Clerkship**
- Formative observed structured clinical encounter (OSCE)
- Error disclosure to family and reflect on event and discuss second victim
- Incorporates interdisciplinary team training as each role play has physician, nurse, pharmacist, SW, OT/PT and family members
Inter-professional Team Education (IPE)

• Medicine Clerkship
  - Students participate in an IP transition of care “role play” module (U. of Alberta).
  - Students then participate in an Interdisciplinary Team (IDT) Rounds in the hospital.
  - Write a hospital discharge plan for the patient with IDT perspective from multiple IP members.
Educational Strategies- Adult Learning Principles- Four Case Studies

• Health Disparities and Determinants of Health

• Inter-professional Team Education (IPE)

• Medical Economics and Health Care Systems

• Public Health and Medicine
Medical Economics and Health Care Systems: Fourth Year Ambulatory Selective Intersession

- **The Effects of Health Policy and Quality in Health Care Delivery**
  - Medical providers are affected by quality-related expectations set by public/private organizations.
  - Clinical case demonstrates the relationships between health policy, the evaluation of quality care, and clinical practice.

- **The Essentials of Medical Malpractice and Professionalism Boards 101**
  - Team-based learning session
  - Students identify common causes of malpractice suits; describe best practices for enhancing patient safety.
  - Review the process to follow when a physician has been served with a malpractice suit.
  - Explore concepts of risk management, liability insurance, professionalism boards, and discuss tort reform.
Navigating Patients through System Complexities

- Blended clinical case with online exercises
- Students discuss common methods of financing (e.g., Medicare, Medicaid, private insurance, out-of-pocket payment).
- Participants identify how health plans employ cost and utilization control strategies (e.g., copays, deductibles, drug formularies, prior authorization) and will identify how these strategies can become financial barriers to care (e.g., underinsurance, uninsured).
- Students will also learn to counsel patients on how to reduce their prescription and equipment costs, and how to advocate for appropriate treatment when drug or service coverage is denied by a health plan.
• Billing and Coding 101: Reimbursement to Physicians and Clinical Institutions
  ▪ Students describe the different means by which physicians and clinical institutions are reimbursed.
  ▪ Introduced to terminologies such as DRG, ICD and CPT, and the role those terms play in reimbursement.
  ▪ Review the current and future state of physician and institution reimbursement.
  ▪ Student code a clinical encounter.
Educational Strategies - Adult Learning Principles - Four Case Studies

- Health Disparities and Determinants of Health
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- Public Health and Medicine
Public Health and Medicine

- Public Health and Preventive Medicine
  - Introduction to Clinical Medicine Course (Doctoring)
  - Students identify the roles of public health and the interface with clinical medicine
  - Lecture
  - Small group case-based exercise based on APTR module on Influenza Immunization

- Health Policy 101 Lecture
- Impact of Health Policy on Access to Mental Health Care
  - Clinical Write Up in Psychiatry Clerkship
  - Small Group Debrief
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Next Steps

- Preliminary program evaluation
  - One year follow up of student survey
    - Satisfaction
    - Self assessment of competency
    - Attitude – Rating importance of learning content
    - Knowledge assessment

- Develop more learner assessments of CPPH competencies
  - Integration of items into course MCQ exams
  - OSCEs
  - Observed clinical exams
  - Patient write ups
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Lessons Learned

• Tap into stakeholder interests and engage early adopters.
• Lack of protected time dedicated to CPPH content has made establishing developmentally appropriate curriculum challenging.
• Integration is a cognitive act for the learner. Create active learning experience that allow students to integrate concepts.
• National surveys can change at any time (GQ)
Conclusion

- Curriculum development in thematic content areas relies on a centralized process and group collaboration.
- Using validated assessment instruments, or developing and validating your own instruments has the potential to contribute to the advancement of this instruction.
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- Thank you to Paul Marantz, MD, MPH