

Kern-ricular Method: A Curriculum Development Workshop for Faculty

MAJ Nick Bennett, DO Faculty Development Fellow





Disclosures



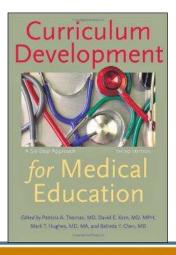
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A Six Step Approach

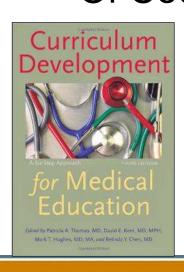




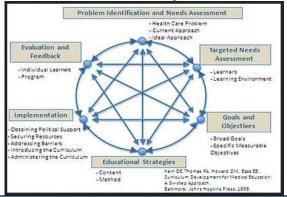
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Of Course . . . Huh???





A planned educational experience



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Exactly . . .







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My Goal







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Objectives



- Discussed Kern's framework for curriculum development
- Applied steps 1-4 to your curriculum
- Outlined scholarly activity opportunities through curriculum development
- Identified online curricular resources

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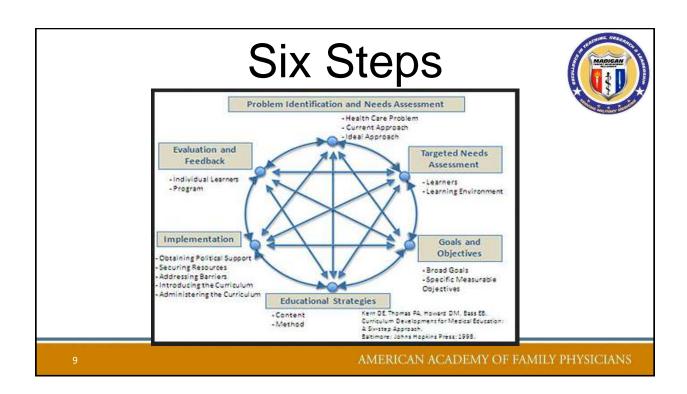
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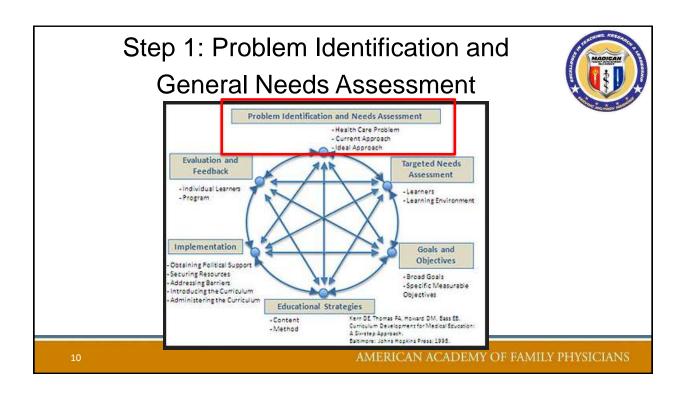
Underlying Assumptions



- Educational programs have goals or purposes, whether articulated or not
- Medical educators have professional and ethical obligations to meet the needs of their learners, patients and society
- Medical educators should be held accountable for the outcomes of their interventions

"A logical, systematic approach to CD will help achieve these goals" - Kern





Overview



- Builds a rationale for your curriculum
- Grounded in patient and societal needs
- Focuses goals and objectives → directs educational and evaluation strategies
- Makes you an expert and a scholar

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Problem Identification



Whom does it affect?

- Patients
- Providers
- Medical Educators
- Society

How important is the problem, quantitatively and qualitatively?

What does it affect?

- Clinical outcomes
- Quality of life
- · Quality of health care
- Use of resources
- Medical and nonmedical costs
- Patient/provider satisfaction
- Work and productivity
- Societal function

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Activity #1



- Think of an area of curriculum you would like to develop or refine.
 - What healthcare problem are you addressing?
 - Who does it affect?
 - What does it affect?
 - How important is the problem?
- · Work individually on your curriculum.
- After 3 minutes, share your curriculum to the group on nearpod.

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4 Minutes

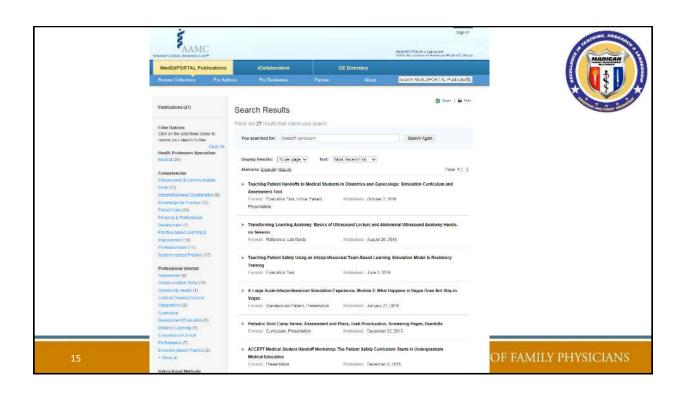
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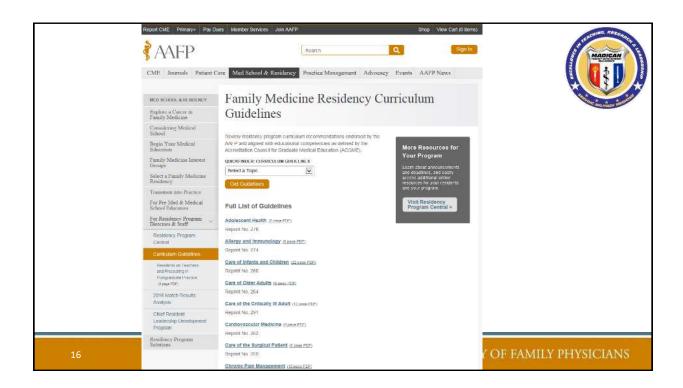
General Needs Assessment



- Identification and critical analysis of a health care need or problem
- Analysis of the current approach
- Identification of ideal approach











AAFP Reprint No. 262

Recommended Curriculum Guidelines for Family Medicine Residents

Cardiovascular Medicine

This document was endorsed by the American Academy of Family Physicians (AAFP).

Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Attifudes, behaviors, knowledge, and skills that are critical to family medicine should be attained through longitudinal experience that promotes educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME), www.acgme.org. The family medicine curriculum must include structured experience in several specified areas. Much of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center, although additional experience gained in various other settings (e.g., an inpatient setting, a patient's home, a long-term care facility, the emergency department, the community) is critical for well-rounded residency training. The residents should be able to develop a skillset and apply their skills appropriately to all patient care settings.

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Activity #2

- What is the current approach for the problem you have identified?
- It may include:
 - Patients
 - Providers
 - Medical education system
 - Society
- Where will you discover the ideal approach?

3 Minutes

Problem Identification and General Needs Assessment



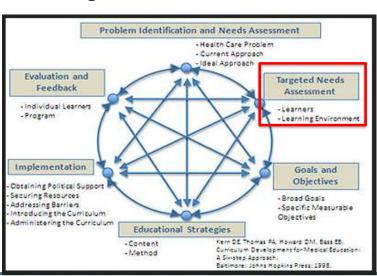
- Work smarter, not harder
- Time allocation
- Clear definition
 - Stakeholders
 - Educators
 - Learners
- Potential for dissemination?



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Step 2: Targeted Needs Assessment





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Overview



- Assesses the environment
- Identifies needs and preferences of targeted learners and other stakeholders
- Builds relationship with stakeholders
- Engages and motivates learners
- Increases efficiency, prevents duplication
- Identifies resources to align strategy

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Targeted Needs Assessment Group of Learners



- Experiences
- Expectations
- Existing proficiencies
 (Cognitive, Affective, Psychomotor)
- Attitudes
- Preferred learning styles



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Targeted Needs Assessment



Learning Environment

- Related existing curriculum
- Needs of stakeholders
- · Barriers and enablers
- Resources



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Methods



- Informal discussion
- Formal interviews
- Focus group discussion
- Questionnaires

- Direct observation
- Audit of current performance
- Test
- Strategic planning session

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Activity #3



- Think about conducting a targeted needs assessment on both your learner and learning environment.
 - What methods are you going to use?
 - What questions are you going to ask?
- Work individually for 3 min, then share your method to the group on nearpod.

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4 Minutes

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By This Point . . .

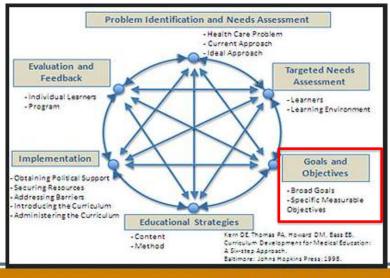


- Have a strong argument for your curriculum
- Set the stage for generalizability and dissemination of your curriculum
- Understand the particular needs of your targeted learners and institution
- Identified potential resources and support
- Have the introduction and part of the discussion for publication

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Step 3: Goals and Objectives





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Overview



- Assist with the following:
 - Direct choice of curriculum content
 - Help identify effective learning methods
 - Enable evaluation of learners and curriculum
 - Suggest what evaluation methods are appropriate
 - Communicate a vision
- Broad, general goals
- Specific, measurable objectives

Goals

- MADISAN
- Communicate the overall objective of the curriculum
- Usually not measurable as written
- General Goal:

"Patient Safety: Residents will understand the importance of Patient Safety Reports on identifying potential system errors or challenges."

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Objectives



- Further refinement of curriculum
- Direct education and evaluation methods
- Five basic elements:

Who will do how much (how well) of what by when

(1)

(2)

(3)

(4)

(5)

Example: Each resident will submit five patient safety reports, via the online database, by the end of their inpatient family medicine rotation.

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Types of Objectives



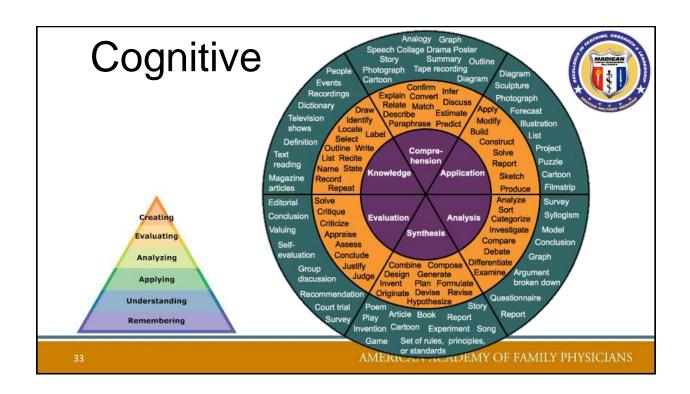
- Current capabilities of learner
- What you want learner to achieve:
 - Cognitive
 - Affective
 - Psychomotor

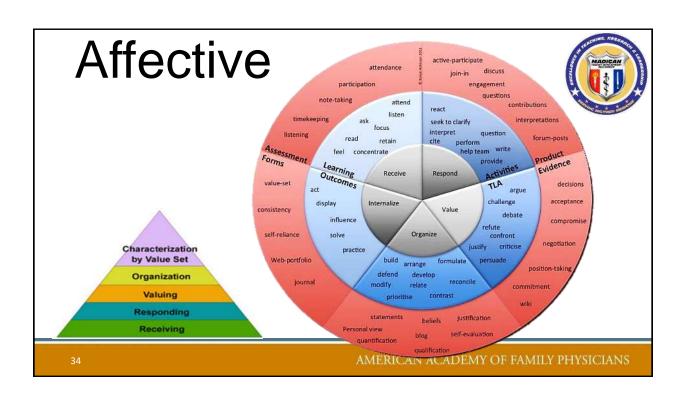
• Process or patient/healthcare outcome

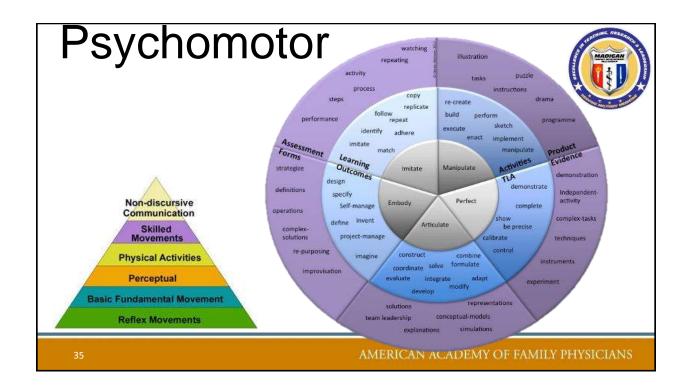
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Verb Selection







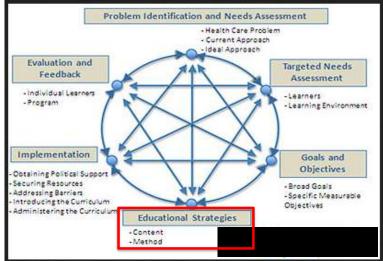
Activity #4

- Write 1-2 broad educational goals
- Write 1-2 specific measurable objectives
- Work individually for 3 min, then share your goals and objectives to your neighbor.

4 Minutes

Step 4: Educational Strategies





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Educational Strategies



- Content and methods that will most likely achieve the educational objectives
- The adult learner . . .
 - Experience
 - Pattern of learning
 - Need for immediacy
 - Reduced attention span
 - Dialogue
 - Craves feedback



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Syllabus



- Outlines goals and objectives
- Schedule of curriculum events
- Curricular resources
- Plans for assessment

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Factors to Consider



- Maintain congruence between objectives and methods
- Use multiple educational methods
- Feasible in terms of resources

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Educational Methods



- Readings
- Lectures
- Online resources
- · Large group discussion
- Small group discussion
- Problem based learning
- Team based learning
- Audio/video recording and review

- Peer teaching
- Supervised clinical experience
- Reflection
- Role modeling
- Demonstration
- Simulation
- Standardized Patients
- Role Play

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	Type of Objective				
Educational Method	Cognitive: Knowledge	Cognitive: Problem Solving	Affective: Attitudinal	Psychomotor: Skills or Competence	Psychomotor: Behavioral or Performance
Readings	+++	+	+	+	
Lectures	+++	+	+	+	
Programmed learning	+++	++		+	
Discussion	++	++	+++	+	+
Reflection on experience			+++	+++	+++
Feedback on performance	+	++	++	+++	***
Small group learning	**	++	++	*	+
Problem-based learning	4+	+++	+		*
Team-based learning	+++	***	++	+	+
Learning projects	+++	+++	+		+
Role models		+	++		++
Demonstration	+	+	+	++	++
Role-plays	+	+	++	+++	+
Artificial models and simulation	+	++	++	***	+
Standardized Patients	+	++	++	+++	+
Real-life experiences		**	++	+++	+++
Audio or video review of learner	+			***	*
Behavioral/ environmental interventions*			*	*	***



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Activity #5



- Decide on at least two methods to deliver your curriculum.
- · What type of objective does this meet?
 - Cognitive? Affective? Psychomotor?
- Work individually for 3 min on your curriculum, then share your answers to your neighbor.

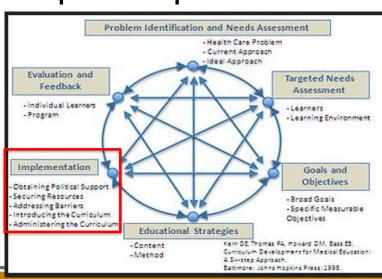
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4 Minutes

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Step 5: Implementation





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Overview



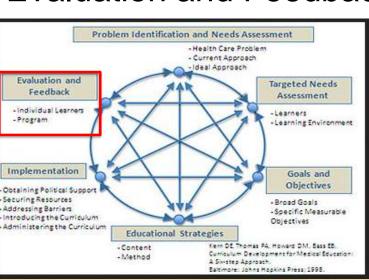
- · Identifying and obtaining resources
- Identifying and obtaining support
- Administrative methods to support
- Identifying and addressing barriers
- Introducing curriculum pilot
- Administering curriculum
- Curriculum enhancement/maintenance



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Step 6: Evaluation and Feedback



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Overview



- Determine if goals and objectives met
- Provide information for improvement
- Assess individual achievement
- Maintain and garner support
- Serve as a basis for presentations/publication



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Scholarship of Curriculum Development



Scholarship	Curriculum Development	
Clear Goals and Aims	Goals and Objectives	
Adequate Preparation	Problem ID, GNA, TNA	
Appropriate Methods	Educational Strategies	
Significant Results	Evaluation	
Dissemination	?	
Reflective Critique	Evaluation	

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Scholarly Activity Opportunities



- Local/Regional
- National:
 - MedEd Portal
 - Specialty sites
 - Specialty meetings and journals
 - Journals: Academic Medicine, Medical Education, Medical Teacher, Teaching and Learning in Medicine

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Online Resources

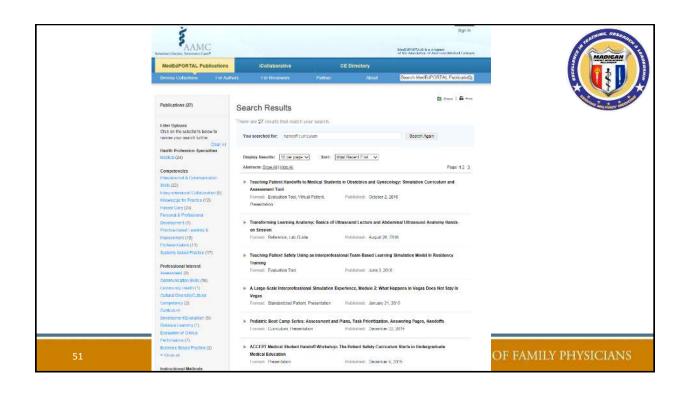


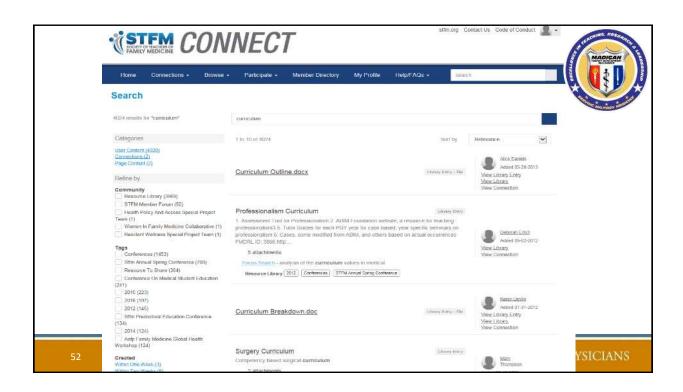
- AAMC: MedEd Portal (www.mededportal.org)
- Specialty specific sites
- PubMed



Thomas PA, Kern DE. Internet resources for curriculum development in medical education. *J Gen Intern Med.* 2004 May; 19(5 Pt 2):599-605.

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Take Away



- Kern's six steps can be used as a framework
- · Ensure problem is clearly identified
- · Allot adequate time for development
- Query for existing solutions
- · Objectives will drive your educational content and methods
- · All steps are interrelated
- Continue to assess and refine your curriculum
- Consider dissemination of your efforts

Questions?











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References



- 1. Thomas PA, et al: Curriculum Development for Medical Education A Six-Step Approach. Baltimore: The Johns Hopkins Univ. Press. 1998, 3rd edition, 2016
- 2. Lynne, Joanne: Curriculum development in 6 easy steps-for busy MED-Ed types. Ohio State University College of Medicine, lecture presentation accessed 15 Nov 2012:

http://medicine.osu.edu/education/Documents/curriculum_design_2010.pdf

- 3. Thomas PA, Kern DE. Internet resources for curriculum development in medical education. J Gen Intern Med. 2004 May; 19(5 Pt 2):599-605.
- 4. Kern DE. Curriculum development: an essential educational skill, a public trust, a form of scholarship, an opportunity for organizational change. Presented at Weill Cornell College of Medicine, Qatar; November 23, 2014.

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5.8

Please

complete the session evaluation.

Thank you.



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