

# Using a Delphi Survey to Establish Learning Objectives in Chronic Disease Management for Medical Students

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**Funded by the AMA's Improving Health Outcomes division**

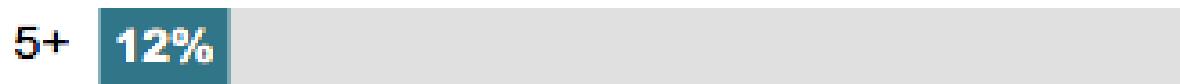
# Disclosures

Michael Dekhtyar

- Salaried employee of the AMA

# Chronic conditions affect millions of Americans

Percentage of U.S. Adults, by Number of Chronic Conditions



Percentage of Health Care Spending



*Rand Review, July 2017*

# Training Health Care Professionals for 21st-Century Practice: A Systematic Review of Educational Interventions on Chronic Care

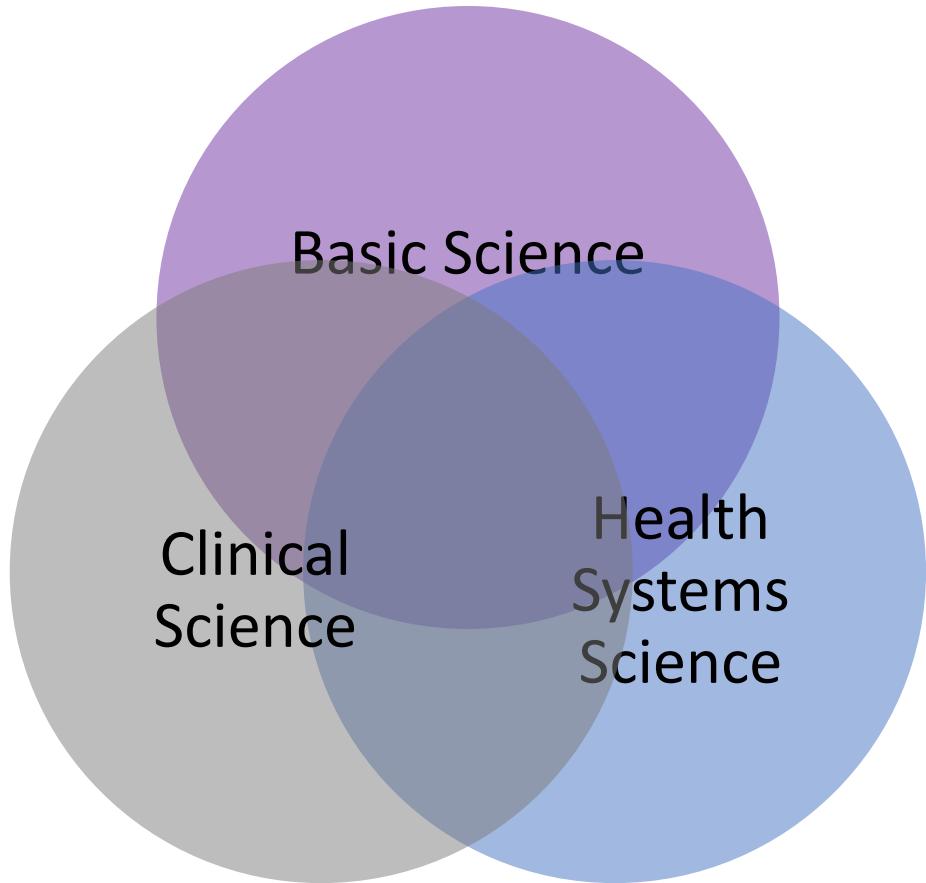
## Successful interventions

- Included multiple elements of chronic care
- Assessed higher-level learner outcomes
- Changed health care delivery systems

## Future activities

- Most studies lacked a theoretical framework
- Multi-institution studies
- Link to patient outcomes

# Health Systems Science



Health Systems Science – “the principles, methods, and practice of improving quality, outcomes, and costs of health care delivery for patients and populations within systems of medical care”

# Study Goals

To develop a set of learning objectives in chronic disease prevention and management (CDPM) for undergraduate medical education that:

1. Goes beyond the teaching of the pathophysiology and treatment of specific chronic diseases,
2. Provides a health system science framework,
3. Involves a systematic consensus process among CDPM experts and curriculum leaders.

# Methods

Convening  
an expert  
panel

Preliminary  
steps

Surveying  
the  
literature

Conducting  
the Delphi  
Process

# Methods: A Consortium as Sample

- Venue for communication, benchmarking, and collaboration
- Annual and thematic
  - Chronic disease prevention, leadership, coaching
- Interest groups
  - Health systems science
  - Social determinants of health
  - Master adaptive learner
  - **Chronic disease prevention and management (CDPM)**
  - Leadership
  - Student wellness

# Consortium Members

A.T. STILL UNIVERSITY  
SCHOOL OF OSTEOPATHIC MEDICINE IN ARIZONA | ATSU

OHIO  
Heritage College  
of Osteopathic Medicine

SOPHIE DAVIS  
SCHOOL OF BIOMEDICAL EDUCATION  
The College of New York

MOREHOUSE  
SCHOOL OF MEDICINE

The University of Texas at Austin  
Dell Medical School

MICHIGAN STATE  
UNIVERSITY

College of  
Osteopathic Medicine

UCONN  
SCHOOL OF MEDICINE

UNIVERSITY OF UTAH  
SCHOOL OF MEDICINE

RUTGERS  
Robert Wood Johnson  
Medical School

School of  
MEDICINE  
OHHSU

East Carolina University  
Brody School of Medicine

UTRGV  
School of Medicine

BROWN  
Alpert Medical School

SCHOOL OF MEDICINE  
VANDERBILT UNIVERSITY

NYU School of Medicine  
NYU LANGONE MEDICAL CENTER

HARVARD  
MEDICAL SCHOOL

MAYO  
CLINIC

AMA  
AMERICAN MEDICAL  
ASSOCIATION

M  
MEDICAL SCHOOL  
UNIVERSITY OF MICHIGAN

UW Medicine  
SCHOOL OF MEDICINE

EVMS

UCDAVIS  
SCHOOL OF MEDICINE

PENNSTATE HERSHEY  
College of Medicine

UCSF  
School of  
Medicine

University of Nebraska  
Medical Center

SCHOOL OF MEDICINE  
INDIANA UNIVERSITY

FIU  
Herbert Wertheim  
College of Medicine  
FLORIDA INTERNATIONAL UNIVERSITY

UNC  
SCHOOL OF MEDICINE

UND  
SCHOOL OF MEDICINE  
& HEALTH SCIENCES  
UNIVERSITY OF NORTH DAKOTA

SCHOOL OF MEDICINE  
CASE WESTERN RESERVE  
UNIVERSITY

Sidney Kimmel  
Medical College  
at Thomas Jefferson University

EMORY  
UNIVERSITY  
SCHOOL OF  
MEDICINE

THE UNIVERSITY OF  
CHICAGO  
PRITZKER SCHOOL  
OF MEDICINE

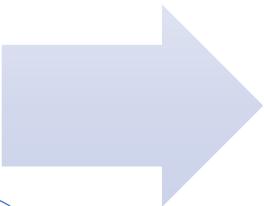
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CHANGE  
IN MEDICAL  
EDUCATION

# Convening an Expert Panel

Invitational CDPM meeting in June 2016

- To consider the chronic disease burden in the US and implications for medical student education
- To share best practices in teaching CDPM,
- To identify current curricular gaps, barriers, and needs
- Explore achievable goals and action steps

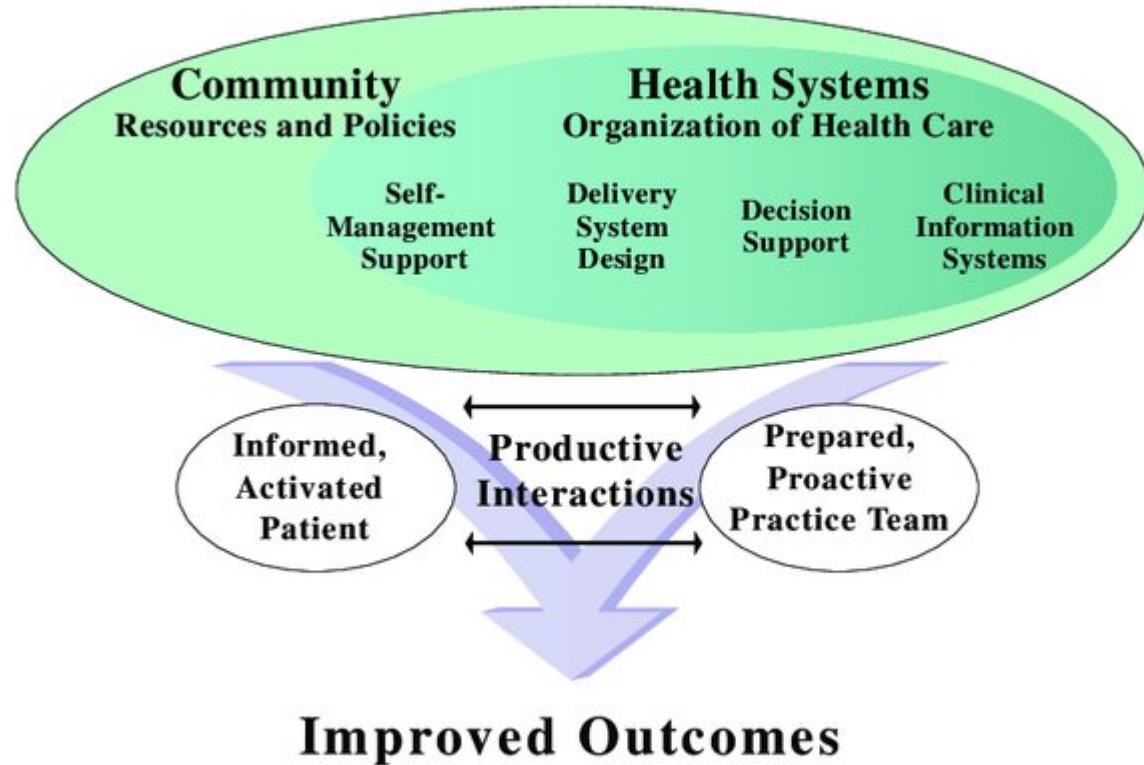


Meeting Outcomes

- Formation of a CDPM interest group with regular calls
- Priority need is for learning objectives for CDPM
- Choice of Wagner's Chronic Care model to guide learning objective identification

# Wagner's Chronic Care Model

## The Chronic Care Model



Developed by The MacColl Institute  
© ACP-ASIM Journals and Books

# Surveying the literature

- Conducting a review of the literature on needed CDPM knowledge, skills, or attitudes
  - Inclusion: identification of competencies or learning objectives for CDPM in students, residents, or practitioners
  - Exclusion: disease-specific rather than systems oriented
- Mapping results to Wagner's Chronic Care model
  - 45 articles
  - 451 competency statements

# Conducting the Delphi Process

## Round 1:

- Participants: 7 interest group members with expertise in CDPM and/or curriculum development representing 6 medical schools and 3 AMA staff
- Format: in-person meeting, Dec 2016
- Task: Review 451 objectives from the lit review to select most relevant for medical students related to 6 WCC competencies
- Outcome: 83 initial objectives reduced to 39 in subsequent phone discussion.

## Round 2

- Participants: 32 CDPM experts and curriculum leaders
- Format: Online survey using snowball sampling of colleagues with CDPM expertise or curriculum leadership roles , spring 2017
- Task: Select 20 from the list of 39 that would help guide development of a CDPM curriculum for medical students
- Outcome: 21 objectives

## Round 3:

- Participants: 35 Interest group members representing 14 schools
- Format: in-person thematic meeting, May 2017, with discussion, voting, reporting, and discussion until consensus
- Task: Consider relevance, importance, and feasibility, appropriate for medical student level, key objectives not addressed in other curricular areas
- Outcome: 11 final objectives

# Results:

## Patient self care and management

- Elicit patient-identified barriers
- Use motivational interviewing to activate patient engagement

## Decision support

- Use an expanded social history
- Identify chronic care practice guidelines
- Apply data gathered for shared decision making with the patient

# Results:

## **Clinical Information Systems**

- Use EHR to appropriately document chronic care
- Use the EHR for population level actions

## **Community resources and engagement**

- Identify community resources for chronic care support

## **Delivery systems and teams**

- Describe the function of interprofessional teams in CDPM

## **Health system practice and improvement**

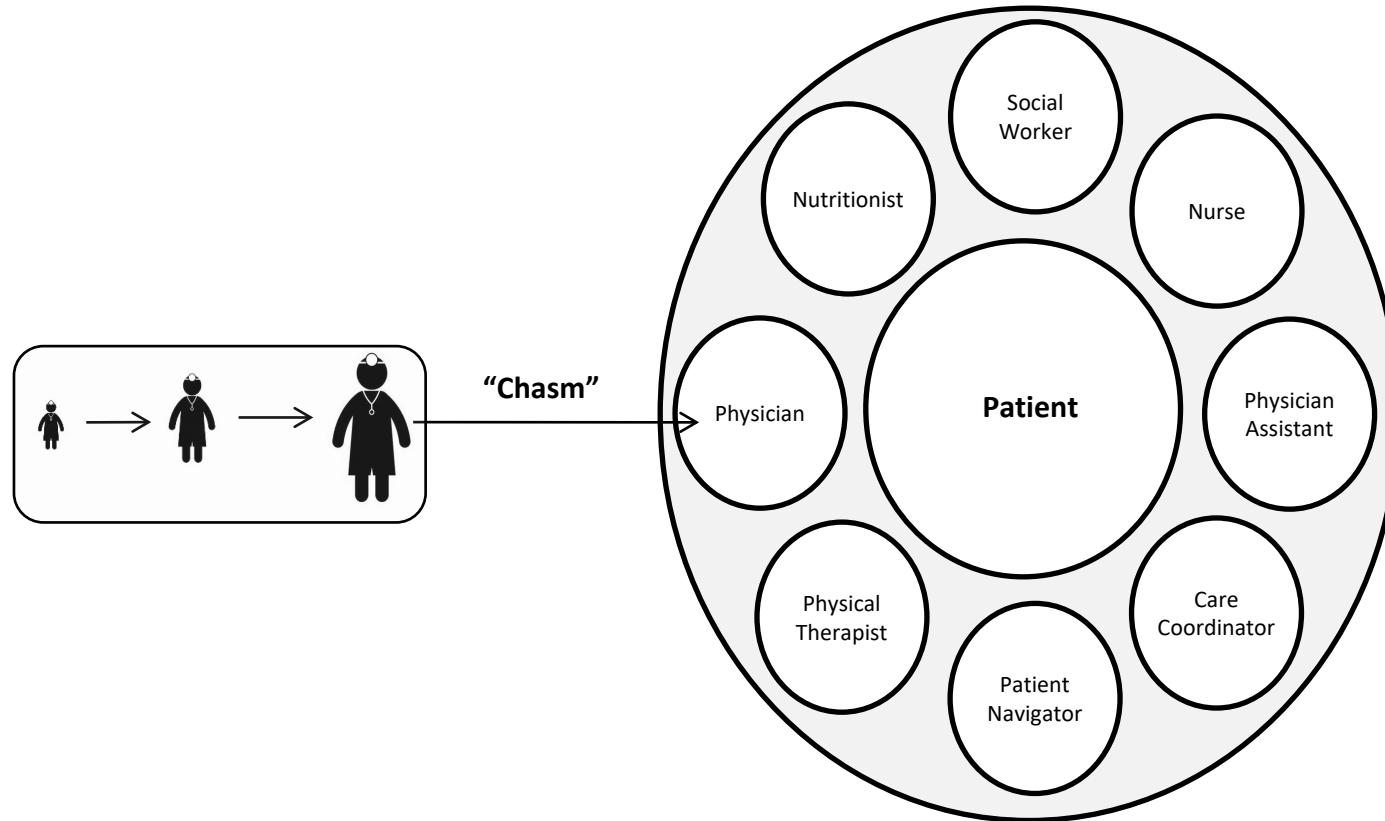
- Identify the role of financial systems in influencing access
- Understand policies that affect chronic disease care

# Discussion: Shift from acute to chronic conditions

The 11 objectives represent the curriculum needed to prepare students to care for the increased incidence and prevalence of chronic diseases.

- Current curriculum may focus more on acute than chronic disease in both the classroom and clinical settings.
- Current curriculum may focus on understanding individual chronic diseases with little if any attention to the multi-faceted system needed to help patients prevent and manage complex chronic conditions.

# Discussion: Student engagement



## "Value-added Roles"

Patient Navigators

Care Transition Facilitators

Safety and Patient-Care Analysts

Quality Improvement Team Extenders

Population Health Managers

Patient-Care Technicians

Medical Scribes

# Limitations and Next Steps

- Delphi included chronic disease faculty members and medical educators from only Consortium member schools.
- Important chronic disease topics related to physician wellness were not included but have the potential to worsen well-being among providers.
- A national survey of medical school curriculum deans could be conducted to determine the balance of acute and chronic care and the individual vs system approach