Examining Evidence for the Patient-Centered Medical Home

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Changing Systems

Evidence-Based Guidelines
e.g. Clinical Practice Guidelines

System Change Strategy
e.g. Patient Centered Medical Home (PCMH)

Change Model
e.g. Plan-Do-Study-Act Cycles

Learning Model
e.g. Learning Collaboratives

Improved Processes
Improved Outcomes
Improved Satisfaction
Enhanced Access
More Appropriate Costs

Adapted from material presented by Edward H. Wagner, MD, MPH
PCMH Background

• Patient Centered Medical Home (PCMH) is a conceptual framework for organizing care to address the continuum of patient health needs
  – Most frequently primary care
  – Prevention, chronic illness, acute conditions
  – Not just a single condition or service focus
  – Changes in the overall organization of healthcare delivery
  – Not a thing like a drug, device, procedure, or place
  – Defined by a set of structures and actions
    ➢ You know it when you see it (hopefully)
Where does PCMH come from?

1967 – “medical home” term first used by the American Academy of Pediatrics in its *Standards of Child Health Care*

- Referred to having a usual source of care for children with special healthcare needs

1980’s to 1990’s – Expanded definitions of primary care

- 1996 IOM definition: “Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”
Where does PCMH come from?

2001 IOM Report – *Crossing the Quality Chasm*

- Six dimensions of a high quality healthcare system
  1. Safe
  2. Effective
  3. Patient-centered
  4. Timely
  5. Efficient
  6. Equitable
Wagner Chronic Care Model

Community
- Resources and Policies
  - Self-Management Support

Health System
- Organization of Health Care
  - Delivery System Design
  - Decision Support
  - Clinical Information Systems

- Informed, Activated Patient

Functional and Clinical Outcomes

- Productive Interactions
- Prepared, Proactive Practice Team
How is PCMH Different?

- PCMH is an evolution of related models such as the Wagner Chronic Care Model
  - Explicitly deals with the continuum of care
    - Prevention, chronic, and acute
  - Some definitions include payment or financing reform
  - Greater focus on patient flow through the healthcare system (e.g. advanced access)
  - Greater focus on PCMH as a mechanism for improving staff satisfaction
  - Precise definitions vary
    - 29 published definitions 2000-2008\(^1\)

Evidence Underlying PCMH Implementation

• Interventions utilizing elements of the Chronic Care Model have been associated with improvements in care and/or outcomes\(^1\)
  - Primarily based on single disease studies

• Studies of individual components of PCMH

• Few studies have attempted to implement all aspects of PCMH across multiple conditions
  - Our goal was to systematically review those studies that have made the attempt

Key Systematic Review Question

• In published, primary care–based evaluations of comprehensive PCMH interventions, what are the effects of the PCMH on patient and staff experiences, process of care, clinical outcomes, and economic outcomes?

Functional PCMH Definition

- **Team-based care** (team may be virtual)
- At least 2 of the following 4 components:
  - Enhanced **access to care**
  - Coordinated **care across settings**
  - **Comprehensiveness**
  - A **systems-based approach to improving quality and safety**
- A **sustained partnership** and personal relationship over time oriented towards the whole person
- **Structural changes** to the traditional practice, reorganizing care delivery

1-Based on AHRQ definition of PCMH – http://www.pcmh.ahrq.gov
Example of a Team Structure

(VA PACT Teamlet -Not specifically part of review)

- Provider (MD, DO, NP, PA)
- RN Care Manager
- Clinical Associate (LPN, MA)
- Clerical Associate (MSA/PSA)
- Other Specialty/Service

Other Specialty/Service

Other Specialty/Service

Other Specialty/Service

Other Specialty/Service
What We are Not Reviewing

• Decided not to review
  – Single condition programs
    ➢ Only reporting outcomes for a tracer condition is OK (e.g. asthma outcomes from larger program)
  – One or a few components of PCMH
  – Programs not focused on improving primary care
    ➢ Specialty care
    ➢ Programs that don’t interact with primary care
  – Non-peer reviewed reports
PCMH Components Utilized

• Based on published comparative and pre-post studies
• 24 of 31 studies address all 7 PCMH components
  – More common among studies specifically studying PCMH
• Tended to address chronic illness care
• Most studies indicated multiple professions on teams
• Most studies addressed need to improve access to care
• Majority of studies indicated coordination of transitions of care
Outcomes Examined

• Patient experiences
• Staff experiences
• Process of care
  – Preventive services
  – Chronic illness care services
• Clinical outcomes, including Pt. reported
• Economic outcomes
  – Inpatient utilization
  – Emergency department utilization
  – Overall costs
Description of Studies

- Outcomes assessment based on 19 comparative studies
  - 7 Specifically examine PCMH
  - 12 Meet functional definition of PCMH
- 18 Studies conducted in the US
- 10 Studies among older adults
- 18 studies ≤ 26 months in duration
- 18 studies compared PCMH intervention to usual care
Summary of Comparative Results

- **Moderate strength indication** that interventions meeting PCMH criteria are generally associated with small improvements in patient experiences
  - Both overall and care coordination measures

- **Low strength indication** that PCMH implementation is associated with improved clinical staff experiences
Summary of Comparative Results

• **Low strength indication** that PCMH may improve care processes
  – Based on a combination of:
    ➢ Moderate evidence of an effect for preventive services
    ➢ Insufficient evidence to evaluate impacts on care for patients with chronic illness

• **Insufficient evidence** to determine the impact of PCMH implementation on clinical outcomes
Summary of Comparative Results

• Low strength indication that PCMH does not appear to lead to uniformly lower utilization of two areas hypothesized to be impacted:
  – Inpatient utilization
  – Emergency department utilization

• Among older adults, possibility of reduced ED admissions

• Total costs were generally not lowered in the reviewed studies
Some Challenges

• Economic incentives may be different depending on perspective
  – Third party payers and employers
  – Provider organizations

• Measuring cost of implementing PCMH can be difficult

• May see reductions in expected utilization of some services with no decrease or even increases for others (e.g.¹,²)

Some Challenges

• Different patients may benefit from different components of PCMH
  – Healthcare is not one size fits all
  – There is some evidence that older patients may especially benefit from PCMH
  – PCMH may allow for more effective implementation of patient-centered care processes (e.g. self-management support)
    ➢ Important area of ongoing research/evaluation

• How do practices make whole-system changes if PCMH programs are focused on specific payers?
Some Challenges

• Implementing change takes time and can increase stress on staff
  – Any enhancements to staff satisfaction may take time
  – Different organizations have different starting points
  – Studies and evaluations have often not reported details on the implementation process
Promising News

• Literature indicates that PCMH holds promise for improving care processes and experience
  — May especially be true for older patients
  — Despite somewhat different study inclusion criteria, reasonably consistent results across PCMH reviews (e.g.¹)

• There are examples of large organizations that report bending the cost curve with implementation of PCMH (e.g. Geisinger)²
  — May require a longer time horizon

Promising News

• There is evidence for a number of programs aimed at improving the care of patients with chronic illness that can be implemented as part of PCMH that have improved health outcomes

• Numerous ongoing studies will provide enhanced evidence concerning PCMH over the next two years

• Increased emphasis on understanding the implementation process and costs incurred by provider organizations
Promising News

• Organizations have greatly improved quality by adopting PCMH/CCM principles (e.g. VA)
  – Significant improvements in quality in the Veterans Affairs (VA) healthcare system starting in 1995 resulted from PCMH/CCM components¹
  – VA is implementing Patient Aligned Care Teams (PACTs) with a renewed emphasis on care coordination, innovative patient encounters, and utilization of a personal health record system
    - Increased use of innovative care process such as telephone encounters and group visits while still seeing modest improvements in continuity of care²
    - ~$600 million in avoided costs in first 2½ years, primarily through reductions in ambulatory care sensitive condition admissions³

Conclusion – PCMH Evidence

- Complex health services interventions often represent concepts, not things
- Literature has tremendous heterogeneity
- PCMH is a conceptually sound approach to organizing patient care
  - Appears to hold promise for:
    - Improving the experiences of patients and staff
    - Possibly improving care processes
  - There is limited evidence concerning clinical and economic outcomes
  - Results of our review generally consistent with other systematic reviews
PCMH Resources

• AHRQ Patient Centered Medical Home Resource Center
  http://www.pcmh.ahrq.gov

• American College of Family Physicians PCMH Page

• American College of Physicians PCMH Page
  http://www.acponline.org/running_practice/delivery_and_payment_models/pcmh/

• Improving Chronic Illness Care
  http://www.improvingchroniccare.org/
  - Developers of the Chronic Care Model and related PCMH materials

• National Center for Medial Home Implementation (American Academy of Pediatrics)
  http://www.medicalhomeinfo.org/

• National Committee on Quality Assurance PCMH Accreditation
  http://www.ncqa.org/Programs/Recognition/PatientCenteredMedicalHomePCMH.aspx

• Patient-Centered Primary Care Collaborative
  http://www.pcpcc.org/
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