PATIENT-CENTERED MEDICAL HOMES AND DIABETES OUTCOMES: AN INTEGRATIVE LITERATURE REVIEW

BY
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Objectives

- An overview of PCMH and diabetes
- Describe process of ILR
- Discuss the pertinent findings
- Describe limitations of the review
What is a Patient-Centered Medical Home (PCMH)?

A healthcare model that delivers care that is accessible, coordinated, patient-centered comprehensive and culturally effective.
Diabetes Care in US

- 26 million people in the United States
- Cost $116 billion annually (medical and treatment)
- Only 50% of diabetics under controlled
- 75% poorly controlled in ethnic minorities
- Situation projected to get worse with rising obesity and sedentary lifestyle
- Seventh leading cause of death in US

Patient-Centered Medical Home

Integrated Literature Review

- Experimental and Non-Experimental Studies
- Comprehensive Understanding of the healthcare issue
- Uses existing literature as data source
- Drives evidence-based practice in nursing
Integrative Literature Review

- Problem
- Data Collection
- Data Evaluation
- Data Analysis/ Interpretation
- Presentation of Findings
Purpose Statement:

Critique and synthesize the current research on the efficacy of the PCMH model on diabetes type 2 quality outcomes.
Electronic Database Search

- CINAHL - Cumulative Index to Nursing and Allied Health Literature
- Academic Search Premier
- Psych Info
- Cochrane Review
- PubMed
Electronic Database Search:
CINHAL (n=13), Academic Search Premier (n=45),
Psych Info (n=16), Cochrane Review (n=1), PubMed (n=21)
Total Search (n=96)

8 articles duplicates removed (n=88)

88 articles reviewed on basis of titles and

63 articles excluded as "not relevant"

25 articles selected on basis of abstract

15 articles excluded

Additional articles selected from reference

Articles selected for review (n=12)
### JHNEBP Evidence Rating Scales

#### Strength of the Evidence

<table>
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<tr>
<th>Level</th>
<th>Description</th>
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<tr>
<td>Level 1</td>
<td>Experimental study/randomized control trial (RCT) or meta analysis of RCT</td>
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<tr>
<td>Level 2</td>
<td>Quasi-experimental study</td>
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<tr>
<td>Level 3</td>
<td>Non-experimental study, qualitative study, or meta-synthesis</td>
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<td>Level 4</td>
<td>Opinion of nationally recognized experts based on research evidence or expert consensus panel (systematic review, clinical practice guidelines)</td>
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<tr>
<td>Level 5</td>
<td>Opinion of individual expert based on non-research evidence. (Includes case studies, literature review; organizational experience e.g., quality improvement and financial data; clinical expertise, or personal experience)</td>
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#### Quality of the Evidence

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<tr>
<td>A High</td>
<td>Research: High Research consistent results with sufficient sample size, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence. &lt;br&gt; Summative reviews: well-defined, reproducible search strategies; consistent results with sufficient numbers of well defined studies; criteria-based evaluation of overall scientific strength and quality of included studies; definitive conclusions. &lt;br&gt; Organizational: well-defined methods using a rigorous approach; consistent results with sufficient sample size; use of reliable and valid measures well-defined methods using a rigorous approach; consistent results with sufficient sample size; use of reliable and valid measures.</td>
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<td>B Good</td>
<td>Research: Research reasonably consistent results, sufficient sample size, some control, with fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence. &lt;br&gt; Summative reviews: reasonably thorough and appropriate search; reasonably consistent results with sufficient numbers of well defined studies; evaluation of strengths and limitations of included studies; fairly definitive conclusions. &lt;br&gt; Organizational: Well-defined methods; reasonably consistent results with sufficient numbers; use of reliable and valid measures; reasonably consistent recommendations.</td>
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<td>C Low quality or major flaws</td>
<td>Research: little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn &lt;br&gt; Summative reviews: Undefined, poorly defined, or limited search strategies; insufficient evidence with inconsistent results; conclusions cannot be drawn. &lt;br&gt; Organizational: Undefined, or poorly defined methods; insufficient sample size; inconsistent results; undefined, poorly defined or measures that lack adequate reliability or validity.</td>
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<td>Expert Opinion</td>
<td>expertise is clearly evident &lt;br&gt; Expert Opinion: Research reasonably consistent results, sufficient sample size, some control, with fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence. &lt;br&gt; Summative reviews: reasonably thorough and appropriate search; reasonably consistent results with sufficient numbers of well defined studies; evaluation of strengths and limitations of included studies; fairly definitive conclusions. &lt;br&gt; Organizational: Well-defined methods; reasonably consistent results with sufficient numbers; use of reliable and valid measures; reasonably consistent recommendations.</td>
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<tr>
<td>Expert Opinion</td>
<td>expertise appears to be credible &lt;br&gt; Expert Opinion: expertise is not discernable or is dubious</td>
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Adapted with permission from John Hopkins Nursing Evidence-Based Practice Model and Guidelines.
Results

- 9 Improvement in DM care
  - 5 Quality outcome
  - 4 Process outcomes
- 3 No improvement
Discussion

- Process measures Vs. Outcome Measures
- Lack of Methodological Rigor
  - Randomized Control Studies vs Longitudinal studies
- Mixed results in minority patients
  - 2 studies- No effect
  - 5 studies better outcome
- Silent on Solo practices
Limitations

- Findings not generalizable
- Heterogeneity of study designs
- No comparison groups
- Non-randomized comparison practices
Conclusion

- Evidence of PCMH on DM outcomes is mixed
- Suggest more Longitudinal studies to evaluate outcome measures
- Where there is successful implementation:
  - Dedicated workflows
  - Consistent approach to care delivery
  - Well managed team


Questions?