Evaluating the Effectiveness of a PCMH Model of Care: A Retrospective Analysis Using HEDIS Scores

Tiffinie Zellars, DNP, MSPH, RN
Belmont University

Faculty Advisors: Patricia Sengstack, DNP, RN-BC (Vanderbilt University) & Christian Ketel, DNP, RN (Vanderbilt University)

Background

With the continued rise in the cost of health care in the United States (U.S.), the health care industry is pressured to decrease the overall cost of health care; while simultaneously increasing quality of care. The patient centered medical home (PCMH) model of care, which promotes comprehensive, accessible, interprofessional and coordinated, patient-centered care, has become a potential solution to this problem.

PURPOSE: This project is to determine if changing the model of care in a Primary Care Practice (PCP) from that of a chronic and episodic model of care to a PCMH model of care improved the quality of care provided to its patients.

Methodology

- HEDIS scores evaluated were provided by the 3 Managed Care Organizations (MCOs) contracted to manage the State of TN’s Medicaid member (TennCare) benefits
- Using an evaluative methodology, the project examined the difference in the clinical quality of care of a multi-specialty PCP before (pre-) and after (post-) changing their model of care to a PCMH model of care.
- Project participants were a convenience sampling of de-identified TennCare members assigned to the PCP during:
  - The Pre-PCMH measurement periods of January 1, 2017 - December 31, 2017, and
  - The Post-PCMH measurement period of January 1, 2018 - June 30, 2018
- The HEDIS measures evaluated for clinical quality were:
  - Percentage rate of adult BMI assessments for patients age 18-74 years
  - Percentage rate of childhood immunizations administered to young children by their two-year-old birthdate
  - Percentage rate of HbA1c testing on adult diabetic patients
- The statistical test used to analyze the data were:
  - Descriptive analytics, and
  - Chi-Square ($\chi^2$) test

Results

Table 1 – Results – HEDIS Scores - Descriptive and Chi-Square Statistical Analysis

<table>
<thead>
<tr>
<th>MCO #1</th>
<th>Adult BMI Assessment Rate (Benchmark ≥ 60%)</th>
<th>Adult Diabetic HbA1c Assessment Rate (Benchmark ≥ 85%)</th>
<th>Childhood Immunization Administration Rate (Benchmark ≥ 45%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-PCMH HEDIS</td>
<td>51.2 % (p=2204/430)</td>
<td>80.0 % (p=52/65)</td>
<td>17.9 % (p=7/39)</td>
</tr>
<tr>
<td>Post-PCMH HEDIS</td>
<td>57.1 % (p=241/427)</td>
<td>64.4 % (p=47/73)</td>
<td>30.8 % (p=20/65)</td>
</tr>
<tr>
<td>$\chi^2$ Results</td>
<td>3.03 (p=0.081)</td>
<td>4.16 (p=0.041)</td>
<td>2.08 (p=0.147)</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Insufficient Evidence to Conclude a Difference</td>
<td>** = Evidence of a Difference</td>
<td>Insufficient Evidence to Conclude a Difference</td>
</tr>
</tbody>
</table>

MCO #2

| Pre-PCMH HEDIS | 47.7 % (p=206/432) | 76.4 % (p=68/89) | 40.0 % (p=16/40) |
| Post-PCMH HEDIS | 58.9 % (p=292/496) | 71.4 % (p=65/91) | 26.8 % (p=10/38) |
| $\chi^2$ Results | 11.61 (p=0.001) | .05 (p=0.447) | 3.61 (p=0.057) |
| Conclusion | ** = Evidence of a Difference | Insufficient Evidence to Conclude a Difference | Insufficient Evidence to Conclude a Difference |

MCO #3

| Pre-PCMH HEDIS | 50.6 % (p=164/327) | 84.7 % (p=50/59) | 58.7 % (p=32/55) |
| Post-PCMH HEDIS | 66.7 % (p=213/315) | 64.7 % (p=70/109) | 39.9 % (p=37/93) |
| $\chi^2$ Results | 3.51 (p=0.06) | 7.99 (p=0.004) | 35.75 (p=0.001) |
| Conclusion | Insufficient Evidence to Conclude a Difference | ** = Evidence of a Difference | ** = Evidence of a Difference |

References & Acknowledgements

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Implications for Practice

- Qualitative methods of evaluating clinical quality, such as with patient satisfaction surveys, have been proven to be valid measurement tools
- However, quantitative methods of evaluating quality, such as through EHR data, have become the preferred method of measuring clinical quality
- This study demonstrates how using HEDIS scores to measure clinical quality in the primary care setting can be highly effective
- The results of this project validates the importance of initial and ongoing provider, staff and administrator education on accurate coding, billing and documentation using HEDIS guidelines to demonstrate quality of care
- Provider education increases knowledge of standards of practice and promotes better patient outcomes
- Provider knowledge of standards of practice and quality measures aligns with the Centers for Medicare and Medicaid’s new quality payment model which aim to decrease the continuous rise in the cost of health care while simultaneously increasing quality of care

For questions or further discussion, please contact:
Tiffinie Zellars DNP, MSPH, RN
Belmont University College of Health Sciences & Nursing
Gordon Inman 203-B
1900 Belmont Avenue
Nashville, TN 37212
(615) 460-5236
Tiffinie.Zellars@belmont.edu