WELCOME TO ADCES20

DIABETES CARE  EDUCATION  TECHNOLOGY
Comparing a Collaborative Care and a Standard Practice Models' Quality Metrics in People with Diabetes

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  • Please refer to learning goals and objectives
  • Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours

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  • Presenter: John Bucheit, PharmD, BCACP, CDE – No COI/Financial Relationship to disclose
  • Presenter: Shawn R. Smith, PharmD, APh – No COI/Financial Relationship to disclose

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Objectives

1. Discuss the quality of diabetes care delivered in the United States

2. Evaluate the quality outcomes of a collaborative care model compared to the standard of care

3. Identify future implications as a result of this research project
Prevalence of Type 2 Diabetes

• In 2018, 34.2 million people of all ages or 10.5% of the US population had diabetes.
  • Hispanic: 14.7%

• During 1999–2016, prevalence of total diabetes significantly increased among adults

ABC’S & CV Risk Reduction

A1c
Blood Pressure
Cholesterol
Smoking

Cascade of Diabetes Care: 2005-2016

- **Glucose Control**
  - Personalized A1c Goal: < 7-8%

- **BP control**
  - BP < 140/90 mmHg

- **Cholesterol Control**
  - LDL < 100 mg/dL

- **Non-Smoker**
  - Cotinine < 10ng/mL or Answered ‘no’ to questionnaire

Risk Factor Control

Diabetes care has not significantly improved between 2005 and 2016.

Uninsured Rates in the US

Figure 20. Health insurance coverage among adults aged 18–64, by type of coverage and race and Hispanic origin: United States, 2007–2018 (preliminary data)

Crossover Healthcare Ministry

• NCQA certified PCMH
  • Hybrid model
• Serves 6500 uninsured patients per year at 2 locations
  • Predominately Hispanic
• Primary care, specialty services, dental, social work, pharmacy, vision, mental health, women’s health
Pharmacist-Physician Collaborative Care Model

1. New patient visit/Physical Exam (MD/NP)
   - Collaborative Practice Pharmacist (PharmD)
     - Comprehensive Medication Management
     - Laboratory Monitoring
     - Referrals (Dental, Ophthalmology, Behavioral Health)

   - Goals of care met?
     - No
     - Yes: Defer further management to PCP

2. Annually or sooner as needed
3. Every 1-3 months or sooner as needed
Study Methods

• A cross sectional study was performed comparing the quality metrics for people with T2DM seen in the collaborative care clinic vs. those who receive standard care at CHM.

• The collaborative care model includes pharmacist-led diabetes intensive care visits in addition to standard care.

• Patients with T2DM were included if they completed one visit at CHM from November 20, 2018 to November 20, 2019.

• The primary outcome of this study was the proportion of patients reaching the composite of three quality metrics: a BP < 140/90 mmHg, A1C < 8%, and LDL < 100 mg/dL.

• BRIDGE-IT was used to record patient data from the last visit in the study period to assess each practice models’ quality metrics.

• The proportion of patients meeting the composite and individual metrics in each group were compared. Additionally, a multiple logistics model was used to identify covariates contributing to successful attainment of the metrics.
## Demographics

<table>
<thead>
<tr>
<th>Patients</th>
<th>Collaborative Care</th>
<th>Standard Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>186 (24%)</td>
<td>583 (76%)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>n=42 (5.5%)</td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>n=156 (20.6%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>n=371 (48.9%)</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>n=137 (18.1%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>n=53 (7%)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Female: n=447 (58%)</td>
<td>Male: n=322 (42%)</td>
</tr>
</tbody>
</table>
Diabetes Care Metrics

*Indicates statistical significance

A1c, BP, LDL-C
BP
Intensive BP
LDL-C
HbA1c
BP & LDL-C

Collaborative Group
Standard Group
<table>
<thead>
<tr>
<th>Model</th>
<th>Significant Covariates</th>
<th>Odds Ratio (95%CI)</th>
<th>P-Value</th>
</tr>
</thead>
</table>
| HbA1c + BP + LDL-C      | • Chronic kidney disease (↑ control)  
• **No difference between groups**                                                      | 0.97 (0.64-1.46)   | 0.961   |
| HbA1c                   | • **Favored standard group**                                                           | 0.43 (0.3-0.61)    | <0.0001 |
| LDL-C                   | • **Favored collaborative care group**                                                 | 2.08 (1.38-3.13)   | 0.0003  |
| BP                      | • African Americans < Whites  
• Females > Males  
• Chronic kidney disease (↓ control)  
• **No difference between groups**                                                      | 0.69 (0.46-1.01)   | 0.089   |
| LDL-C + BP              | • Chronic kidney disease (↓ control)  
• **Favored collaborative care group**                                                 | 2.2 (1.51-3.24)    | <0.0001 |
| Intensive BP (130/80 mmHg) | • African Americans < Whites  
• Females > Males  
• **Favored collaborative care group**                                                 | 1.59 (1.11-2.27)   | 0.0137  |
Limitations

• Retrospective analysis
• True baseline values were not available for either the collaborative care group or standard care groups
Conclusion

• The study population reflects a high-risk group
  ➢ Low insurance coverage rates
  ➢ High-risk ethnicity groups (Hispanic)

• The proportion of patients meeting intensive blood pressure control (<130/80 mmHg) and LDL-C (<100 mg/dL) were statistically significantly better in patients seen by a pharmacist

• Adding a pharmacist to the primary care team improves health quality metrics in people with diabetes
Conclusion

• The less favorable HbA1c outcomes in the pharmacist-led group were likely due to baseline differences in HbA1c

• Prospective randomized controlled trials are need to confirm these data
Future Directions

• Present data to Medicaid Care Organizations in Richmond, Virginia
  ➢ More robust reimbursements options are needed for pharmacy services in the primary care

• Additional analyses planned
  ➢ Review discrepancies in HbA1c data
  ➢ Evaluate use of SGLT2 inhibitors and
  ➢ GLP-1 receptor agonists