Understanding the Current Quality of Diabetes Care and Effective Approaches to Improving Care

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Acknowledgements

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Outline

- Context
- Research questions and methods
- Results
  - Quality of care
  - Quality improvement
- Summary
- Implications
Aboriginal people in industrialized countries have high rates of diabetes and its complications.

Prevention is important, but quality health services needed to reduce complications for Aboriginal people currently living with diabetes.
Research Questions

1. What is known about quality of diabetes care in Aboriginal communities in Canada, US, Australia and New Zealand?

2. What interventions improve quality of care in Aboriginal populations in these countries?
Methods

- Systematic review of the quality of care and quality improvement literature
  - OVID Medline
  - Bibliographic searches
  - Selected websites of governments, agencies, organizations, etc
Search Diabetes AND quality of care AND aboriginal terms AND Canada OR United States OR Australia OR New Zealand

1658 articles

225 articles

265 articles

1433 articles excluded through title and abstract review

40 articles from bibliographies, non peer-reviewed sites, academic partners

179 articles excluded

86 articles
72 quality of care studies
14 quality improvement studies
## Results – Quality of Care Studies

<table>
<thead>
<tr>
<th>Country</th>
<th># Chart Audits</th>
<th># Epi Surveys</th>
<th># Patients (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>19</td>
<td>14</td>
<td>17-15,537</td>
</tr>
<tr>
<td>Australia</td>
<td>13</td>
<td>4</td>
<td>18-4,522</td>
</tr>
<tr>
<td>Canada</td>
<td>10</td>
<td>7</td>
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<tr>
<td>New Zealand</td>
<td>4</td>
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<td>78-11,553</td>
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</table>
IHS Audit

- Exemplary national system
- Measures and tracks quality of care and patient outcomes annually (www.dmaudit.com)
- Trend data shows steady improvements in process and outcome measures over time (2002-2008):
  - A1c <7%: 30-39%
  - Lipid agent: 53-73%
  - Flu vaccine: 53-64%
ATSI Health Performance Framework Report

- Australian Department of Health and Ageing -- to monitor progress against national strategic framework
- Chronic disease management section:
  - Diabetes process and outcome measures
  - Variation by isolation level (remote, regional, urban)
  - Indigenous vs. non-Indigenous
Cree Diabetes Information System (CDIS)

- Exemplary regional system
- 9 James Bay Cree communities
- Variability across communities, i.e. level of control (% at target):
  - A1c: 30-70%
  - BP and LDL-C: 30-40%
CIRCLE Study

<table>
<thead>
<tr>
<th>Level of Isolation</th>
<th>CIRCLE Communities</th>
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<tbody>
<tr>
<td>Non-isolated</td>
<td>21%</td>
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<tr>
<td>Semi-isolated</td>
<td>34%</td>
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<tr>
<td>Isolated</td>
<td>45%</td>
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</table>

OCAP: Working WITH Communities
Summary – Quality of Care Studies

- High level of risk factors
- Large variation in quality within and between jurisdictions
- Improving control in some areas
- Suggests that quality of care can be tracked and high-quality services can be provided in Aboriginal settings
## Results – QI Studies

<table>
<thead>
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<th></th>
<th>Canada</th>
<th>USA</th>
<th>Australia</th>
<th>NZ</th>
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<td>5</td>
<td>1</td>
<td>6</td>
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<tr>
<td>OBS</td>
<td></td>
<td></td>
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<td></td>
<td>1</td>
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<tr>
<td>TOTAL</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>14</td>
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</table>
Types of Interventions

- Structural
  - Transfer ownership of facilities

- Organizational
  - Case management, patient registry, multidisciplinary teams, outreach services, revision of professional roles

- Professional
  - Clinician education, clinical practice guidelines, clinical decision support systems

- Patient-related
  - Patient education
Common Interventions

- Organizational and professional interventions most common
  - Clinician education: 43%
  - Clinical decision support systems: 43%
  - Multidisciplinary teams: 43%
Successful Clusters of Interventions

Audit and Feedback
Clinical decision support systems
Clinician Education
Clinical practice guidelines

Revision of professional roles
OR
Case management

Clinical organization and guidance

Human Resource Challenges
Audit and Best Practice for Chronic Disease (ABCD)

- Continuous quality improvement (CQI) approach
- 12 Aboriginal community health centres, Top End of Northern Territory, Australia, 2002-2006
- Significant improvements in processes of care; moderate improvements in health outcomes
- Extension project (ABCDE): 2005-2009
Canadian QI Studies

- **DREAM trial**
  - Expanded nursing role in HTN treatment
  - Significant reduction DBP

- **DOVE study and SLICK project**
  - Travel by team of specialists to rural and remote areas of Alberta.
  - DOVE: improved BP and patient satisfaction
  - SLICK: decreased ER visits; improved patient knowledge; trend towards improved BP
Conclusions

- Clinical information systems are important, as trend data suggests a link between systems and improved care and outcomes.
- Innovative QI studies should be developed and rigorously evaluated in order to determine the relative effectiveness of different interventions in Aboriginal communities.
Recommendations for Canada

- Develop a national clinical information system or standard measures for evaluating quality
  - USA and Australia provide good examples
  - CIRCLE study provides a platform to build on in Canada
- Use this information to develop new programs, evaluate new models of care, and inform QI strategies
Thank you!

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