



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

Elizabeth Estey

Li Ka Shing Knowledge Institute,
St. Michael's Hospital

**Onil Bhattacharyya, Stewart Harris,
David Peiris, Alan Cass**



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ST. MICHAEL'S HOSPITAL
A teaching hospital affiliated with the University of Toronto



Acknowledgements

- o Special thanks to the Canadian Institutes of Aboriginal Health Research (CIHR) and the CIHR-Institute of Aboriginal Peoples Health for funding travel to and attendance at this conference





Outline

- Context
- Research questions and methods
- Results
 - Quality of care
 - Quality improvement
- Summary
- Implications



Context

- 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

1433 articles excluded through title and abstract review

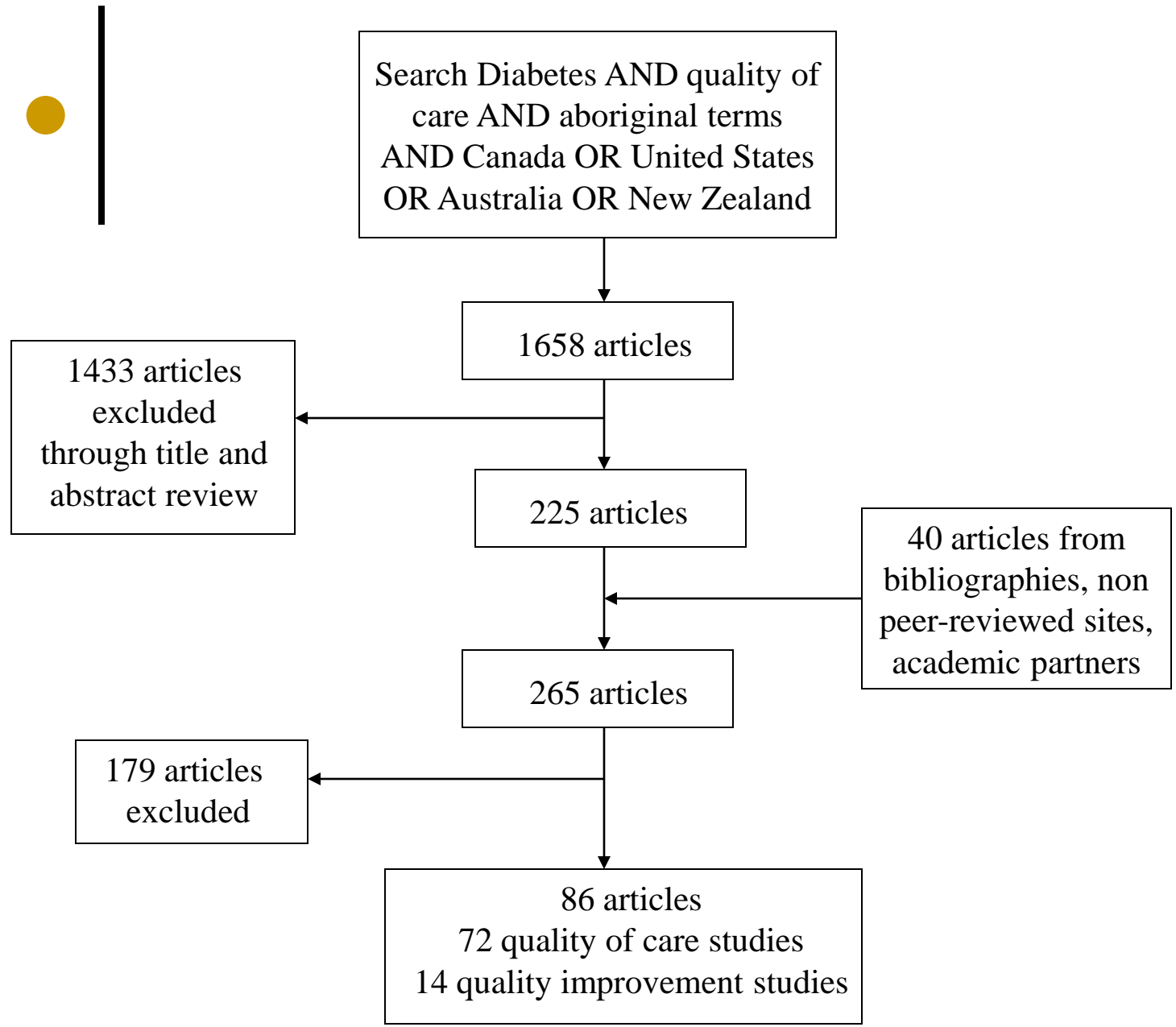
225 articles

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

265 articles

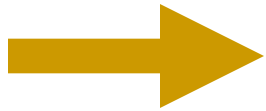
179 articles excluded

86 articles
72 quality of care studies
14 quality improvement studies





Results – Quality of Care Studies



Country	# Chart Audits	# Epi Surveys	# Patients (Range)
United States	19	14	17-15,537
Australia	13	4	18-4,522
Canada	10	7	49-1,363
New Zealand	4	1	78-11,553



IHS Audit

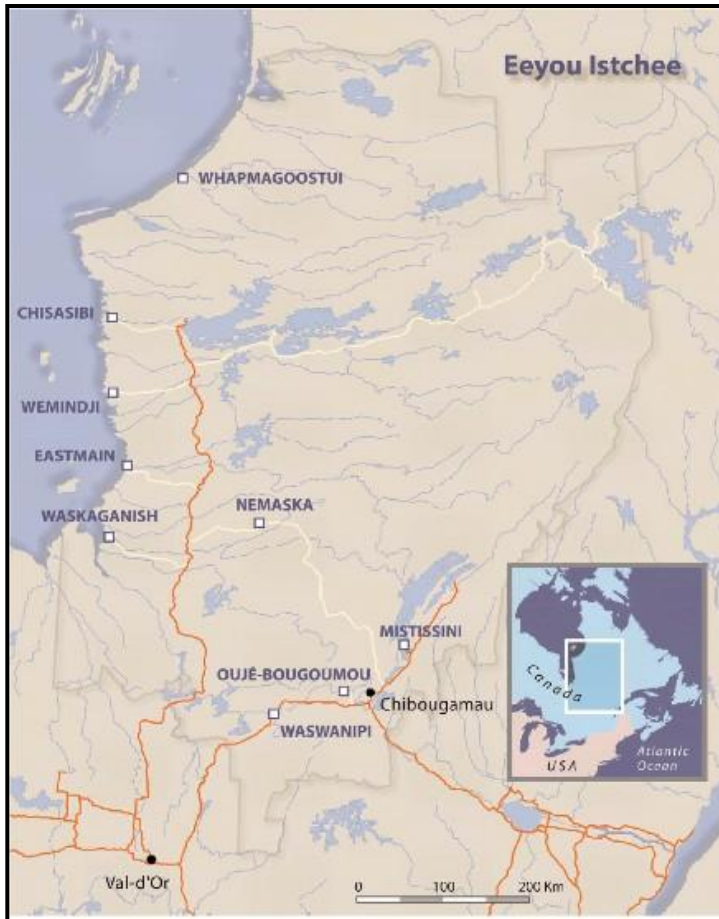
- Exemplary national system
- Measures and tracks quality of care and patient outcomes annually (www.dmaudit.com)
- Trend data shows steady improvements in process and outcome measures over time (2002-2008):
 - A1c <7%: 30-39%
 - Lipid agent: 53-73%
 - Flu vaccine: 53-64%

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%

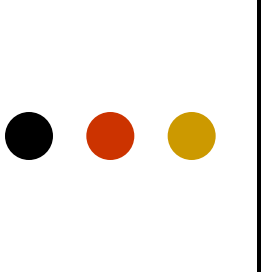


CIRCLE Study



**OCAP:
Working WITH
Communities**

Level of Isolation	CIRCLE Communities
Non-isolated	21%
Semi-isolated	34%
Isolated	45%



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

	Canada	USA	Australia	NZ	TOTAL
RCT	1		1		2
ITS		1	1		2
CBA	2	1			3
UBA			5	1	6
OBS		1			1
TOTAL	3	3	7	1	14



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**

**Clinical organization and
guidance**

**Revision of professional roles
OR
Case management**

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



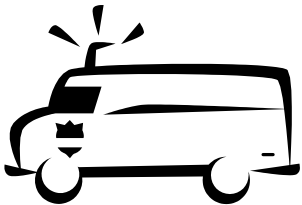
Canadian QI Studies

o DREAM trial



- Expanded nursing role in HTN treatment
- Significant reduction DBP

o 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!**

○ Elizabeth Estey

● Elizabeth.estey@gmail.com

● EsteyE@smh.toronto.on.ca

○ Onil Bhattacharyya

● BhattacharyyaO@smh.toronto.on.ca

