A System-based Learning Partnership as a Research Translation Mechanism

NMHRC Research Translation Symposium

Achieving better health outcomes for Australians living with chronic conditions through more effective research translation

Ross Bailie            Melbourne           November 2014
Acknowledgements

Many partner organisations and individuals who have worked with One21seventy and the ABCD National Research Partnership
- Health service staff and other colleagues

AHMAC, NHMRC and ARC

The Lowitja Institute [http://www.lowitja.org.au]
Continuous Quality Improvement (CQI)
How have we got from A to B?

- Origins
- Development and current status
- Evidence of effectiveness / impact
- Conceptual base
- Conclusions, challenges
Quality of care for Indigenous Australians

<table>
<thead>
<tr>
<th>Reasons for concern</th>
<th>Indigenous vs non-Indigenous</th>
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<tbody>
<tr>
<td>Prevalence of diabetes</td>
<td>2-4 times higher</td>
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<tr>
<td>Hospitalisation rates for diabetes</td>
<td>10-15 times higher</td>
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<tr>
<td>Death rates due to diabetes (35-54 years)</td>
<td>27-35 times higher</td>
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</table>

- Lack of information on quality of care
- Little evidence on systematic approaches to improving quality
Continuous Quality Improvement Cycle

**Evidence Base**
- Indigenous health research values and ethics
- Quality improvement
- Action learning

- Evidence-based medicine and best practice guidelines
- Information technology

**Formal and Tacit Knowledge**

**STEP 1:** Signed Agreement

**STEP 2:** Training/Orientation

**STEP 3:** Audits, system assessment

**STEP 4:** Participatory Interpretation. Data analysis & report preparation

**STEP 5:** Action Planning. Clinic feedback, workshop & goal setting for system changes

**STEP 6:** act. Implement changes

Bailie et al. MJA 2007
Development of ABCD program

Audit & Best Practice for Chronic Disease (ABCD)
2002
12 services
NT Top End

ABCD Extension
2005
69 services nationally

(RESEARCH + SERVICE SUPPORT)

2010

Phase 1
Proof of Principle

Phase 2
Scalability

Phase 3
Roll Out

2014

175 health centres

230+ health centres

RESEARCH

SERVICE SUPPORT

One21seventy
National Centre for Quality Improvement in Indigenous Primary Health Care
Number of health centres using One21Seventy tools in 2013

- Systems Assessment Tool: 192
- Vascular and Metabolic: 213
- Child Health: 176
- Preventive care: 175
- Maternal Health: 131
- Rheumatic heart disease: 69
- Mental health: 35

Government health centre
Community controlled health centre
Medicare Local
‘Overall CQI capability and capacity has increased’
‘Degree of enthusiasm and fervour among health workers for quality improvement’

**Contribution and use of One21seventy tools**
- ‘Solid technical basis for CQI’, ‘technical rigour behind the approach’
- ‘Wide engagement of health service managers and clinicians in CQI activities’
- ‘Resulted in staff becoming adept at using ePIRS and the data in these systems being improved’

Allen and Clark 2013. Evaluation of the Northern Territory CQI Investment Strategy
### ABCD National Research Partnership
Data from 2005 to 30 Sept 2014

Total of 175 health centres participating - almost 60,000 audit records

<table>
<thead>
<tr>
<th>Audit Type</th>
<th>Health Centres</th>
<th>Audit Records</th>
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<tbody>
<tr>
<td>Vascular &amp; Metabolic Syndrome Management</td>
<td>163</td>
<td>19,051</td>
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<tr>
<td>Child Health</td>
<td>141</td>
<td>14,545</td>
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<tr>
<td>Preventive Health</td>
<td>138</td>
<td>17,010</td>
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<td>Maternal Health</td>
<td>106</td>
<td>4,451</td>
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<tr>
<td>Rheumatic Heart Disease</td>
<td>63</td>
<td>2,602</td>
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<tr>
<td>Mental Health</td>
<td>35</td>
<td>946</td>
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</table>
Unique resource – expertise and data

- Indicators of quality of care, trends in performance
- Influences on variation in performance, extent of improvement
- Identifying priorities for improvement, stimulating thinking on barriers and strategies
Engaging stakeholders
Priority evidence-practice gaps for chronic illness care

Example: Diabetes medication review or adjustment for patients with abnormal HbA1c

Health centres that have at least 4 years of audit data
(n=number of health centres; number of T2D patients with abnormal HbA1c).
Example: Trends in emotional wellbeing screening by audit cycle (patients with diabetes)

For health centres with at least 4 years of audit data
(n=number of health centres; number of patients who attended in last 12 months)
Duration of CQI participation and odds of higher level of guideline scheduled care for patients with diabetes

- Baseline (n=32): Adjusted Odds Ratio (95% CIs) = 1.00
- 1-2 cycles (n=55): Adjusted Odds Ratio (95% CIs) = 1.66*
- ≥3 cycles (n=45): Adjusted Odds Ratio (95% CIs) = 1.99*

* p-value < 0.0001

# >76% scheduled services delivered (out of 15 items)

^ adjusted for health centre factors: location, governance, pop size, client attendance and patient factors: age, gender, Indigenous status, co-morbidities, number of disease complications

Thanks to Veronica Matthews
Duration of CQI participation by remoteness – odds of higher level of guideline scheduled care for patients with diabetes#

Adjusted Odds Ratio^ (95% CIs)

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<tr>
<th>Remoteness</th>
<th>Baseline</th>
<th>1-2 cycles</th>
<th>≥3 cycles</th>
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<tr>
<td>Non-remote</td>
<td>1.00</td>
<td>1.47*</td>
<td>1.55</td>
<td>1.00</td>
<td>2.91**</td>
<td>3.29**</td>
<td>1.00</td>
<td>4.31***</td>
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<td>Very Remote</td>
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p-values: ***<0.0001; **<0.001; *<0.05
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^ adjusted for health centre factors: location, governance, pop size, client attendance and patient factors: age, gender, Indigenous status, co-morbidities, number of disease complications

Thanks to Veronica Matthews
Partnership learning model to achieve large-scale change

Bailie et al. *Implementation Science* 2013, 8:143
How have we got from A to B?

- Systems approach
- Learning through working together
Conclusions, challenges

• Service-Research Partnership: a unique source of
  – expertise
  – practice-based evidence
  – direct practical benefit to health centres

• Successful scale-up of the CQI program:
  – Leadership, purpose, policy and financing commitment
  – National Framework for CQI

• Knowledge Exchange / Research Translation
  – Engagement between people
  – Investment in building a learning system
Selected References