What’s the data telling you?
Using evidence-based stories for health planning and decision-making

Bayline RRT Meeting

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May 25, 2007
Manitoba Centre for Health Policy (MCHP)

- **The Manitoba Centre for Health Policy**
  - University of Manitoba: Department of Community Health Sciences, Faculty of Medicine
  - anonymized administrative health claims database
  - 6 “deliverables”/yr on contract with Manitoba Health
  - Reports, four-pagers, website, concept dictionary

- **Mission:**
  - *to provide accurate and timely information to health care decision-makers, analysts and providers, so they in turn can offer services which are effective and efficient in improving the health of Manitobans*
Population Health Research Data Repository

- uses “administrative” data ... paperclips!
MANNITOBA
CENTRE FOR
HEALTH POLICY

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Need to Know Project
Researchers Wanted
Child Health Atlas

110,947 visits last month

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UNIVERSITY OF MANITOBA
COMMUNITY HEALTH SCIENCES
REPORT SUMMARIES DIRECTORY
2001-2004

Mental Illness in Manitoba: A Guide for RHA Planners
Mental illness can have a devastating effect on people's lives. It also has a staggering impact on Manitoba's use of hospitals, physicians, home care, nursing homes and pharmacists. This report by MCHP offers RHAs a comprehensive look at mental illness and its demands on their health care services. Full report titled Patterns of Regional Mental Illness Disorder Diagnoses and Service Use in Manitoba: A Population-Based Study by Patricia Martens, Randy Fransoo, Nancy McKeen, The Need To Know Team (funded through CIHR), Elaine Buraldi, Laurel Jembaran, Charles Burchill, Carolyn De Coster, Okechukwu Ekuma, Heather Prior, Dan Chateau, Renee Robinson, and Colleen Metge; summary by RJ Currie (September 2004)

Data from the report

Diagnostic Imaging Data: the Good, the Bad, and the Potential
Diagnostic imaging plays a prominent role in the health of Manitobans, from both a health and cost perspective. Technology-driven as it is, diagnostic imaging data is evolving. How much of the current data is useful for research? How much can it tell us about what these services are contributing to the health of Manitobans? Full report titled Diagnostic Imaging Data in Manitoba, Assessment and Applications by Greg Finlayson, Bill Leslie and Leonard MacWilliam; summary by RJ Currie (June 2004)

Starting Behind, Staying Behind: Low-Income Area Kids and School
The poorer their neighbourhood, the more likely children are to have difficulties in school, fail standards tests, fail a grade, quit school and
Involvement and influencing health policy

• At the RHA level
  • MCHP’s Annual Rural and Northern Health Care Days since 1994
• … highlight a report
• … workshop approach
• … RHA “teams”
• LOOK FOR THE STORIES
A Decade of MCHP’s Annual Rural & Northern Health Care Days

... highlight a report
... workshop approach
... RHA “teams”
LOOK FOR THE STORIES
MCHP’s involvement in influencing health policy

*The Need To Know Team*

- CIHR-funded, 2001-2006
- Research, capacity building, dissemination & application
MCHP reports and *The Need To Know* Research

- districts defined by the RHAs (these may have changed in different reports, depending on the RHA)
- Usually a cross-sectional look, except in RHA Indicators Atlas (a longitudinal “look” approximating pre- and post-RHA)
- no matter where a person received a service, the use is attributed back to the region of residence
The foundation of the reports

- How do I interpret these numbers?
  - In many of the reports, a chapter detailing how to read the graphs, with examples

- Who lives in my region? (age, sex, SES)

- What is their overall health status? And does this relate to their use of the health care system? (PMR ordering)
Manitoba Centre for Health Policy reports

most relevant for BRRT:

Health of First Nations People (2002)
The RHA Indicators Atlas (2003)*
The Mental Illness Report (2004)*
The Sex Differences Report (2005)*

Coming: RHA Indicators Atlas 2008 (Mar 08)*

* These are The Need To Know Team reports
Figure 4.2.1: Premature Mortality Rates by RHA

Age- & sex-adjusted rate of deaths per 1000 aged 0-74

- South Eastman (1,2)
- South Westman (1)
- Brandon (1)
- Central (1,2,t)
- Marquette
- Parkland
- Interlake (1,t)
- North Eastman (2)
- **Burntwood (1,2)**
- Churchill (1,t)
- Nor-Man (1,2,t)
- Rural South (t)
- North (1,2,t)
- Winnipeg (t)
- Manitoba (t)

PMR 1996-2000
Burntwood is 4.76 (higher than MB at 3.32)
Down from 5.04 in 1991-1995

'1' indicates area's rate was statistically different from Manitoba average in first time period shown
'2' indicates area's rate was statistically different from Manitoba average in second time period shown
't' indicates change over time was statistically significant
**Figure 4.2.2: Premature Mortality Rates by District**  
Age- & sex-adjusted rate of deaths per 1000 aged 0-74

<table>
<thead>
<tr>
<th>District</th>
<th>PMR 1996-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thompson</td>
<td>3.96</td>
</tr>
<tr>
<td>Oxford H &amp; Gods (t)</td>
<td>3.19</td>
</tr>
<tr>
<td>Cross Lake (2)</td>
<td>5.18</td>
</tr>
<tr>
<td>Lynn/Leaf/SIL</td>
<td>4.94</td>
</tr>
<tr>
<td>Island Lake (2)</td>
<td>5.07</td>
</tr>
<tr>
<td>Tad/Broch/Lac Br</td>
<td>4.69</td>
</tr>
<tr>
<td>Gillam/Fox Lake</td>
<td>5.60</td>
</tr>
<tr>
<td><strong>Thick Por/Pik/Wab</strong></td>
<td><strong>6.51</strong></td>
</tr>
<tr>
<td>Norway House (1,2,t)</td>
<td>5.05</td>
</tr>
<tr>
<td>Sha/York/Split/War (1,2)</td>
<td>6.94</td>
</tr>
<tr>
<td>Nelson House (1,2)</td>
<td>8.53</td>
</tr>
</tbody>
</table>

*Note: PMR = Premature Mortality Rate*
Rates

• Each graph shows the rates by RHA/district

• many “comparisons”:
  • your RHA and districts within the RHA
  • Manitoba rate
  • aggregate area rates (North, Rural South, Brandon, Winnipeg)
Figure 8.3.1: Ambulatory Visit Rates by RHA

Age & sex adjusted rate of visits to all physicians (annual average per resident)

“1” indicates area’s rate was statistically different from Manitoba average in first time period shown
“2” indicates area’s rate was statistically different from Manitoba average in second time period shown
“t” indicates change over time was statistically significant

South Eastman (1,2,t)

“1” = South Eastman rate (shown in grey) for the early time period is statistically different (lower) than the Manitoba overall average rate for the early time period (shown as a grey vertical line on the graph).

“2” = South Eastman rate (shown in black) for the later time period is statistically different (lower) than the Manitoba overall average rate for the later time period (shown as a black vertical line on the graph).

“t” = South Eastman earlier rate (shown in grey) is statistically different (lower) than the South Eastman later rate (shown in black).
Rates

- Rates are age- and sex-adjusted to Manitoba population structure, with crude rates and annual numbers usually given in appendices.

- Stroke rate for Burntwood:
  - Crude rate is 1.52 per thousand
  - Age/sex adjusted rate is 3.2 per thousand!
Figure 3.3.9a: Age Profile of Burntwood, 2000
Population: 45,051
Figure 5.2: Direct Adjusted Diabetes Treatment Prevalence per 1,000 Population age 20-79 years
Registered First Nations vs. All Other Manitobans by RHA

RFN 27%, all others 4%
Heterogeneity within areas, or anomalous findings

• The need to “drill deeper” to find interesting exceptions

  – the North: lower consult rates

  – Churchill: highest consult rates in the province
Bayline area results

• Burden of diseases:
  – Diabetes high
  – Hypertension average
  – Cancer low
  – Respiratory diseases low
Bayline area results (cont)

• Immunization & Prevention
  – Childhood immunizations all average
  – Breast & cervical cancer average
  – Flu shots average
Bayline area results (cont)

- Child Health
  - Preterm birth rate below average
  - Low birthweight rate average
  - High birthweight rate above average
  - Breastfeeding rate very low
  - Teen pregnancy rate high
Bayline area results (cont)

• Physician services
  – % of residents visiting a physician at least once per year is low (73% vs 83%)
  – Average number of visits also low
  – Consultation rate (specialists) average
Bayline area results (cont)

- Hospital services:
  - Separation rate high
  - Days used for short stays high
  - Days used for long stays low
  - Hospitalization rate for injuries high
Bayline area results (cont)

• High profile procedures:
  – Cardiac catheterization average
  – CT scan rate average
  – C-Section rate: low, then high
Bayline area results (cont)

• Home care services:
  – Number of open cases average

• Prescription drugs:
  – Number of different drugs high
  – Antibiotic use average
  – Antidepressant use avg (low given need?)
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Manitoba Centre for Health Policy

go to Reports, or to Data Extras
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THE PAOMNNEHAL PWEOR OF THE HMUAN MNID

Aoccdrnig to a rschechear at Cmabrigde Uinervtisy, it deosn’t mtttaer in what oredr the ltteers in a word are, the olny iprmoatnt tihng is that the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can still raed it wouthit porbelm. This is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the word as a wlohe.

Amzanig huh?
I couldn't believe it! But the word as a whole read every letter by itself, but the word as a whole wouldn't matter. This is because the human mind doesn't matter in what order the letters in a word are, the only important thing is that the first and last letter be in the right place. The rest can be a total mess and you can still read it.

According to a research team at Cambridge University, it doesn't matter in what order the letters in a word are, the only thing is that the first and last letter be in the right place. The rest can be a total mess and you can still read it.

Amazing huh?

**The PAMMONEHAL PERVEOR OF THE HMUAN MIND**

Reading Test
Key findings: First Nations report 2002

- Health status of Registered First Nations people (RFN) is much poorer
- Big differences in health across Tribal Council areas (with poorest overall health status in southern tribal councils)
- Preventive care rates are lower for RFN
- Higher overall use of physicians and hospitals reflect RFN poorer health status (yet consult rates are similar)
- Determinants of health (education, income, employment, housing) show great disparity