Overview of MCHP reports with research findings on suicide

May 21, 2008
WRHA Research to Action Day: Using what we know about suicide
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The Need To Know Team (CIHR-funded): partnership of MCHP, Manitoba Health, RHAs

- Ongoing research projects
  - RHA Indicators Atlas, June 2003
  - Mental Illness in Manitoba, September 2004
  - Sex differences in health, health care use and outcomes (2005)
  - What Works (2008)
  - RHA Indicators Atlas (ongoing)

Patterns of Regional Mental Illness Disorder Diagnoses and Service Use in Manitoba: A Population-Based Study

Patricia J. Martens, Randy Fransoo, Nancy McKeen, The Need To Know Team, Elaine Burland, Laurel Jebamani, Charles Burchill, Carolyn DeCoster, Okechukwu Ekuma, Heather Prior, Dan Chateau, Renee Robinson, Colleen Metge

Thanks to the Working Group: Christine Ogaranko, Eckhard Goerz, John Walker, Merril Brownell, Renee Robinson
Released: September 2004

Population, data, definitions

- Most analyses: aged 10+ cohort for the five year period 1997/98 to 2001/02, living in MB at least a year (n=507,193 males and 522,039 females)

Data Sources and Methodology
- Population Health Research Data Repository, MHMIS
- Limitations: dependent upon diagnostic coding of physicians, hospitals, MHMIS (not chart audit clinical diagnoses); salaried physicians and shadow billing
- Vital Statistics coding of suicide
- For suicide and suicide attempt definition – see glossary of report

Suicide and suicide attempts: Chapter 9

- Suicide rate 1.3 per 10,000 per year
  - males 3X times higher than females
  - URBAN: Hanging (males 39%) and poisoning (females 55%)
  - most common method
  - North Eastman high
- Suicide attempt rate 8.0 per 10,000 per year
  - females 2X higher than males
  - poisoning most common method (URBAN: males 72%; females 84%)
  - Bumtwood, Nor-Man, North Eastman high; 15-19 yr olds high

Window of opportunity for health care system ... mental illness diagnosis one year prior to suicide or attempt
Figure 9.2.2: Suicide Rates by Age and Sex, Manitoba, 1997-2001
Annual rate per 10,000 residents

Figure 9.5.3: Suicide-Attempt Rates by Age and Sex, Manitoba, 1997-2001
Annual rate per 10,000 residents

Figure 9.10.1a: Probability of Completing or Attempting Suicide in the North With No Mental Illness Diagnosis

Figure 9.10.1b: Probability of Completing or Attempting Suicide in the North With a Mental Illness Diagnosis

What Works?: list of indicators

Part A - Health & disease
• Chapter 2: Premature Mortality Rate (PMR)
• Chapter 3: Diabetes and Lower Limb Amputation

Part B - Public Health Issues
• Chapter 4: Teen pregnancy
• Chapter 5: Injury hospitalization & deaths (males/females separately)
• Chapter 6: Suicide & Suicide Attempts

Part C - Prevention/screening
• Chapter 7: Breastfeeding initiation
• Chapter 8: Immunizations (2-year old)
• Chapter 9: Complete physicals
• Chapter 10: Mammography
• Chapter 11: Cervical cancer screening (Pap tests)

Part D - Health Services Procedures and Practices
• Chapter 12: Polypharmacy in the older adult
• Chapter 13: Caesarean Section rates
• Chapter 14: Hysterectomy rates
• Chapter 15: Access to specialist care, Telehealth effects

Figure 6.1: Prevalence of Individuals Completing or Attempting Suicide by RHA
Age-adjusted percent of suicides or attempts in a 2 year period, for residents aged 10+

Source: Manitoba Centre for Health Policy, 2008

‘1’ indicates area’s rate was statistically different from Manitoba average in first time period
‘2’ indicates area’s rate was statistically different from Manitoba average in second time period
‘t’ indicates change over time was statistically significant for that area
‘s’ indicates data suppressed due to small numbers

See pages 134-137
Figure 6.3: Prevalence of Individuals Completing or Attempting Suicide by Winnipeg Community Areas
Age-adjusted percent of suicides or attempts in a 2 year period, for residents aged 10+

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Source: Manitoba Centre for Health Policy, 2008

See page 134-137

Figure 6.6: Trends in Winnipeg Prevalence of Individuals Completing or Attempting Suicide
Age-adjusted percent of suicides or attempts for residents aged 10+

Time Trend Analysis
- Wpg Most Healthy: similar to the Manitoba time trend
- Wpg Average Health: similar to the Manitoba time trend
- Wpg Least Healthy: similar to the Manitoba time trend

Source: Manitoba Centre for Health Policy, 2008

See page 139

Figure 6.5: Trends in non-Winnipeg Prevalence of Individuals Completing or Attempting Suicide
Age-adjusted percent of suicides or attempts for residents aged 10+

Time Trend Analysis
- South: similar to the Manitoba time trend
- Mid: similar to the Manitoba time trend
- North: getting worse relative to the Manitoba time trend
- Brandon: improving relative to the Manitoba time trend

Source: Manitoba Centre for Health Policy, 2008

See page 138

Figure 6.7: Suicide or Suicide Attempt Prevalence Quintiles by RHA Districts and Winnipeg Neighbourhood Clusters
Age-adjusted percent of suicides or attempts for residents aged 10+, 1996/97-2003/04

Source: Manitoba Centre for Health Policy, 2008

Descriptive Information
“mapped”
Example: Table 6.1

See page 142+ (more detail on website)
Suicide: modelling (aOR)

- Higher age (1.01)
- Higher physical comorbidity (1.3)
- Higher mental comorbidity (3.2)**
- Winnipeg Least Healthy (1.2)
- North (1.4)

- Female (0.38)**
- Winnipeg Most Healthy (0.85)
- South (0.72)
- Higher income (0.86)

So who’s at risk? Males, lower income, mental illness comorbidity, living in the North, or in Winnipeg “core”

Suicide attempts: modelling (aOR)

- Female (2.3)**
- Higher physical comorbidity (2.0)
- Higher mental comorbidity ** (4.1)
- Higher age (0.97)
- Higher income (0.77)
- Central (0.72); SE (0.63); Interlake (0.56); Assiniboine (0.80)
- All Winnipeg CAs are either NS or have a lower OR, after adjusting for above

So who’s at risk? Females, physical and mental illness comorbidity, young, lower income