Modeling the Mental Health Act:
Exploring the use of the Mental Health Act across Police Detachments in British Columbia

Kathryn Wuschke
Niki Huitson
Joseph Clare
Patricia Brantingham
Fiona Young

ASC: Nov. 18, 2010
Outline

• Background
  ▫ Review of Canada’s Mental Health Act
  ▫ Review of Research in Area

• Exploratory Analysis
  ▫ Data and Methodology
  ▫ Results

• Discussion and Future Directions
Mental Health Act

- Canadian health care is Provincially mandated
- 1964: BC developed Mental Heath Act
  - Specifies guidelines for admittance of voluntary and involuntary patients
  - Identifies provincial mental health facilities
  - Describes safeguards aiming to prevent unnecessary detention

(BC Ministry of Health, 2005)
System Overlap

- The Act recognizes the overlap between the health care systems and criminal justice systems
  - Section 28(1):
    - A police officer or constable may apprehend and immediately take a person to a physician for examination if satisfied from personal observations, or information received, that the person
      - is acting in a manner likely to endanger that person’s own safety or the safety of others, and
      - is apparently a person with a mental disorder

(BC Ministry of Health, 2005, 141)
Research in the Area

- Crime and the Environment
- Mental Health and the Environment
  - Complex relationship
  - Social and structural neighbourhood decline associated with higher instances of mental health disorders (*Wandersman and Nation, 1998*)
  - Sub-standard housing linked to mental and physical health problems (*Srinivasan et al., 2003; Evans, 2003*)
Crime, Mental Health and the Environment

- **Schizophrenia and Arrests** *(Australian Institute of Criminology, 2008)*
  - Majority of individuals were arrested *before* being diagnosed with mental disorder
- **Reintegration of NCR-MD:** *(Melnychuk et al., 2009)*
  - Patients return to former home neighbourhoods
  - Homes spatially clustered in two most socially disorganized neighbourhoods in area
  - Patients living in these areas had highest rates of return to custodial care
Exploratory Research Approach

- **Data Sources:** RCMP Police Records
  - All RCMP Contacts between 2002 and 2006 within British Columbia, Canada
  - Records relating to Mental Health Act queried for exploration (n = 118, 123)
- **Phase I:** Mapping event location by detachment
- **Phase II:** Exploring aggregate trends of Act-related records
- **Phase III:** Spatial analysis of access to health care
Cartograms

“Cartograms are maps in which the projection of geographic space onto the page is deliberately distorted to give regions...sizes that are proportional to some quantity of interest.” (Dorling et al., 2006, 758).

- Can equalize differences in population density
- Quickly and powerfully present spatial patterns
- Clearly emphasize hotspots and inequalities
British Columbia Police Detachments (2002 to 2006): Percent of Total Calls for Service associated with the Mental Health Act

Standard Choropleth Map

Cartogram: Sized by Count of Total MHA Calls

% of Total Calls: MHA

- No Data
- 0 - 1.93
- 1.94 - 2.68
- 2.69 - 3.43
- 3.44 - 6.69

Source: Data and Boundaries: RCMP E-Division
Choropleth Projection: NAD 1983 UTM Zone 10N
Cartogram Developed using ScapeToad K. Wuschke, 2010
Vancouver Island (2002 to 2006):
Percent of Total Calls for Service associated with the Mental Health Act

Standard Choropleth Map

Cartogram:
Sized by Count of Total MHA Calls

% of Total Calls
MHA
No Data
0 - 1.95
1.96 - 2.87
2.88 - 4.62
4.63 - 6.69

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Cartogram Developed using ScapeToad K. Wuschke, 2010
## Trends in Calls for Service

<table>
<thead>
<tr>
<th>Measured Feature</th>
<th>Calls for Service Relating to the Mental Health Act (n = 118,123)</th>
<th>Total Calls for Service (N = 5,370,841)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>Percent</td>
</tr>
<tr>
<td>Female-Related Calls</td>
<td>60567</td>
<td>51.27</td>
</tr>
<tr>
<td>Male-Related Calls</td>
<td>57547</td>
<td>48.72</td>
</tr>
<tr>
<td>Status - Charged</td>
<td>43</td>
<td>0.04</td>
</tr>
<tr>
<td>Status - Complainant</td>
<td>42098</td>
<td>35.68</td>
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<tr>
<td>Status - Suspect</td>
<td>109</td>
<td>0.09</td>
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<tr>
<td>Status - Victim</td>
<td>365</td>
<td>0.31</td>
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<tr>
<td>Status - Violent</td>
<td>192</td>
<td>0.16</td>
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<tr>
<td>Status - Diverted</td>
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<td>0.00</td>
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<tr>
<td>Status - Intoxicated</td>
<td>5374</td>
<td>4.55</td>
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<tr>
<td>Status - Chargeable</td>
<td>392</td>
<td>0.33</td>
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<tr>
<td>Status - Subject of Complaint</td>
<td>39975</td>
<td>33.84</td>
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<tr>
<td>Status - Charges Recommended</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>No Fixed Address Recorded</td>
<td>797</td>
<td>0.67</td>
</tr>
</tbody>
</table>
Vancouver Island (2002 to 2006): Percent of Total Calls for Service associated with the Mental Health Act

Standard Choropleth Map

Cartogram: Count of Health Facilities per Detachment

Source: Data and Boundaries: RCMP E-Division
Choropleth Projection: NAD 1983 UTM Zone 10N
Cartogram Developed using ScapeToad  K. Wuschke, 2010
Discussion and Future Directions

- Females associated with more Mental Health Act-related calls for service
  - Differences due to prevalence in mental disorders?
  - Differences due to policing practices?
- Fewer charged, chargeable & victims
- Accessibility to Health Services
  - Unclear and complex relationships
  - Future research will incorporate Complex Systems
Thank You!

- Many thanks to the Institute for Canadian Urban Research Studies
- Thanks to Simon Verdun-Jones for direction and input
- Thanks to the Modeling Complex Social Systems group for supporting future directions
- This research has been supported by SSHRC