Rural Disparity in Domestic Violence Prevalence and Distance to Resources

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Intimate partner violence (IPV)

- Physical, sexual, or psychological harm by a current or former partner or spouse
  - One in four women experience IPV during their lifetime (NIJ/CDC, 2000)
  - About 1.3 million women are victims of physical IPV annually (CDC, NCIPC, 2003)

Domestic Violence Intervention Programs (DVIP)
- Daily 5,200 women are turned away
  - Rural women are twice as likely to be turned away (Iyengar R., Sabik L., 2009)
Study design & objectives

- Cross-sectional study to determine the prevalence of IPV among women seeking elective abortion services at a large reproductive health clinic
  - according to rurality of residence, and
  - to identify disparities in the location and types of DVIP services by rurality.
Study setting + eligibility

- Large family planning clinic that provides first trimester medical and surgical abortion

- Eligibility criteria
  - \( \geq 18 \) years
  - Resident of Iowa
  - English or Spanish reading proficiency

- Ineligibility
  - Women returning for re-aspiration procedures
Data collection

- Anonymous, self-administered questionnaire to assess
  - 12-month prevalence of physical, sexual, and battering violence
  - Demographic & lifestyle/behavioral characteristics of participants and current partners
  - Zip code of residence
- English and Spanish
- <10 minutes to complete
IPV Measures

- Physical/sexual abuse
  - Abuse Assessment Screen (AAS)
    - Frequency of physical violence
    - Perception of severity of physical violence
    - Perpetrator

- Battering
  - chronic, non-physical abuse characterized by controlling behaviors and abuse of power in a relationship
  - Women’s Experience of Battering (WEB) instrument
Rurality and distance to programs

- **Rurality**
  - Rural Urban Commuting Area (RUCA 2.0) for residence 2004
  - Urban Influence Codes (UIC 2003) for Domestic Violence Intervention Programs (DVIP)

- **Probabilistic Sampling Method** (K. Beyer et al, 2011)
  - Sample each participant possible census block within their zip code to geocode their residence
    - Participant age
    - Census block age distribution
  - Road networks
  - Median distance from participant to DVIP
Demographics (N=1478)

- Education:
  - ≤ High school or less: 43.7%
  - Some college, technical: 21.7%
  - College degree +: 22.9%

- Race:
  - White: 83.0%
  - Black: 10.1%
  - Other: 6.9%

- Age:
  - 18-20: 21.7%
  - 21-24: 32.4%
  - 25-29: 23.9%
  - 30-34: 22.9%
Prevalence and Odds of Intimate Partner Violence by type of abuse and rurality, among abortion clients screened for IPV, Iowa, Nov. 2006-July 2008 (N=1478)

<table>
<thead>
<tr>
<th>Total</th>
<th>Any IPV</th>
<th>Physical and/or sexual IPV</th>
<th>Battering (current partner only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>All Women</td>
<td>1478</td>
<td>233 (16.1)</td>
<td>180 (12.5)</td>
</tr>
<tr>
<td>Urban/Suburban</td>
<td>1074(72.7)</td>
<td>163 (15.5)</td>
<td>1.0 (referent)</td>
</tr>
<tr>
<td>Large Rural</td>
<td>161(10.9)</td>
<td>21 (13.3)</td>
<td>0.9 (0.5 - 1.4)</td>
</tr>
<tr>
<td>Small Rural</td>
<td>146(9.9)</td>
<td>32 (22.5)</td>
<td>1.6 (1.03 - 2.5)</td>
</tr>
<tr>
<td>Isolated</td>
<td>97(6.7)</td>
<td>17 (17.5)</td>
<td>1.2 (0.7 - 2.1)</td>
</tr>
</tbody>
</table>

1 Includes physical or sexual violence by a former or current partner and battering by a current partner

2 Denominator for this analysis = 1081

3 Controls for race (white/non-white), health insurance (private, public, none), employment (yes/no), age (18-20, 21-24, 25-29, 30-34), and children < 18 in the household (yes/no)
Severity of physical IPV by rurality

- Urban/suburban: 10.2% (Severe/very severe) + 69.4% (Moderate) + 20.4% (Very mild/mild)
- Large Rural (p=0.9261): 11.8% (Severe/very severe) + 64.7% (Moderate) + 23.5% (Very mild/mild)
- Small Rural (p=0.3273): 8.7% (Severe/very severe) + 56.5% (Moderate) + 34.8% (Very mild/mild)
- Isolated (p=0.0443): 30.8% (Severe/very severe) + 30.8% (Moderate) + 38.5% (Very mild/mild)
Box and whiskers plot of distance, in miles, between participant residence and closest IPV program for all subjects and the subset that are IPV positive.

- **Urban/Suburban**
  - All: Sample N = 1065, Mean (sd) = 6.5(5.1), Range = 0.5-37.7
  - IPV+: Sample N = 162, Mean (sd) = 6(4), Range = 0.74-18.7

- **Large Rural**
  - All: Sample N = 161, Mean (sd) = 7.5(9.9), Range = 1.3-42.3
  - IPV+: Sample N = 21, Mean (sd) = 4.8(6.7), Range = 1.3-29.8

- **Small Rural**
  - All: Sample N = 145, Mean (sd) = 26.6(13.9), Range = 1.0-65.6
  - IPV+: Sample N = 32, Mean (sd) = 29.6(15.2), Range = 1.1-65.6

- **Isolated**
  - All: Sample N = 96, Mean (sd) = 31.5(11.5), Range = 8.7-59
  - IPV+: Sample N = 17, Mean (sd) = 29.4(10.2), Range = 18.5-57.1
Rural counties have fewer Domestic Violence Intervention Programs and far fewer shelter service.

<table>
<thead>
<tr>
<th></th>
<th>DVIPs (n)</th>
<th>Counties served/DVIP (mean)</th>
<th>Shelter beds/county (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban (n=21)</td>
<td>13</td>
<td>10</td>
<td>13.8</td>
</tr>
<tr>
<td>Suburban (n=37)</td>
<td>6</td>
<td>3.5</td>
<td>4.2</td>
</tr>
<tr>
<td>Rural (n=32)</td>
<td>17</td>
<td>5.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Remote rural (n=9)</td>
<td>6</td>
<td>5.0</td>
<td>3.3</td>
</tr>
</tbody>
</table>
Rural counties have fewer Domestic Violence Intervention Programs and far fewer shelter service, continued

Census tract data show the number of counties that do not have a program in that county. Counties that do not have a program in that county are served by a program in another county. Urban counties have the fewest programs and services, followed by rural counties, then suburban counties, and finally remote rural counties.

1 Counties that do not have a program in that county are served by a program in another county.
Network Distance Between ZCTA Centroid (as Residential Geocode) and IPV Service Center in Relation to County Urban Influence Codes
Conclusions

- Rural women
  - Increased prevalence of IPV
  - Report greater severity of physical injuries
- DVIP services
  - Fewer shelter services in rural areas
- Distance to services
  - Rural women have further to travel
- Lacking services for those most at need
Acknowledgements

- This work was supported by University of Iowa Social Research Center, the University of Iowa Injury Prevention Research Center (CDC R49 CCR703640), and the National Institutes of Health (R21 HD053850).