South Dakota Demography Conference

South Dakota State University

June 11-13, 2014

Jan Clites, MEd, BSN, RN (retired)
Healthcare Response Planning for At-risk, Vulnerable, or ‘Special’ Populations
Why Healthcare Organizations Prepare for Emergency Events

- Local planning efforts
- Accreditation
- State requirements
- Federal requirements
- Common Sense
The events of September 11, 2001 forever changed the scope and magnitude of emergency preparedness efforts.
ANTHRAX
Initial planning by Healthcare Organizations was having a response to a Bioterrorism event
HEALTHCARE ORGANIZATIONS’ PLANNING is not just for acts of terrorism, but events such as:

- Blizzards
- Ice storms
- Fires
Floods

Tornadoes

Other potential mass causality incidents
Active Shooter Event

ACTIVE SHOOTER RESPONSE

Upon entry leave P3 Sensors at closed doorways and egress points. The contact team can proceed directly to the active shooter. In the event any of the closed doors are opened or incur movement of any kind, the team will receive voice notification of the specific sensor/door activation.

Survive An Active Shooter Event
RUN. HIDE. FIGHT.
Learn more here!
Assists hospitals and collaborating entities to prepare for and respond to medical and public health emergencies

- **Improves surge capacity**
- **Promotes partnerships between healthcare facilities**
- **Ensures integrated response from local facility to state level**
- **Four (4) Regions**
REGION 1 COUNTIES: 26% SD Population

Bennett
Butte
Corson
Custer
Dewey
Fall River
Haakon
Harding

Jackson
Lawrence
Meade
Pennington
Perkins
Shannon
Ziebach
REGION 3 COUNTIES: 40% SD Population

Brookings
Clay
Deuel
Hamlin
Kingsbury
Lake
Lincoln

McCook
Miner
Minnehaha
Moody
Turner
Union
REGION 4 COUNTIES: 16% SD Population

Aurora
Beadle
Bon Homme
Brule
Buffalo
Charles Mix
Davison
Douglas
Gregory
Hanson

Hutchinson
Jerauld
Jones
Lyman
Mellette
Sanborn
Todd
Tripp
Yankton
Yankton
HPP: HOSPITAL PREPAREDNESS PROGRAM
SDDOH

- Assists hospitals and collaborating entities to prepare for and respond to medical and public health emergencies
- Improves surge capacity
- Promotes partnerships between healthcare facilities
- Ensures integrated response from local facility to state level
- Four (4) Regions

South Dakota Hospitals
### WHO ARE THE AT-RISK POPULATIONS?

<table>
<thead>
<tr>
<th>Population</th>
<th>% U.S. Population (Census 2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children, age 15 &amp; under</td>
<td>22.84</td>
</tr>
<tr>
<td>Elderly, age 65 &amp; older</td>
<td>12.43</td>
</tr>
<tr>
<td>Non-institutionalized with a Disability, age 16-64</td>
<td>11.78</td>
</tr>
<tr>
<td>Speak English ‘not well’ or ‘not at all’</td>
<td>2.95</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>49.99</td>
</tr>
<tr>
<td>With addition of entire institutionalized population (e.g. nursing homes, residential facilities, hospitals)</td>
<td>51.44</td>
</tr>
</tbody>
</table>
AT-RISK POPULATIONS
FOUR (4) CATEGORIES*

1. **Age:** Elderly, Children

2. **Disability/Medically Fragile:** Vision, Hearing, Substance Abuse, Physical/Mental Illness, Pregnant Women, Pharmacologically Dependent

3. **Economic Disadvantage:** Unemployed, Homeless, Below Poverty Level

4. **Limited Language/Cultural/Geographic Isolation:** Non-English Speaking, Hutterite, Native Americans

*Source: CDC (Center for Disease Control)
INDIVIDUALS MAY HAVE ONE OR MORE NEEDS IN THESE FIVE AREAS AND REFERRED TO AS CMIST

1. **Communication**: decreased hearing, speech, vision, limited English
2. **Medical Care**: unstable, terminal, or contagious conditions; tube feedings; on oxygen; managing intravenous therapy; on power-dependent equipment; medication supply
3. **Independence**: requirement of durable medical equipment (wheelchairs, walkers); medical supplies; service animals; caregivers may determine level of independence
4. **Supervision**: loss of caregivers, family, friends or inability to cope in a new environment
5. **Transportation**: lack of vehicle; unable to drive; require special vehicles

‘AT-RISK’ TOO BROAD/NON-SPECIFIC
Examples of 2010 County Pyramids
(Aging and Dependency)

Median age: 50
Population density ratio: 5/sq mile
Youth dependency ratio: 24
(# of persons 0-14 years per 100 persons 15-64 years)
Aged dependency ratio: 34
(# of persons 65+ years per 100 persons 15-64)
Aging Index: 141
Dependency Ratios
Youth Dependency Ratio = 53
Aged Dependency Ratio = 10
Aging index = 18

Youth Dependency Ratio = 33
Aged Dependency Ratio = 56
Aging index = 169
County Pyramid Examples

Pennington County 2010

Brookings County 2010

Youth Dependency Ratio = 31
Aged Dependency Ratio = 20
Aging Index = 65

Youth Dependency Ratio = 22
Aged Dependency Ratio = 13
Aging Index = 61
### Table 2

**AT-RISK POPULATIONS: Region 3**  
**Category: DISABILITY**

<table>
<thead>
<tr>
<th>County</th>
<th>*County Population 2008</th>
<th>***Alcohol &amp; Drug Abuse 6/01/08-5/31/09 #clients served</th>
<th><strong>End Stage Renal Disease (ESRD)</strong></th>
<th>+Sensory Disabilities</th>
<th>+Physical Disabilities</th>
<th>+Mental Disabilities</th>
<th>+Self-Care Disabilities</th>
<th>+Go-Outside Home Disabilities</th>
<th>+Employment Disabilities</th>
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</thead>
<tbody>
<tr>
<td>Brookings</td>
<td>29,668</td>
<td>157</td>
<td>32</td>
<td>836</td>
<td>1,462</td>
<td>857</td>
<td>419</td>
<td>934</td>
<td>1,381</td>
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<tr>
<td>Clay</td>
<td>13,605</td>
<td>89</td>
<td>14</td>
<td>292</td>
<td>678</td>
<td>308</td>
<td>140</td>
<td>441</td>
<td>587</td>
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<tr>
<td>Deuel</td>
<td>4,276</td>
<td>14</td>
<td>4</td>
<td>113</td>
<td>355</td>
<td>161</td>
<td>128</td>
<td>312</td>
<td>280</td>
</tr>
<tr>
<td>Hamlin</td>
<td>5,660</td>
<td>28</td>
<td>9</td>
<td>113</td>
<td>452</td>
<td>260</td>
<td>182</td>
<td>384</td>
<td>266</td>
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<tr>
<td>Kingsbury</td>
<td>5,394</td>
<td>25</td>
<td>6</td>
<td>129</td>
<td>469</td>
<td>144</td>
<td>99</td>
<td>278</td>
<td>219</td>
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<tr>
<td>Lake</td>
<td>11,693</td>
<td>83</td>
<td>8</td>
<td>232</td>
<td>642</td>
<td>301</td>
<td>183</td>
<td>440</td>
<td>541</td>
</tr>
<tr>
<td>Lincoln</td>
<td>39,713</td>
<td>181</td>
<td>19</td>
<td>549</td>
<td>1,023</td>
<td>472</td>
<td>224</td>
<td>726</td>
<td>1,078</td>
</tr>
<tr>
<td>McCook</td>
<td>5,671</td>
<td>24</td>
<td>9</td>
<td>110</td>
<td>351</td>
<td>183</td>
<td>85</td>
<td>322</td>
<td>287</td>
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<tr>
<td>Miner</td>
<td>2,435</td>
<td>6</td>
<td>5</td>
<td>66</td>
<td>247</td>
<td>97</td>
<td>54</td>
<td>168</td>
<td>194</td>
</tr>
<tr>
<td>Minnehaha</td>
<td>179,180</td>
<td>3,257</td>
<td>205</td>
<td>4,360</td>
<td>8,442</td>
<td>4,978</td>
<td>2,235</td>
<td>6,120</td>
<td>9,193</td>
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<tr>
<td>Moody</td>
<td>6,414</td>
<td>63</td>
<td>8</td>
<td>197</td>
<td>436</td>
<td>235</td>
<td>78</td>
<td>243</td>
<td>311</td>
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<tr>
<td>Turner</td>
<td>8,366</td>
<td>42</td>
<td>10</td>
<td>193</td>
<td>624</td>
<td>229</td>
<td>147</td>
<td>487</td>
<td>465</td>
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<tr>
<td>Union</td>
<td>14,131</td>
<td>56</td>
<td>6</td>
<td>287</td>
<td>698</td>
<td>247</td>
<td>161</td>
<td>493</td>
<td>583</td>
</tr>
<tr>
<td>Total:</td>
<td>Region 3 Population 326,206</td>
<td>4,025</td>
<td>335</td>
<td>7,477</td>
<td>15,879</td>
<td>8,472</td>
<td>4,135</td>
<td>11,348</td>
<td>15,385</td>
</tr>
</tbody>
</table>

*U.S. Census Bureau data estimated population for 2008. [http://quickfacts.census.gov/qfd/states](http://quickfacts.census.gov/qfd/states)*  
***S. D. Department of Human Services, Division of Alcohol and Drug Abuse [www.bt.cdc.gov/snaps/data](http://www.bt.cdc.gov/snaps/data)**  
+SNAPS data derived from the 2000 U.S. Census and several 2003 CDC databases [www.bt.cdc.gov/snaps/data](http://www.bt.cdc.gov/snaps/data)
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brookings</td>
<td>29,668</td>
<td>14.4%</td>
<td>648</td>
<td>1,283</td>
<td>1,560</td>
<td>71</td>
<td>2.3</td>
<td>18</td>
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<tr>
<td>Clay</td>
<td>13,605</td>
<td>19.6%</td>
<td>547</td>
<td>904</td>
<td>1,331</td>
<td>66</td>
<td>2.7</td>
<td>1</td>
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<tr>
<td>Deuel</td>
<td>4,276</td>
<td>8.8%</td>
<td>115</td>
<td>257</td>
<td>207</td>
<td>a</td>
<td>3.8</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>Hamlin</td>
<td>5,660</td>
<td>9.5%</td>
<td>184</td>
<td>562</td>
<td>389</td>
<td>a</td>
<td>3.3</td>
<td>0</td>
</tr>
<tr>
<td>Kingsbury</td>
<td>5,394</td>
<td>9.3%</td>
<td>149</td>
<td>243</td>
<td>229</td>
<td>11</td>
<td>3.2</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>Lake</td>
<td>11,693</td>
<td>11.2%</td>
<td>384</td>
<td>642</td>
<td>872</td>
<td>29</td>
<td>3.1</td>
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</tr>
<tr>
<td>Lincoln</td>
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<td>3.7%</td>
<td>370</td>
<td>1,201</td>
<td>920</td>
<td>15</td>
<td>2.4</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>McCook</td>
<td>5,671</td>
<td>9.2%</td>
<td>187</td>
<td>390</td>
<td>391</td>
<td>a****</td>
<td>3.4</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>Miner</td>
<td>2,435</td>
<td>11.6%</td>
<td>90</td>
<td>149</td>
<td>165</td>
<td>a</td>
<td>3.5</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>Minnehaha</td>
<td>179,180</td>
<td>9.6%</td>
<td>6,425</td>
<td>15,355</td>
<td>19,685</td>
<td>822</td>
<td>2.8</td>
<td>447</td>
</tr>
<tr>
<td>Moody</td>
<td>6,414</td>
<td>8.9%</td>
<td>164</td>
<td>493</td>
<td>512</td>
<td>27</td>
<td>4.3</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>Turner</td>
<td>8,366</td>
<td>8.5%</td>
<td>295</td>
<td>501</td>
<td>680</td>
<td>10</td>
<td>3.1</td>
<td>Did Not Report</td>
</tr>
<tr>
<td>Union</td>
<td>14,131</td>
<td>6.4%</td>
<td>261</td>
<td>692</td>
<td>783</td>
<td>37</td>
<td>3.4</td>
<td>Did Not Report</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>326,206</strong></td>
<td><strong>9,819</strong></td>
<td><strong>22,672</strong></td>
<td><strong>27,724</strong></td>
<td><strong>1,088</strong></td>
<td><strong>466</strong></td>
<td><strong>813</strong></td>
<td></td>
</tr>
</tbody>
</table>

* U.S. Census Estimate Population [http://quickfacts.census.gov/qfd/states](http://quickfacts.census.gov/qfd/states)


***SD Statewide 2009 Homeless Count Results/SD Housing Authority

****Data for 5 or less families not published to avoid disclosure of information for particular individuals.

<table>
<thead>
<tr>
<th>County</th>
<th>Colony</th>
<th>Colony Population</th>
<th>Age 0-19</th>
<th>Age 20-85+</th>
<th>County Population</th>
<th>Hutterite Population</th>
<th>% Hutterite Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brookings</td>
<td>Newdale</td>
<td>68</td>
<td>37</td>
<td>31</td>
<td>28,200</td>
<td>181</td>
<td>0.6%</td>
</tr>
<tr>
<td></td>
<td>Norfield</td>
<td>75**</td>
<td>**</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rolland</td>
<td>38</td>
<td>18</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hamlin</td>
<td>Claremont</td>
<td>68</td>
<td>40</td>
<td>28</td>
<td>5,540</td>
<td>123</td>
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</tr>
<tr>
<td></td>
<td>Poinsett</td>
<td>55</td>
<td>23</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kingsbury</td>
<td>Spring Lake</td>
<td>105</td>
<td>51</td>
<td>54</td>
<td>5,815</td>
<td>105</td>
<td>1.8%</td>
</tr>
<tr>
<td>Lake</td>
<td>Graceville</td>
<td>131</td>
<td>62</td>
<td>69</td>
<td>11,276</td>
<td>201</td>
<td>1.8%</td>
</tr>
<tr>
<td></td>
<td>Rustic Acres</td>
<td>70**</td>
<td>**</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McCook</td>
<td>Orland</td>
<td>73</td>
<td>51</td>
<td>22</td>
<td>5,832</td>
<td>73</td>
<td>1.3%</td>
</tr>
<tr>
<td>Moody</td>
<td>Pleasant Valley</td>
<td>75</td>
<td>33</td>
<td>42</td>
<td>6,595</td>
<td>75</td>
<td>1.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10 colonies</strong></td>
<td><strong>758</strong></td>
<td><strong>315</strong></td>
<td><strong>298</strong></td>
<td><strong>63,258</strong></td>
<td><strong>758</strong></td>
<td><strong>1.2%</strong></td>
</tr>
</tbody>
</table>

*Information obtained from U.S. Census Bureau 2000; summarized by Mike McCurry Ph.D. SDSU Extension Sociologist.

**Colony formed after the 2000 census with estimate of population based on usual split of colonies. Age distribution information not available.
<table>
<thead>
<tr>
<th>County</th>
<th>County Population 2008*</th>
<th>Language other than English spoken at home**</th>
<th>Native American Population*</th>
<th>Hispanic Population*</th>
<th>Asian Population*</th>
<th>Lacking basic prose literacy skills***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>#</td>
<td>% #</td>
<td>% #</td>
<td>% #</td>
<td>#</td>
</tr>
<tr>
<td>Brookings</td>
<td>29,668</td>
<td>5.2</td>
<td>1,542 1.0</td>
<td>297 1.2</td>
<td>356 1.8</td>
<td>534 1.2</td>
</tr>
<tr>
<td>Clay</td>
<td>13,605</td>
<td>5.1</td>
<td>694 2.6</td>
<td>354 1.3</td>
<td>177 2.5</td>
<td>340 2.5</td>
</tr>
<tr>
<td>Deuel</td>
<td>4,276</td>
<td>3.9</td>
<td>167 0.4</td>
<td>17 1.2</td>
<td>51 0.2</td>
<td>9 0.2</td>
</tr>
<tr>
<td>Hamlin</td>
<td>5,660</td>
<td>5.7</td>
<td>323 0.8</td>
<td>45 1.3</td>
<td>74 0.2</td>
<td>11 0.2</td>
</tr>
<tr>
<td>Kingsbury</td>
<td>5,394</td>
<td>2.7</td>
<td>146 0.6</td>
<td>32 0.8</td>
<td>43 0.4</td>
<td>22 0.4</td>
</tr>
<tr>
<td>Lake</td>
<td>11,693</td>
<td>4.8</td>
<td>561 0.9</td>
<td>105 1.2</td>
<td>140 0.7</td>
<td>82 0.7</td>
</tr>
<tr>
<td>Lincoln</td>
<td>39,713</td>
<td>3.3</td>
<td>1,311 0.7</td>
<td>278 1.5</td>
<td>596 0.7</td>
<td>280 0.7</td>
</tr>
<tr>
<td>McCook</td>
<td>5,671</td>
<td>4.1</td>
<td>233 0.4</td>
<td>23 1.1</td>
<td>62 0.2</td>
<td>11 0.2</td>
</tr>
<tr>
<td>Miner</td>
<td>2,435</td>
<td>4.7</td>
<td>114 0.4</td>
<td>10 0.9</td>
<td>22 0.1</td>
<td>2 0.1</td>
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<tr>
<td>Minnehaha</td>
<td>179,180</td>
<td>6.7</td>
<td>12,005 2.3</td>
<td>4,121 4.0</td>
<td>7,167 1.0</td>
<td>1,792 6.9</td>
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<tr>
<td>Moody</td>
<td>6,414</td>
<td>5.8</td>
<td>372 12.6</td>
<td>808 1.3</td>
<td>83 1.1</td>
<td>71 1.1</td>
</tr>
<tr>
<td>Turner</td>
<td>8,366</td>
<td>3.7</td>
<td>310 0.7</td>
<td>59 0.8</td>
<td>67 0.3</td>
<td>25 0.3</td>
</tr>
<tr>
<td>Union Totals:</td>
<td>14,131 Region 3 Population 326,206</td>
<td>4.1</td>
<td>579 1,835 0.5</td>
<td>71 6,220 1.8</td>
<td>254 9,092 2.5</td>
<td>353 3,532 6.0</td>
</tr>
</tbody>
</table>

* U. S. Census Bureau data estimated population for 2008
**U.S. Census Bureau 2000 data
***National Center for Education Statistics/number of persons based on estimated (county) population size of persons 16 years and older in households in 2003.
Inflow/Outflow Analysis

enter your own subtitle

Display Settings

Labor Market Segment Filter

All Workers

Year

2010

Map Controls

Color Key

Flow Overlay

Selection Outline

Identify

Zoom to Selection

Clear Overlays

Animate Overlays

Report/Map Outputs

Detailed Report

Export Geography

Print Chart/Map

Legends

Note: Overlay arrows do not indicate directionality of worker flow between home and employment locations.

Employed and Live in Selection Area

Employed in Selection Area, Live Outside

Live in Selection Area, Employed Outside

Analysis Selection
REGIONAL RESPONSE PLAN OBJECTIVES

- Maintain individuals in a familiar environment to lessen the traumatic impact of an emergency situations;
- Provide support to community-based agencies and organizations who provide direct service to At-Risk Populations; thus,
- Minimize additional burden on hospitals and allow for care of those most critically injured/ill
Components of Planning

- **IDENTIFY** vulnerable populations
- **WHO** represents them (agencies/organizations)
- **HOW** to reach vulnerable populations
- **HOW** to transport or provide care
QUESTIONS?