Overweight and Obesity among Adults with Intellectual Disability

Roger J. Stancliffe\textsuperscript{1}, K Charlie Lakin\textsuperscript{2}, Sheryl A. Larson\textsuperscript{2}, Sarah Taub\textsuperscript{3}, Joshua Engler\textsuperscript{3} & Julie Bershady\textsuperscript{3}

1. University of Sydney
2. Research and Training Center on Community Living, University of Minnesota
3. Human Services Research Institute
Available research suggests that adolescents and adults with intellectual disability have higher prevalence of overweight and obesity than the general community.

The present study is the first US study to report BMI-based data for a large (over 8,000) twenty-state sample of adult ID/DD service users with intellectual disabilities.
National Core Indicators (NCI) (adult users of state ID/DD services)

Collaboration between:
- National Association of State Directors of Developmental Disabilities Services (NASDDDS)
- Human Services Research Institute (HSRI).
- www.nationalcoreindicators.org

NCI data gathered annually with a common instrumentation package:
- Data on weight and height collected for the first time in 2008-09 enabled BMI to be calculated

Data collected on a random sample of each state’s service users (minimum 400).
BMI Status

- **underweight**, BMI < 18.50
- **normal weight**, 18.50 ≤ BMI < 25.00
- **overweight**, 25.00 ≤ BMI < 30.00
- **obese**, BMI ≥ 30.00

Compared 8,911 NCI participants (age 20+) from 20 states with 2007-08 U.S. general population comparison data (age 20+) from:

NCI: 20 Participating States 2008-09
% Overweight and Obese (BMI ≥ 25.0)
Means and 95% CI, US vs NCI
Overweight and Obesity (BMI ≥ 25.0)

- NCI sample vs. U.S. general population
  - All people
    - NCI (62.2%) significantly less than US (68.0%)
  - Men
    - NCI (60.5%) significantly less than US (72.30%)
  - Women
    - NCI (64.5%) not significantly different from US (64.1%)
% Obese (BMI ≥ 30.0):
Means and 95% CI, US vs NCI
Obesity (BMI ≥ 30.0)

- NCI sample vs. U.S. general population
  - *No significant differences in obesity prevalence*

- All people
  - NCI (33.6%)    US (33.8%)

- Men
  - NCI (29.4%)    US (32.2%)

- Women
  - NCI (38.9%)    US (35.5%)
**Obesity** (BMI ≥ 30.0) by Level of ID

Mild & Moderate > Severe > Profound

<table>
<thead>
<tr>
<th>Level of ID</th>
<th>Obese</th>
<th>Overweight</th>
<th>Normal</th>
<th>Underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>28.3</td>
<td>31.3</td>
<td>27.5</td>
<td>2.8</td>
</tr>
<tr>
<td>Moderate</td>
<td>41.4</td>
<td>38.2</td>
<td>26.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Severe</td>
<td>26.7</td>
<td>29.9</td>
<td>37.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Profound</td>
<td>12.6</td>
<td>22.8</td>
<td>47.8</td>
<td>16.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of ID</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>10</td>
</tr>
<tr>
<td>Moderate</td>
<td>20</td>
</tr>
<tr>
<td>Severe</td>
<td>30</td>
</tr>
<tr>
<td>Profound</td>
<td>40</td>
</tr>
</tbody>
</table>
% Obese by Diagnosis and 95% CI (BMI >=30.0)
% Obesity By Diagnosis

Cerebral Palsy < Autism/PDD < Intellectual Disability only < Down Syndrome

Adults with Down syndrome had the highest prevalence of obesity and individuals with cerebral palsy had the lowest.
% BMI Category by Residence type: All participants
% Obesity by Residence type

- Institution residents had the lowest prevalence of obesity and people living in their own home had the highest.

- However there were substantial differences in personal characteristics, such as level of intellectual disability, between living arrangements.
% BMI Category by Residence Type: Mild ID only

- Institution: 31.4% Obese, 37.7% Overweight, 27% Underweight
- Group home: 39.1% Obese, 31.1% Overweight, 27% Underweight
- Agency apartment: 45.9% Obese, 25.3% Overweight, 25.3% Underweight
- Own home: 47.4% Obese, 25.2% Overweight, 25.2% Underweight
- Family home: 39.1% Obese, 31.0% Overweight, 4.2% Underweight
- Foster home: 36.9% Obese, 34.9% Overweight, 26.8% Underweight
% Obesity by Residence Type: Mild ID only

- Although differences between living arrangements in obesity prevalence remain, the differences are much smaller when level of intellectual disability is controlled.

- For example, among people with severe ID there were *no significant differences* between living arrangements in obesity prevalence.
Conclusions

- Overweight and obesity are serious health issues for American adults with and without ID.
- Adults with ID mostly did not differ from the general US adult population in prevalence of obesity.
  - For overweight and obesity combined fewer adults with ID were affected than the general population.
- There was a higher prevalence of obesity among women with ID than among men with ID.
- Level of ID was strongly related to obesity prevalence; individuals with milder ID were more likely to be obese.
Conclusions

- Obesity prevalence differed by living arrangement, with institution residents having the lowest prevalence and people living in their own home the highest.

- When level of ID was taken into account, these differences between living arrangements were reduced, but some remained significant especially for individuals with milder disability.
Conclusions

- We have shown elsewhere that smaller, less regulated settings, such as living in one’s own home, are consistently associated with desirable outcomes:
  - greater wellbeing
  - greater choice
  - less loneliness

- whereas institutions are associated with poorer outcomes.

- Finding effective ways for people to maintain a healthy weight while living in community settings of their choice presents a challenge for all Americans, both those with and without ID.
Contact Details

Roger J. Stancliffe
roger.stancliffe@sydney.edu.au
http://sydney.edu.au/health_sciences/

K. Charlie Lakin
lakin001@umn.edu
http://rtc.umn.edu/main/

Sarah Taub
staub@hsri.org
http://www.hsri.org/