2013 Minnesota School District Wellness Policy
Scores, Student Behaviors, and Body Mass Index
(Preliminary Findings 2/20/14)

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Acknowledgements

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http://z.umn.edu/scope
The School Obesity-related Policy Evaluation Study (ScOPE) is a 5 year, National Institutes of Health funded study to evaluate whether school policies and practices are positively affecting student behaviors and weight.
Measures

• **POLICIES:** Minnesota School Health Profiles (Profiles)
  – Principal & Health Educator Surveys
  – Conducted every 2 years (2002-2012)
  – Random sample of secondary schools

• **BEHAVIORS:** Minnesota Student Survey (MSS)
  – Self-report
  – Conducted every 3 years (2001-2013)
  – Statewide census to all 6th, 9th and 12th graders

• **DEMOGRAPHICS:** National Center for Educational Statistics Common core of Data
Outline

• Collection of 2013 Wellness Policy documents
• Scoring approach
• State, Regional and District scores
  – Policy Strength
  – Policy Comprehensiveness
• Patterns
• Relationships between scores and youth behaviors and body mass index
Introduction

• Background on School Wellness Policies
  – Child Nutrition and WIC Reauthorization Act of 2004; Healthy, Hunger-Free Kids Act of 2010

• Purpose of Study
  1. What is the quality of MN school wellness policies?
  2. Do school wellness policies impact student health?
Policy Document Collection

• 327 MN School District Wellness Policies
  – Policies obtained from district websites or phone/email follow-up, 2013-2014 School Year

• Study Instrument: Wellness School Assessment Tool, or WellSAT (Rudd Center for Food Policy & Obesity, Yale University, 2010)
  – Pilot Study of WellSAT
  – Interrater reliability checks throughout study (10% of sample)
Scoring Approach

- **WellSAT Scoring:**
  - **5 subscales:**
    - Nutrition Education & Wellness Promotion
    - Standards for USDA Child Nutrition Programs & School Meals
    - Nutrition Standards for Competitive and Other Foods & Beverages
    - Physical Education & Physical Activity
    - Evaluation
  - Each subscale question is scored 0, 1, or 2
    - **0** = Policy does not contain provision
    - **1** = Weak policy provisions: recommended or optional standards
    - **2** = Strong policy provisions: mandatory and specific standards
Scoring Approach

• **WellSAT Scoring:**
  - **Strength Scores** (Total + Each Subscale): How strongly policy content is stated
    - Range of scores: 0 (Low) – 100 (High)
  - **Comprehensiveness Scores** (Total + Each Subscale): The extent to which recommended content areas are covered in the policy
    - Range of scores: 0 (Low) – 100 (High)
Total WellSAT Scores: MN versus US

- Comprehensiveness:
  - MN: 64
  - US: 48

- Strength:
  - MN: 29
  - US: 38
How do Minnesota districts rate?

- Nutrition Ed & Wellness Promotion: 64
- School Meal Standards: 73
- Competitive Foods Standards: 57
- PE & Physical Activity: 65
- Evaluation: 59

- Comprehensiveness Score
- Strength Score
Any patterns by region?
Total Comprehensiveness Score by Region

Overall Mean Score

<table>
<thead>
<tr>
<th>Region</th>
<th>Score</th>
<th># of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central (56)</td>
<td>63.2</td>
<td></td>
</tr>
<tr>
<td>Northeast (32)</td>
<td>64.4</td>
<td></td>
</tr>
<tr>
<td>Northwest (40)</td>
<td>64.2</td>
<td></td>
</tr>
<tr>
<td>South Central (33)</td>
<td>64.7</td>
<td></td>
</tr>
<tr>
<td>Southeast (43)</td>
<td>*59.7</td>
<td></td>
</tr>
<tr>
<td>Southwest (43)</td>
<td>61.7</td>
<td></td>
</tr>
<tr>
<td>Twin Cities Metro (50)</td>
<td>63.0</td>
<td></td>
</tr>
<tr>
<td>West Central (27)</td>
<td>*73.6</td>
<td></td>
</tr>
</tbody>
</table>

(# of school districts in region)
Total Strength Score by Region

Overall Mean Score

<table>
<thead>
<tr>
<th>Region</th>
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<th>(# of school districts in region)</th>
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</thead>
<tbody>
<tr>
<td>Central (56)</td>
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</tr>
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<td>*44.3</td>
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(* indicates region with the highest score)
Any patterns by district characteristics?

- No WellSAT score differences by district
  - minority enrollment categories (high, medium, low)
  - free/reduced priced lunch (FRPL) categories (high, medium, low)
  - geographic location (City, Suburb, Town, Rural)
Any patterns by student characteristics?

Compared to other districts, districts with High free/reduced priced meal eligibility (FRPL) (50% or greater) have significantly

– Higher mean servings of pop
– Lower mean servings of vegetables*
– Fewer mean days physically active for 60 minutes or more
– Higher mean BMI and percent overweight or obese

*compared to Low FRPL districts only
Any evidence associating WellSAT scores and student eating/drinking behaviors?

• Yes, especially for the districts serving the lowest income students
In Districts with 35 - <50% FRPL students...

<table>
<thead>
<tr>
<th></th>
<th>More Daily Vegetable Servings</th>
<th>Fewer Daily Pop Servings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comprehensive Overall Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strong Overall Policies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition Education &amp; Wellness</td>
<td>√</td>
<td>(strength)</td>
</tr>
<tr>
<td>School Meal Standards</td>
<td></td>
<td></td>
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<tr>
<td>Competitive Foods Standards</td>
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Preliminary results (2/20/14)

-Significant (p < .05)
-Adjusted for percent minority and geographic location
In Districts with 50% or more FRPL students...

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<td>√</td>
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<tr>
<td>Nutrition Education &amp; Wellness CS</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Nutrition Education &amp; Wellness SS</td>
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Preliminary results (2/20/14)

- Significant (p < .05)
- Adjusted for percent minority and geographic location
Any evidence associating WellSAT scores and student activity levels?

• Yes, especially for the districts serving the lowest income students
  – Also, for the districts serving the highest income students (<35% FRPL)
In Districts with 35% or fewer FRPL students…

<table>
<thead>
<tr>
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<th>More days with 60 minutes of activity</th>
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<tr>
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<td>√  (strength)</td>
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Preliminary results (2/20/14)

- Significant (p < .05)
- Adjusted for percent minority and geographic location
Any evidence associating WellSAT scores and student BMI?

• Yes, for the districts serving lower income students
  – and not just the lowest
WellSAT scores are associated with lower BMIs among medium FRPL Districts, but higher BMIs for highest FRPL Districts.

<table>
<thead>
<tr>
<th>Comprehensives Overall Policies</th>
<th>Lower BMI</th>
<th>Higher BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDIUM FRPL (35% - &lt;50%)</td>
<td>√</td>
<td></td>
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| Strong Overall Policies          |           | √          |
|                                 | MEDIUM FRPL (35% - <50%) |            |

- Significant (p < .05)
- Adjusted for percent minority and geographic location

Preliminary results (2/20/14)
Preliminary Conclusions

• MN districts score better than US for content, but worse than US for **policy strength**

• For Regions
  – West Central has the best policy scores

• For Districts
  – **Strong policies and comprehensive policies** are associated with fewer daily pop servings, more veggie servings and more days with 60 minutes activity especially among students attending the **lowest income serving districts**
Evidence Summary

- Wellness policies may be the most effective among districts serving the most vulnerable students (i.e., low income) even though these districts have:
  - Similar policy scores as other schools
  - Students eat fewer vegetables, drink more pop and fewer days of activity
  - Students having higher BMIs, overweight and obesity

- Stronger policy language and/or more supportive home and neighborhood environments may be needed to realize lower BMIs