

# Nemours®



## Effectiveness of Using WellSAT in Improving School District Wellness Policies

Active Living Research Conference 2015

---

Claudia Caruso<sup>1</sup>, Jia Zhao<sup>2</sup>, Marina Kaplan<sup>2</sup>, Marianne Olmstead<sup>2</sup>, Dave Nichols<sup>2</sup>

1. University of Delaware, Newark, DE

2. Nemours Health and Prevention Services, Wilmington, DE



# Background

- Delaware Small Communities: Community Transformation Grant (CTG)
- Project goal:
  - Increase access to over 23,000 Delaware students to opportunities and resources that support: **1) active living; 2) healthy eating; 3) social and emotional wellness**
- Strategies:
  - **Policy: School district wellness policies**
  - Infrastructure: Integrating local resources into school communities
  - Systems change: School-wide wellness plans supporting revised district wellness policy



# Key Objectives: Wellness Policies

- To engage school districts in improving their wellness policies by providing districts with technical assistance and a coding tool to self assess policies
- To work collaboratively with districts to include recommended language to strengthen policies
- To increase the number of schools with written school-wide physical activity plans and nutrition promotion plans



# School Districts

- Six school districts in the state of Delaware
  - Christina, Colonial, Laurel, Red Clay, Seaford, Woodbridge
- Geographic locations: Urban, rural and suburban
- District free/reduced lunch rates: 59%-70%
- Six comparison districts were matched for size, student demographics and geographic location.



# Intervention: District Wellness Policy Enhancement

- Gathering a wellness committee in each district
- Collecting data: using information as a light to guide the way.
  - Wellness School Assessment Tool (WellSAT): criteria-referenced tool provided districts with a mechanism to objectively score strength and comprehensiveness of current wellness policies.
- Districts revised policies based on WellSAT criteria.
- WellSAT tool helped develop wellness champion knowledge and expertise.



# Instrumentation

- Wellness School Assessment Tool (WellSAT)
- Policy comprehensiveness and strength was assessed for five subsections of the wellness policies:
  - Nutrition Education (NEWP)
  - Standards for USDA Child Nutrition Programs and School Meals (US)
  - Nutrition Standards for Comprehensive and Other Foods and Beverages (NS)
  - Physical Education and Physical Activity (PEPA)
  - Evaluation (EVAL)

start 25% 50% 75% finish

» Visit the "How To Use This Tool" tab at the top before beginning this survey

 **Section 1: Nutrition Education**

| SUBJECT |  | RATING |   |   |   |
|---------|--|--------|---|---|---|
| NE1     | There is a standards-based nutrition curriculum, health education curriculum, or other curriculum that includes nutrition. | ?      | 0 | 1 | 2 |
| NE2     | All elementary school students receive nutrition education.  | ?      | 0 | 1 | 2 |
| NE3     | All middle school students receive nutrition education.  | ?      | 0 | 1 | 2 |
| NE4     | All high school students receive nutrition education.  | ?      | 0 | 1 | 2 |
| NE5     | Links nutrition education with the school food environment.  | ?      | 0 | 1 | 2 |
| NE6     | Nutrition education teaches skills that are behavior-focused.  | ?      | 0 | 1 | 2 |

**Jump to a Section**

- 1. Nutrition Education
- 2. Standards for USDA School Meals
- 3. Nutrition Standards
- 4. Physical Education & Physical Activity
- 5. Wellness Promotion and Marketing
- 6. Evaluation

Scorecard

**Version: 2.0**

**Policy Name: test**

My saved policies

Home

Sign out and return later

The example below shows the calculation of sample scores for Section 1 of WellSAT 2.0.

| Section 1. Nutrition Education |  | Rating    |
|--------------------------------|--|-----------|
| NEPE1                          | There is a standards-based nutrition curriculum/health education or other curriculum includes nutrition.   | 0         |
| NEPE2                          | All elementary school students receive nutrition education.  | 1         |
| NEPE3                          | All middle school students receive nutrition education.  | 2         |
| NEPE4                          | All high school students receive nutrition education.  | 1         |
| NEPE5                          | Links nutrition education with the school food environment.  | 0         |
| NEPE6                          | Nutrition education teaches skills that are behavior-focused.  | 0         |
| NEPE7                          | Nutrition education is sequential and comprehensive in scope.  | 1         |
| <b>Subtotal for Section 1</b>  | <b>Comprehensiveness Score:</b><br><i>Count the number of items rated as "1" or "2" and divide this number by 7. Multiply by 100. Do not count an item if the rating is "0."</i> | <b>57</b> |
|                                | <b>Strength Score:</b><br><i>Count the number of items rated as "2" and divide this number by 7. Multiply by 100.</i>  | <b>14</b> |

**Comprehensiveness Score** = Three items are rated as "1" and one item is rated as "2," for a total of 4 items. Four divided by 7 equals 0.57, multiplied by 100 for a score of 57.

**Strength Score** = One item is rated as "2." One divided by 7 equals 0.14, multiplied by 100 for a score of 14.

\*\*In Section 3, some items contain three separate questions (with drop-down boxes) pertaining to regulations specific to elementary, middle and high schools. These items will receive a score based on the average of the responses given to the three questions. Averages will be rounded up.



# Methodology

- **Quantitative: Two-group pre-post design**
  - Two-way mixed factorial ANOVA on the comprehensive and strength scores of the district wellness policy
    - Intervention districts vs. comparison districts
    - Pre-intervention vs. post-intervention
- **Qualitative: Key informant interviews**
  - Two rounds of interviews: pre/post intervention
  - Collecting information regarding the process of the wellness policy revision, policy implementation facilitators, barriers, and stakeholder recommendations



# Results

- Social demographics of the school districts

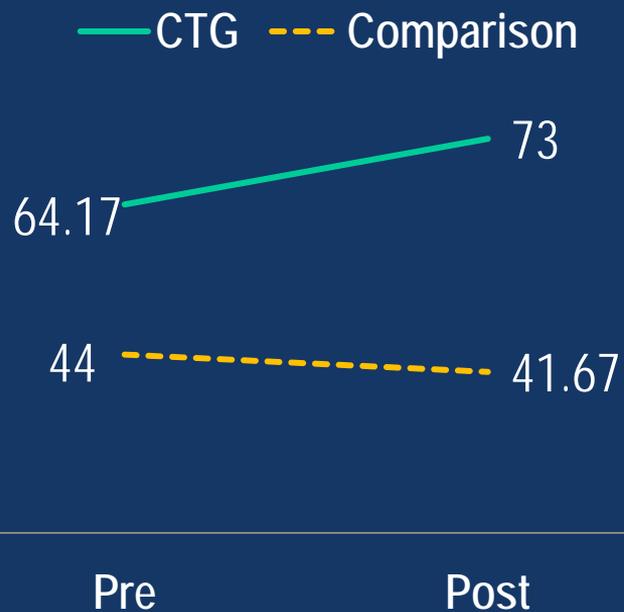
|                      | Intervention |         | Comparison |         | Sig. |
|----------------------|--------------|---------|------------|---------|------|
|                      | Mean         | SD      | Mean       | SD      |      |
| N of Students        | 8492.67      | 6895.64 | 6637.00    | 2785.44 | .562 |
| N of Schools         | 14.50        | 11.47   | 11.33      | 4.08    | .547 |
| % Free/Reduced Lunch | 59.57        | 8.92    | 49.18      | 7.85    | .058 |
| % Hispanic           | 15.4         | 5.6     | 10.7       | 7.0     | .222 |
| % African American   | 34.4         | 7.5     | 24.5       | 8.5     | .059 |
| % Special Education  | 14.9         | 1.3     | 15.4       | 2.0     | .603 |

## Two-way ANOVA on comprehensiveness and strength scores

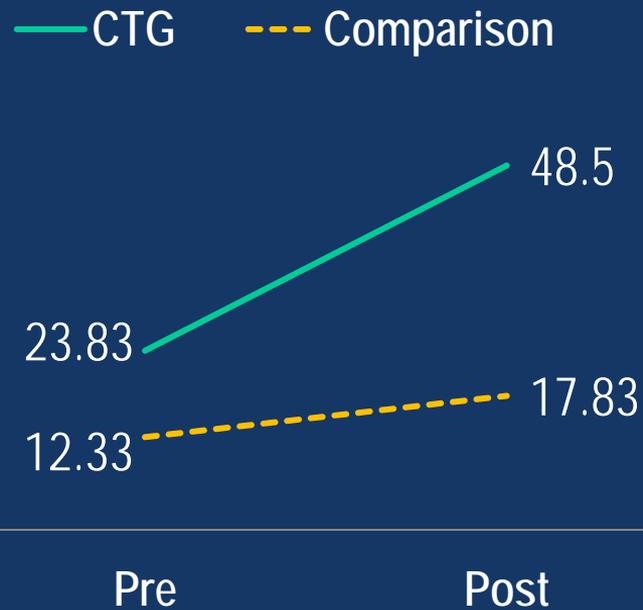
| Policy Section | Time | Comprehensiveness  |                    | Strength             |                     |
|----------------|------|--------------------|--------------------|----------------------|---------------------|
|                |      | Intervention       | Comparison         | Intervention         | Comparison          |
| NEWP           | PRE  | 72.17              | 48.17              | 31.50                | 20.33               |
|                | POST | 75.83              | 55.50              | 57.50                | 27.83               |
| US             | PRE  | 81.00              | 66.83              | 28.67 <sup>†</sup>   | 11.83 <sup>†</sup>  |
|                | POST | 80.83              | 62.00              | 50.00 <sup>†</sup>   | 19.17 <sup>†</sup>  |
| NS             | PRE  | 72.00              | 51.17              | 45.00                | 20.83               |
|                | POST | 74.17              | 45.83              | 50.00                | 21.83               |
| PEPA           | PRE  | 41.67 <sup>†</sup> | 33.17 <sup>†</sup> | 5.83 <sup>*††</sup>  | 3.50 <sup>*††</sup> |
|                | POST | 66.67 <sup>†</sup> | 28.50 <sup>†</sup> | 39.33 <sup>*††</sup> | 8.17 <sup>*††</sup> |
| EVAL           | PRE  | 54.17 <sup>†</sup> | 20.83 <sup>†</sup> | 8.33 <sup>*</sup>    | 4.17 <sup>*</sup>   |
|                | POST | 66.67 <sup>†</sup> | 16.67 <sup>†</sup> | 45.83 <sup>*</sup>   | 12.50 <sup>*</sup>  |
| OVERALL        | PRE  | 64.17 <sup>†</sup> | 44 <sup>†</sup>    | 23.83 <sup>†</sup>   | 12.33 <sup>†</sup>  |
|                | POST | 73.00 <sup>†</sup> | 41.67 <sup>†</sup> | 48.50 <sup>†</sup>   | 17.83 <sup>†</sup>  |



## Overall comprehensiveness scores



## Overall strength scores





# Key informant interviews

- Existing district wellness policies: vague, incomplete, unclear, difficult to implement, and poorly communicated to schools.
- Barriers:
  - Difficulty gaining principal buy-in,
  - Confusion about roles, responsibilities, and accountability regarding policy implementation
  - Not having a dedicated person to coordinate
  - Lack of time and packed scheduling
  - Competing priorities
  - Limited expertise



# Key informant interviews

- Perception about wellness policy revision process

- Pre-intervention: overwhelming, time-consuming, lack of expertise

*“That’s kind of what we’re being expected to be is policy experts and write our own wellness policies. It would be nice if there was basically a menu policy and we could say yes, we like that line, no we don’t like that line, we like this one, but we’d like to add these words. That would be much easier I think for a committee to undertake versus going through the whole process by ourselves.”*

- Post-intervention:

- Outcome was significant and encouraging
- WellSAT was a helpful tool, instrumental in helping the wellness committees make necessary revisions by providing examples of how to write policies that are clear and strong.

# Conclusions

- Intervention districts improved overall strength and comprehensiveness, while comparison districts improved in overall strength, but reduced in comprehensiveness slightly.
- Districts benefit from use of quality self-evaluation tools, such as the WellSAT, for improvement in wellness.
- Districts identified competing priorities as a barrier to making quality changes to wellness policies. Intervention districts were funded to confront wellness policies.



# Implications

- Having policies that are clear and comprehensive supports implementation.
- In policy development, self-assessment is particularly helpful at educating on evidence-based practices, and policy options to meet student needs.
- Technical assistance that integrates self-assessment would empower schools to carry out wellness changes.
- Concerns regarding sustainability of school level engagement and limited resources for professional development and technical assistance need to be addressed by stakeholders at the school and state level.



# Thank you!

Contact Information:

Jia Zhao: [Jia.Zhao@nemours.org](mailto:Jia.Zhao@nemours.org)

Dave Nichols: [David.Nichols@nemours.org](mailto:David.Nichols@nemours.org)