Farm-to-School Programs: Linkages between State Laws, District Policies, and School Practices

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Bridging the Gap Program
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Institute for Health Research and Policy
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Bridging the Gap is …

• A collaborative effort to assess the impacts of *policies, programs & other environmental factors* on a variety of adolescent health-related behaviors

• A Robert Wood Johnson Foundation initiative begun in 1997 with focus on adolescent alcohol, tobacco, and other drug use and related outcomes

• More recently expanded to include youth eating practices, physical activity, and weight outcomes
Presentation Purpose

• Provide an overview of Farm-to-School Programs (FTSP)
• Review the prevalence of state laws and school district policies governing FTSP
• Summarize school-level FTS practices
• Examine the relationship between:
  • State FTS laws and district policies
  • State FTS laws and school-level FTS practices
  • District policies and school-level FTS practices
• Identify suggestions for FTS policy and practice
FTSP History

- **1996-1997**
  - Birth of FTS pilot projects (FL, CA)

- **2000**
  - USDA Initiative for Future Agriculture and Food Systems (IFAFS) supports the establishment of National FTSP enabling program development, research, and policy

- **2001**
  - USDA Agricultural Marketing Service (AMS) began organizing FTS workshops around the country as part of the Small Farms/School Meals Initiative

- **2002**
  - 1st regional Farm-to-Cafeteria conference

- **2004**
  - National FTSP authorized in 2004 Child Nutrition Reauthorization Act (without federal funding)

- **2005-2007**
  - Increasing number of states pass FTS laws (refer to Appendix)

- **2008**

Source: http://www.farmtoschool.org
FTSP Background

• FTSP connects schools and local farms with the objectives of:
  o serving healthy meals in school cafeterias
    o salad bars
    o hot entrees/other meal items
    o classroom snacks
    o taste-tests
  o improving student nutrition & reconnecting students with where food comes from
    o Schools report a 3 to 16% increase in school meal participation when farm-fresh food is served, thus bringing more funds into the schools.
    o Increased consumption of fruits and vegetables with an average increase of one serving per day

Source: http://www.farmtoschool.org
FTSP Background

- providing agriculture, health and nutrition education opportunities
  - Chef/farmer in class, cooking demos
  - Farm tours
  - School gardens, composting, recycling
- supporting local and regional farmers
  - the transaction from farm to school keeps dollars in the local economy, thus strengthening local economies and creating jobs
  - Selling to schools opens up a substantial new market for small-to-medium sized farmers

Source: http://www.farmtoschool.org
METHODS
Methods: State Laws

- **Data Source: State Laws**
  - Statutory (legislative) and administrative (regulatory) laws effective as of September 2007 were examined using the Lexis-Nexis state legal databases for each of the 50 states and the District of Columbia to determine the presence and extent of FTSP-related provisions.

- **State Law Evaluation Topics**
  - Establishment of FTSP*
  - Initiatives to source locally grown F&V in schools*
  - Funding/grants for FTSP
  - Nutrition education
  - Training for food service personnel
  - Establishment of FTS council
  - Establishment of contact person b/w DOE and DOA
  - TA to districts to establish FTSP*
  - Requirement of district to report to state on FTSP
  - State Evaluation and reporting on FTSP

*Focus at the state level*
Methods: District Policies

- **Data Source: District policies**
  - Wellness policies effective as of the beginning of the 2007-08 school year were collected from a nationally representative sample of 577 school districts that contain an elementary-level school
    - When linked with the public school data, sample included 455 districts
  - Wellness policies reviewed to examine extent to which they addressed FTS-related sourcing
  - All data weighted to the % of districts nationwide

- **District Policy Variable**
  - Farm-to-School or Farm-to-Cafeteria Program
  - 0=not mentioned
  - 1=suggested
  - Ex: “Schools are encouraged to source fresh fruits and vegetables from local farmers where practical.”
  - 2=required/definitely in place
  - Ex: “Produce from area farmers shall be sold/served where F&B are sold/served.”
Methods: School Surveys

- **Data Source: School practices**
  - Mail-back surveys from principals in 748 public schools located in 455 of the school districts for which wellness policies were obtained
  - Surveys collected during Spring/Summer 2008
  - All data weighted to the % of schools nationwide

- **Survey Question**
  
  Does your school currently participate in any “Farm to Cafeteria” programs that incorporate or offer locally produced food into meals at school?

  □ No      □ Yes

  - Item response rate=711 public schools (95% of responding public schools)
Analysis Methods

• All analyses conducted using STATA MP v. 10
• Univariate and bivariate analyses
• Multivariate logistic regression models predicting district policy (dichotomized from original variable) and school practice
  – Controlled for state, district and school level factors
• State-district and state-school models clustered on state; district-school models clustered on district
RESULTS
Findings: State FTS-related Laws

- FTSP required (n=5 states)
- FTSP suggested (n=2 states)
- Other law required (n=2 states)
- Other law suggested (n=5 states)
Findings--District Level:
Most District Wellness Policies are Silent on FTS

- 6.5% of districts suggested participation in FTSP/sourcing locally grown food
- 0.4% of district required participation in FTSP/sourcing locally grown food
## Findings: Factors Associated with District FTS-related Policy
(multivariate models linking state-level data with district-level data)

<table>
<thead>
<tr>
<th>Factor</th>
<th>OR</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Law: FTSP required</td>
<td>1.38</td>
<td>(.35-5.52)</td>
<td>ns</td>
</tr>
<tr>
<td>% adult overweight (state level)</td>
<td>.31</td>
<td>(.14-.67)</td>
<td>.003**</td>
</tr>
<tr>
<td>% adult obese (state level)</td>
<td>.51</td>
<td>(.38-.69)</td>
<td>.000***</td>
</tr>
<tr>
<td>Majority African American student pop. (district level)</td>
<td>0.15</td>
<td>(0.02, 1.09)</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Note: Districts in South also had significantly higher odds of FTS policy than districts in NE, MW, W
Findings--School Level:
Most Elementary Schools also Do Not have FTS Programs

• 7.3% of public elementary schools have a FTS program
• 5.7% of private elementary schools have a FTS program
Findings: Factors Associated with Public School FTSP
(multivariate models linking state-level data with school-level data)

<table>
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<th>Factor</th>
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</tr>
</thead>
<tbody>
<tr>
<td>State Law: FTSP required</td>
<td>2.57</td>
<td>(1.1, 6.0)</td>
<td>0.03*</td>
</tr>
<tr>
<td>% adult overweight in state</td>
<td>0.64</td>
<td>(0.44, 0.95)</td>
<td>0.03*</td>
</tr>
<tr>
<td>Proportion FRP participation at school level</td>
<td>6.27</td>
<td>(1.41, 27.73)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Proportion African American students</td>
<td>0.15</td>
<td>(0.02, 1.09)</td>
<td>0.06</td>
</tr>
</tbody>
</table>
### Findings: Factors Associated with Public School FTSP

*(multivariate models linking district-level data with school-level data)*

<table>
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<th>Factor</th>
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<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>District FTS policy</td>
<td>2.48</td>
<td>(.94-6.57)</td>
<td>.06+</td>
</tr>
<tr>
<td>Proportion FRP participation at school level</td>
<td>8.83</td>
<td>(1.38-56.4)</td>
<td>.022*</td>
</tr>
<tr>
<td>Proportion African American students</td>
<td>.14</td>
<td>(.03-.68)</td>
<td>.015*</td>
</tr>
</tbody>
</table>

**Bivariate Results:** 17% of schools with a FTSP are located in a district with a FTS policy; 83% of schools with FTSP are located in a district without a FTS policy; however, once control for school factors, the relationships are more pronounced as noted above.
Conclusions and Implications

• Although few schools participate in FTSP that source locally grown foods, these programs are more common in states that have passed laws that have established FTSP.

• FTSP present a unique opportunity for farmers and schools by creating new marketing outlets for farmers, while improving the school nutrition environment.

• Enacting more FTS state legislation may facilitate increased FTS participation by schools.
www.impacteen.org
www.yesresearch.org
www.monitoringthefuture.org
www.bridgingthegapresearch.org
Appendix: Timeline of FTS legislation

1987 (N=1)
New York
• N.Y. Comp. Codes R. & Regs. Tit. 8, § 114.3

1999 (N=1)
Texas
• Tex. Educ. Code § 44.042

2002 (N=2)
Kentucky

New York
• N.Y. Agric. & Mkts. Law § 16 (5-b)
• N.Y. Educ. Law § 305

2004 (N=1)
New York
• N.Y. Gen. Mun. Law § 103

2005 (N=3)
California
• Cal Ed Code § 49565

Connecticut
• Conn. Gen. Stat. § 4-6aa (C)

Maine
Appendix: Timeline of FTS legislation

2006 (N=7)
California
• Code Regs. Tit. 5, §§ 15566, 15568
Connecticut
• Conn. Gen. Stat. § 22-38d
Maryland
• Md. Code Regs. 21.11.07.08
Massachusetts
Oklahoma
• Okla. Stat. tit. 2, §§ 5-60.1—5-60.6

Pennsylvania
Vermont
• Act 145
Appendix: Timeline of FTS legislation

2007 (N=6)

Iowa
- Iowa Code §§ 190A.1—190A.4

Kentucky

Maryland
- Md. STATE FINANCE AND PROCUREMENT Code Ann. § 14-407 (3)(d)

Rhode Island

Vermont
- Act 38

Virginia
- Va. Code Ann. § 3.1-14.4
Appendix: Timeline of FTS legislation
(not included in analysis)

2008 (N=6)
Maryland
• Md. Code Ann. Agric. § 10-1601
Michigan
• Mich. Comp. Laws Serv. Preceding §§ 388.841—388.844
Oregon
• Ore. Laws 21
Tennessee
• Tenn Code Ann. § 49-6-2303
Virginia
• Va. Code Ann. § 3.2-102(B)(4)

Washington
• Rev. Code Wash. (ARCW) § 15.64.060
• Rev. Code Wash. (ARCW) § A.235.179
• Rev. Code Wash. (ARCW) § 28A.320.185

2009 (N=1)
Vermont
• Act 54
• Act 51
Pending 2009 Legislation

Alaska
  • AK H.B. 70

Georgia
  • GA H.B. 698
  • GA H.B. 847

Hawaii
  • HI H.B. 797
  • HI H.B. 1416
  • HI H.B. 1434
  • HI S.B. 507
  • HI S.B. 813
  • HI H.B. 992
  • HI S.B. 1179

Illinois
  • IL H.B. 78
  • IL H.B. 2521
  • IL H.B. 3990

Iowa
  • IA S.F. 446

Massachusetts
  • MA H.B. 448
  • MA H.B. 446
  • MA H.B. 2092
  • MA S.B. 260

Missouri
  • MO H.B. 1080
Pending 2009 Legislation

Nebraska
- NE L.B. 130

New York
- NY A.B. 4176
- NY S.B. 4153
- NY S.B. 5785

Ohio
- OH H.B. 68

Oregon
- OR H.B. 2800

South Carolina
- SC H.B. 3179

Texas
- TX H.B. 1840
- TX S.B. 1027
- TX S.B. 1089

Washington
- WA S.B. 5890

Wyoming
- WY H.B. 194