

How do we actually put smarter snacks in schools? NOURISH (Nutrition Opportunities to Understand Reforms Involving Student Health) conversations with food-service directors

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Abstract

Objective: In autumn 2012, Massachusetts schools implemented comprehensive competitive food and beverage standards similar to the US Department of Agriculture's Smart Snacks in School standards. We explored major themes raised by food-service directors (FSD) regarding their school-district-wide implementation of the standards.

Design: For this qualitative study, part of a larger mixed-methods study, compliance was measured via direct observation of foods and beverages during school site visits in spring 2013 and 2014, calculated to ascertain the percentage of compliant products available to students. Semi-structured interviews with school FSD conducted in each year were analysed for major implementation themes; those raised by more than two-thirds of participating school districts were explored in relationship to compliance.

Setting: Massachusetts school districts (2013: *n* 26; 2014: *n* 21).

Subjects: Data collected from FSD.

Results: Seven major themes were raised by more than two-thirds of participating school districts (range 69–100%): taking measures for successful transition; communicating with vendors/manufacturers; using tools to identify compliant foods and beverages; receiving support from leadership; grappling with issues not covered by the law; anticipating changes in sales of competitive foods and beverages; and anticipating changes in sales of school meals. Each theme was mentioned by the majority of more-compliant school districts (65–81%), with themes being raised more frequently after the second year of implementation (range increase 4–14%).

Conclusions: FSD in more-compliant districts were more likely to talk about themes than those in less-compliant districts. Identified themes suggest best-practice recommendations likely useful for school districts implementing the final Smart Snacks in School standards, effective July 2016.

Keywords
School health
School nutrition guidelines
Smart Snacks in School
Food-service directors

School food policies are important for healthy child and adolescent growth and development. Epidemiological evidence linking state-level competitive food and beverage laws and health-related outcomes for students continues to grow. For example, such laws are associated with healthier products⁽¹⁾, healthier weights⁽²⁾ and stable or increased food-service revenue^(3–5). Students often

consume a large portion of their daily energy at school, as they spend more time there than in any other environment outside the home^(6–8). Prior studies have shown that school practices impact issues such as children's dietary behaviour^(9,10) and weight status⁽¹¹⁾. This is important because over one-third of children and adolescents are overweight or obese^(12,13).

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Foods in schools include school meals and 'competitive' foods and beverages: products that compete with the sale of school meals and are sold à la carte in the cafeteria, in school stores, in vending machines and in fundraisers. Typically competitive foods and beverages are energy dense and of poor nutritional quality. National estimates suggest competitive food and beverage products unnecessarily add 628–837 kJ (150–200 kcal) to children's energy intake each day⁽¹⁴⁾. While school meals have consistently been regulated at the federal level, up until recently competitive foods and beverages were regulated on a state-by-state basis. Starting in July 2016 school districts are expected to comply with fully implemented (or 'final') federal Smart Snacks in School standards. Smart Snacks in School sets nutrition standards for competitive foods and beverages; it is the first major federal update of competitive foods and beverages in more than 40 years⁽¹⁵⁾. Prior to Smart Snacks in School, most state competitive foods policies were weak and limited in scope⁽¹⁶⁾.

In 2012, Massachusetts implemented a state law to establish nutrition standards for competitive foods and beverages sold or provided in public schools (105 CMR 225-000); hereafter referred to as the 'MA standards'. Similar to the new federal standards, the MA standards aim to limit the energy, portion sizes, saturated and *trans* fats, sugar and sodium contents of snack foods and beverages offered to public-school students, while emphasizing water without additives, skimmed and 1% milk, fruits and vegetables, and whole grains^(17,18). The Massachusetts experience in implementing the standards can provide useful lessons for schools districts across the country as they consider the most appropriate strategies for complying with Smart Snacks in Schools. The NOURISH (Nutrition Opportunities to Understand Reforms Involving Student Health) study examined the extent to which school districts in Massachusetts complied with the standards^(17,18) and the impact of the standards on school food-service finances⁽⁴⁾ and students' dietary intake (J Cohen, M Gorski, J Hoffman *et al.*, unpublished results).

School districts are the primary enactors of federal, state and local school policies. However, we know little about school administrators' work in applying such standards. The purpose of the current mixed-methods study was to understand food-service directors' (FSD) perspectives and experiences implementing the MA standards. FSD run school district food-service programmes in partnership with cafeteria and other school staff. Typically, the FSD is in charge of menu development and ensuring that nutritional content complies with state and federal standards, food preparation and business operations. In some districts, school food-service departments operate vending machines, school stores or snack bars; and in others, they have contracts with outside vendors to provide these services. In addition, there may be points of sale for foods and beverages that are not under the jurisdiction of FSD (e.g. sports concessions, some vending

machines). For all competitive foods and beverages sold or served in Massachusetts schools, the school food authority at the district level is responsible for complying with the state standards. We asked FSD participating in the NOURISH study about the steps they took to prepare for implementation and what they considered the impact of the standards to be on revenue. We particularly examined the themes raised by FSD leading compliant school food-service programmes. These data were used to generate best-practice recommendations for implementing the US Department of Agriculture's new Smart Snacks in School standards.

Methods

Participants, setting and recruitment

The overall study response rate was 32.7%. School district recruitment procedures have been described previously^(17,18). Only school districts that ran their own school food-service programmes participated in the NOURISH study. NOURISH visited school districts to collect study data during lunchtime in the spring of 2012 (*n* 36), 2013 (*n* 28) and 2014 (*n* 21). At the time of recruitment, FSD agreed to a qualitative interview among other site-level data collection. FSD interviews were conducted in spring 2013 and 2014 (after implementation of the MA standards). In 2013, the FSD participation rate was 92.9% (twenty-six of twenty-eight NOURISH districts). In 2014, the FSD participation rate was 100% (twenty-one of twenty-one NOURISH districts). There were no differences between school districts participating in 2013 and 2014 with regard to demographic variables (Table 1). FSD were provided with \$US 50 gift cards for the time involved in completing the survey and site visit. The majority of non-participating districts cited time or availability constraints, as statewide testing pushed data collection to late spring in each year. All study procedures were approved by the Institutional Review Board at the Harvard School of Public Health. Informed consent was obtained from FSD before each site visit began.

Data collection procedures

Research assistants were trained to collect data using established protocols, including administration of mock qualitative interviews with real-time feedback from the study team. In addition, each research assistant shadowed an experienced team member on an entire site visit before conducting his/her own. Prior to each visit, research assistants consulted a site visit protocol document.

School district compliance

We used direct observations of competitive foods and beverages to assess compliance with the MA standards. Detailed information on school district compliance has been published previously^(17,18). For the purpose of the

Table 1 Demographics of school districts whose food-service directors were interviewed; NOURISH (Nutrition Opportunities to Understand Reforms Involving Student Health) study, 2013 and 2014

| | 2013 (n 26) | | | | | | 2014 (n 21) | | | | | |
|--------------------------------|----------------|-------|--------------|-------|-------------|-------|----------------|-------|--------------|-------|-------------|-------|
| | Middle schools | | High schools | | All schools | | Middle schools | | High schools | | All schools | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| School size (enrolment) | 627.0 | 235.4 | 1041.3 | 465.3 | 834.1 | 420.8 | 629.3 | 229.7 | 925.9 | 459.4 | 777.6 | 388.9 |
| Non-white students (%) | 21.4 | 18.0 | 21.6 | 18.9 | 21.5 | 18.3 | 19.1 | 18.5 | 19.8 | 20.0 | 19.5 | 19.0 |
| Low-income (FRPL) students (%) | 31.8 | 19.1 | 25.8 | 15.4 | 28.8 | 17.4 | 30.2 | 18.6 | 25.6 | 14.6 | 27.9 | 16.7 |

FRPL, free and reduced-price lunch programme.

present study, we defined 2013 and 2014 compliance by taking the median of the middle tertile. Prior to the analysis, we decided that this approach best reflected usual compliance of participating school districts. Thus, we grounded the assessment of more compliant (i.e. better than typical) in the reality, and difficulty, of compliance. Therefore, beverage compliance was defined as 98% or above in 2013 and 2014, and food compliance was defined as 65% or above in 2013 and 72% or above in 2014. Finally, a district was considered more compliant if it met compliance thresholds in either the food or the beverage category, or both. Because perfect compliance was not reached by any school district, we therefore refer to these cut-offs more appropriately as more compliant *v.* less compliant to reflect the true difficulty of reaching full compliance with competitive food and nutrition standards.

Interviews with food-service directors

A qualitative interview guide was developed by the NOURISH researchers. There were eight questions that focused on implementing the MA standards, including anticipating changes, working with the wellness committee and sales. Research assistants followed the qualitative interview guide verbatim. Research assistants were instructed to record the response of each FSD as fully as possible in real time. Interviews ranged from 10 to 20 min and all questions were answered, although response detail and length varied.

Data analysis

We explored the relationship between school district compliance with the 2012 MA standards and themes raised by more than two-thirds ($\geq 66\%$) of FSD. Three coders (L.E.R., M.A.J. and K.T.) participated in each step of the coding process. L.E.R. directed the analysis and checked for consistency in practice, including hand checking over 20% of coding content. L.E.R. facilitated regular coder meetings to discuss coding process, progress and questions. M.A.J. and K.T. coded all FSD interview responses from 2013 and 2014, with a scheduled inter-rater reliability check after the first three interviews were coded. This process was performed in 2013 and 2014. At the initial check, inter-rater reliability was over 90% in both 2013 and 2014. Issues were resolved and further understandings

of procedure reached. Subsequent inter-rater reliability checks were over 98% in both years. Any coding disagreements were resolved together by L.E.R., M.A.J. and K.T. Themes were created iteratively as data were coded. The first round of coding generated descriptive codes that were used to define data content. The second round of coding generated interpretative codes that reflected the meaning underlying the data. Content analysis was used to group FSD responses by identified theme⁽¹⁹⁾. Each interview was coded line by line following a constant comparison approach, iteratively coded and categorized to capture all new arising themes^(20,21). Both descriptive and interpretive codes were continually refined as each consecutive transcript was read by comparing new information with the existing code list and determining if new codes needed to be developed or if existing codes adequately defined new data^(19,20).

To explore the relationship between themes raised by FSD and school district compliance, we used the following approach. First, we explored themes mentioned by $\geq 66\%$ of districts in either 2013 or 2014, or both⁽²²⁾. Food and beverage item compliance was calculated by the NOURISH team, by examining each documented item against the state standards. The John C. Stalker Institute's 'A-List' is comprised of products compliant with the MA competitive food and nutrition standards, which are also closely aligned with the US Department of Agriculture's Smart Snacks in School standards. Only compliant products are included, although the list is not exhaustive⁽²³⁾. Therefore, if a food or beverage was on the Stalker 'A-List' for acceptable vending and snack products, it was considered compliant. If an item was not on the 'A-List', the John C. Stalker Institute's Massachusetts Nutrition Evaluation Tool for Schools⁽²⁴⁾ (e.g. a 'compliance calculator') was used to determine an item's compliance with the state standards. Finally, to determine the relationship between often-discussed themes ($\geq 66\%$ of districts) and compliance, we created 2x2 tables in Microsoft[®] Excel to compare the percentage of more-compliant districts that had discussed the theme *v.* the percentage of more-compliant districts that had not discussed the theme⁽²³⁾. The standards guide the amount of fat, energy, sodium and sugar permissible per food or beverage product, as well as detail the types of foods and beverages that can be sold (e.g. whole grains, 100% fruit

juices and sugar-sweetened beverages). The standards also explain, among other things, the unacceptable use of fryolators and having water (available and free). A full explanation of the MA standards which determine food and beverage compliance has been published previously^(17,18).

Results

Overall, NOURISH schools were demographically similar to schools that declined to participate⁽¹⁸⁾. In addition, Massachusetts schools with both years of follow-up data were demographically similar to schools with incomplete follow-up. In 2013, six themes were raised by more than two-thirds of FSD (range 69–100%): (i) took measures for successful transition; (ii) communicated with vendors; (iii) used the 'A-List'; (iv) had wellness committee support for making changes; (v) believed competitive food sales were impacted; and (vi) believed school meal sales were impacted. In 2014, seven themes were raised by more than two-thirds of FSD (range 71–100%); these included all six themes from 2013, plus (vii) grappling with fundraisers and parties. These themes in both years were raised more frequently by more-compliant *v.* less-compliant school districts. The percentage of FSD from more-compliant school districts who discussed these themes increased from 2013 to 2014 (range of increase 4–14%; see Table 2).

Themes from more-compliant school districts

General measures

In 2013 and 2014, 66.7 and 81.3% of FSD in more-compliant districts, respectively, discussed general measures they were taking to create a successful transition to the new standards (Theme 1). One FSD noted: 'We started making changes six years ago' (Table 3). Major sub-themes included garnering student feedback, making gradual changes and planning ahead. In 2013 and 2014, 65.4 and 71.4% of FSD in more-compliant districts, respectively, discussed communicating with vendors because of the new standards. Major sub-themes included districts purchasing as a collective (only 2013) and having vendors/manufacturers coming to the school to discuss new needs and even manufacturers making changes towards compliance on their own (Theme 2). One FSD noted: 'Vendors have come up with new products. Also, the food shows [where companies display products, often at conferences] are more geared to what we can buy now' (Table 3). In 2013 and 2014, respectively 65.4 and 75.0% of FSD in more-compliant districts discussed using the 'A-List' to meet the new standards (Theme 3). One FSD noted: 'Yes [we use the "A-List"] and we have trained cafeteria managers to use it to find new items and use the calculator option'. Also, whether more compliant or less compliant, all districts discussed communicating with vendors/manufacturers and using the 'A-List' in both years: 100% for both themes in 2013 (among all districts, not just

more-compliant districts) and 95.2% in 2014 for use of the 'A-List' (among all districts, not just more-compliant districts). In 2013 and 2014, 66.7 and 70.6% of FSD in more-compliant school districts, respectively, discussed the wellness committee being supportive of making changes to comply with the new standards (Theme 4). One FSD noted: 'We worked with the wellness committee to make sure only foods that comply were being sold and changes in such school policy were reflected on their website' (Table 3). Major sub-themes included making policy updates, holding regular committee meetings and regulating fundraisers/classroom parties.

Fundraisers and parties

Importantly, while 57.1% (2013) and 68.4% (2014) of FSD in more-compliant school districts noted grappling with fundraisers and parties, restricting or eliminating fundraisers and parties was not part of the final standards (Theme 7). One FSD noted: 'No food-based fundraisers during the school day and only a monthly classroom party' (Table 3). Major sub-themes noted in 2013 included: allowing fundraisers/parties (ten out of twenty-six districts), not allowing fundraisers/parties (four out of twenty-six), limiting the number of fundraisers/parties in some way (seven out of twenty-six) and allowing fundraisers/parties without food/beverages (five of twenty-six). In 2014, major sub-themes included allowing (nine out of twenty-one districts) and not allowing (ten out of twenty-one) food/beverages at fundraisers/parties; only one school district mentioned limiting fundraisers/parties.

Impact on sales

FSD reported changes in competitive food and beverage sales, as well as school meal sales, where changes were simultaneously taking place. In 2013 and 2014, 66.7 and 73.3% of FSDs in more-compliant school districts, respectively, discussed competitive food and beverage sales being impacted (Theme 5). One FSD noted: 'Not selling ice cream and the new chocolate milk rule will be difficult' (Table 3). In 2013, most FSD mentioned competitive food and beverage sales going down (twenty-two out of twenty-six). Only one FSD mentioned sales going up or sales being stable. In 2014, the majority of FSD mentioned sales going down (fourteen out of twenty-one); one mentioned sales being stable. In 2013 and 2014, 64.0 and 77.8% of FSD in more-compliant school districts, respectively, discussed school meal sales being impacted (Theme 6). One FSD noted: 'Getting kids to accept them [the changes] has been difficult'. In 2013, half of FSD mentioned school meal sales going down, while five of twenty-six mentioned sales going up and eleven of twenty-six mentioned sales being stable. In 2014, eight of twenty-one FSD mentioned sales going down while six of twenty-one and four of twenty-one, respectively, mentioned sales going up or being stable (see Table 4). Additional FSD quotes are presented in Table 3 to further

Table 2 Themes discussed in interviews with food-service directors; NOURISH (Nutrition Opportunities to Understand Reforms Involving Student Health) study, 2013 and 2014

| Theme no. | Theme* | 2013 (n 26) | | | 2014 (n 21) | | |
|-----------|---|-------------------|------------------|---|-------------------|------------------|--|
| | | % more compliant† | % less compliant | Major sub-themes | % more compliant† | % less compliant | Major sub-themes |
| 1 | Took measures for successful transition, overall | 66.7 | 33.3 | Taking measures to make transition more successful: student feedback, gradual changes, planning ahead | 81.3 | 18.8 | Taking measures to make transition more successful: student feedback, gradual changes, planning ahead |
| 2 | Communicated with vendors | 65.4 | 34.6 | Districts purchasing as collective (4); vendors/manufacturers coming to schools & making changes on own (6) | 71.4 | 28.6 | Districts purchasing as collective (4); vendors/manufacturers coming to schools & making changes on own (8) |
| 3 | Used 'A-List' | 65.4 | 34.6 | 100% of districts discussed using the 'A-List' | 75.0 | 25.0 | 95.2% of districts discussed using the 'A-List' |
| 4 | Had wellness committee support for making changes | 66.7 | 33.3 | Policy updates, regular committee meetings, fund/classroom party | 70.6 | 29.4 | Policy updates, regular committee meetings, fund/classroom party |
| 5 | Felt competitive food and beverage sales impacted | 66.7 | 33.3 | Sales up (1), stable (1), sales down (22) | 73.3 | 26.7 | Sales down (14), stable (1) |
| 6 | Felt school meal sales impacted | 64.0 | 36.0 | Sales up (5), stable (11), sales down (13) | 77.8 | 22.2 | Sales up (6), stable (4), sales down (8) |
| 7 | Grappling with fundraisers and parties‡ | 57.1 | 42.9 | Allow food/beverages at fundraisers/parties (10), did not allow food/beverages at fundraisers/parties (4), limited fundraisers/parties (7), fundraisers/parties without food (5), no policy (1) | 68.4 | 31.6 | Allow food/beverages at fundraisers/parties (9), did not allow food/beverages at fundraisers/parties (10), limited fundraisers/parties (1) |

*Themes discussed by $\geq 66\%$ of school districts.

†Compliance = compliant with foods or beverages, or both (2013: beverage compliance = $\geq 98\%$, food compliance = $\geq 65\%$; 2014: beverage compliance = $\geq 98\%$, food compliance = $\geq 72\%$).

‡In response to Question 7, Theme: Fundraisers and Parties, only 53.8% of districts mentioned the theme in 2013, but since $\geq 66\%$ of districts mentioned the theme in 2014, both years were included for comparison.

highlight the themes raised by more-compliant school districts.

Discussion

Data derived from the present study facilitated an understanding of the issues being considered among a group of Massachusetts school FSD implementing competitive food and beverage standards that are similar to the US Department of Agriculture's new Smart Snacks in School standards. Changes were not easy, but they did result in the availability of healthier competitive food and beverage options in the school environment^(17,18). We uncovered seven main messages from interviews with FSD, which suggest strategies for complying with comprehensive school competitive food and beverage policies. To our knowledge, our study is the first to simultaneously explore both lessons learned by exploring issues raised by FSD and compliance with comprehensive competitive food and beverage standards.

Previous studies support our findings. In particular, five recent peer-reviewed publications examine school district implementation of state competitive food and beverage standards; these states include Arkansas, California, Connecticut, Maine and Massachusetts^(17,18,25–28). While none directly explore the relationship between implementation strategy and compliance, all five report that the school food environment improved (i.e. healthier options available) after implementation of the standards. Further, a 2012 case study report describes school districts across the USA that have successfully implemented strong competitive food standards while minimizing negative financial consequences⁽⁵⁾. The report notes that a wide variety of strategies were used to implement the standards. It describes findings aligned with NOURISH study results.

The present study builds on previous NOURISH analyses that demonstrate increased availability of food and beverage products meeting the 2012 MA standards as well as school food-service financial stability over the initial two years of policy changes^(4,17,18). We offer

Table 3 Quotes from food-service directors (FSD) highlighting best practices; NOURISH (Nutrition Opportunities to Understand Reforms Involving Student Health) study, 2013 and 2014

| Theme no. | Best practices | FSD quotes | | |
|-----------|--|---|---|--|
| 1 | Plan measures | 'We started making changes 6 years ago.' | 'Last year we filled all the vending machines with only water and this year removed all of the vending because of issues with Coca Cola. Last year we removed all of the à la carte except for fruit, yoghurt and wholegrain cookies.' | 'The school has been transitioning to whole grains for a while for 3–4 years so it's been easier. They've always had 1 % and fat-free milk. They have done some sampling with the middle school.' |
| 2 | Communicate with vendors/manufacturers | 'We do group buying and bid for items with the vendor. We set the specs for our foods [preferred brand name, nutritional criteria] and the vendor offers items that meet the criteria.' | 'Vendors have come up with new products. Also, the food shows are more geared to what we can buy now.' | 'Yes, distributors are very school-friendly; they have to work with us to sell their product. They have come out with a wholegrain personal pizza that we sell in the middle school, which has been successful.' |
| 3 | Use the 'A-List' | 'We don't serve many competitive foods, but we have relied heavily on the "A-List" for what we do have. There has been a lot of trial and error with new items.' | 'Yes, and we have trained cafeteria managers to use it to find news items and use the calculator option.' | 'Only "A-List" items sold in the snack line.' |
| 4 | Communicate with the wellness committee | 'We worked with the wellness committee to make sure only foods that comply were being sold and changes in such school policy were reflected on their website. The wellness committee also helps the school store and special needs programme purchase foods that comply.' | 'Yes – we revised the wellness policy and the committee adopted it. A significant portion of the discussion was allotted to class parties, fundraising, etc. We want to be more consistent between schools. We were also able to come to a consensus that classes could hold up to three events per year that served cupcakes or the like.' | 'They helped a lot. We meet monthly.' |
| 5 and 6 | Expect some changes in competitive food and beverage, and school meal, sales | 'Not selling ice cream and the new chocolate milk rule will be difficult.' | 'Don't have the items kids want to eat. Not enough adequate [compliant] products.' | 'Getting kids to accept them [the changes] has been difficult.' |
| 7 | Make a clear decision about fundraisers and parties | 'No bake sales. They are allowed to have parties that do not include food.' | 'The wellness policy states that fundraisers should be non-food whenever possible.' | 'No food-based fundraisers during the school day and only a monthly classroom party.' |

best-practice recommendations, based on the themes generated from our analyses among more-compliant school districts (see Table 4): (a) create a transition plan; (b) discuss possibilities for new products and recipes with vendors and manufacturers; (c) use established resources like compliant food and beverage lists, compliance calculators and 'how-to' guides; (d) find champions and develop support by engaging relevant groups, such as wellness committees, parents and school district leaders; (e) create clear rules for grey areas by deciding, for example, what to do about any sales or use of foods or beverages not outlined by the Smart Snacks in School rules; and (f) prepare for revenue changes by deciding how to handle purchasing and offerings ahead of required compliance to give your food service some initial, additional flexibility.

Our study's findings should be interpreted with the following limitations in mind. First, we had a small sample size, largely due to lack of time and resources for

participation. Of course, school districts that agreed to participate might be those with more resources or those more likely to comply with the standards. However, the range of compliance rates, and the demographic similarity of participating and non-participating school districts, suggests that participating school districts are likely representative of the state as a whole⁽¹⁸⁾. Second, school meals and competitive foods and beverages are often difficult for FSD to disentangle. For example, FSD conversations with vendors and manufacturers are not limited to one or the other. Also, we defined compliance broadly. Using a stricter criterion (i.e. compliant for both foods and beverages) did not yield meaningful results. Even among participating school districts that knew they were being evaluated, very few schools were fully compliant; therefore, it does not seem that participation made school districts compliant. In all, it is clear that meeting the MA competitive food and beverage standards is difficult. Despite such complexity, clear themes among

Table 4 Lessons learned, best-practice recommendations and related resources

Lessons from compliant districts

Compliant districts consistently mentioned the following factors, and the relationship between such themes and compliance increased, over the course of the study

- Plan measures: compliant districts reported on the careful planning steps taken to fulfil the requirements of the new standards
- Communicate with vendors/manufacturers: compliant districts reported on the necessary discussions with vendors and manufacturers, especially when vendors visited the schools. Many manufacturers came out with new compliant products
- Use the 'A-List': compliant districts reported use of the Stalker 'A-List', maintained by the John C. Stalker Institute, Framingham State University, Framingham, MA, to ensure the provision of compliant foods and beverages. The 'A-List' compiles MA-compliant competitive foods and beverages
- Communicate with the wellness committee: compliant districts reported on the involvement of the wellness committee as well as other school district leadership to fulfil the requirements of the new standards
- Make a clear decision about fundraisers and parties: compliant districts reported that creating clear directions around food and beverages with respect to fundraisers and parties was important. However, fundraisers and parties that would be compliant with the standards were hard to manage*
- Expect some changes in competitive food and beverage, and school meal, sales: compliant districts saw fluctuation in sales. As we know from our companion financial analysis, overall school food-service revenue did not decrease

Recommendations for meeting the USDA Smart Snacks in School standards, based on the Massachusetts experience

- Plan ahead for upcoming changes: create a transition plan
- Include vendors and manufacturers: discuss possibilities for new products and recipes
- Use established resources: Stalker 'A-List', food calculators, 'how-to' guides
- Find champions and develop support: engage relevant groups, such as wellness committees, parents, and school district leaders
- Create clear rules for grey areas: decide what to do about any sales or use of foods or beverages not outlined by the Smart Snacks in School rules
- Prepare for revenue changes: decide how to handle purchasing and offerings ahead of time to give your service some initial, additional flexibility

Implementation resources

Massachusetts resources, 2012 MA standards

Healthy Students, Healthy Schools: <http://www.mass.gov/eohhs/docs/dph/mass-in-motion/school-nutrition-guide.pdf>

Smart Snacks in School resources

USDA Guidance: <http://healthymeals.nal.usda.gov/smartsnacks>

USDA Tools for Schools: <http://www.fns.usda.gov/healthierschoolday/tools-schools-focusing-smart-snacks>

PTA Guide: http://www.pta.org/files/advocacy/final_smartsnacks_impguide_web.pdf

Best Practices Sharing Center: <http://healthymeals.nal.usda.gov/best-practices>

Fundraiser-specific resources

USDA Smart Snacks in School Fundraiser Fact Sheet: <http://www.fns.usda.gov/sites/default/files/cn/fundraisersfactsheet.pdf>

USDA, US Department of Agriculture; MA standards, Massachusetts School Nutrition Standards for Competitive Foods and Beverages.

*Compliance during fundraisers and school parties was not mandated by the 2012 MA standards.

more-compliant districts surfaced, which align well with previous research. FSD in more-compliant districts were more likely to talk about such themes than those in less-compliant districts. The evidence-based best-practice recommendations may be useful for FSD across the country grappling with implementing the final national Smart Snacks in School standards in 2016. Table 4 includes these recommendations as well as related resources for Smart Snacks in School implementation. A policy brief will be available on the Heller School for Social Policy and Management, Brandeis University website (<http://heller.brandeis.edu/>).

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