

High School Students' Experiences and Perspectives on Revised School Meal and Smart Snacks Standards Reform

Summary of Findings Report November 2016

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Executive Summary

Background

The school food and nutrition environment has generated substantial media and public interest in the years following the bipartisan Healthy, Hunger-Free Kids Act of 2010. This Act gave the United States Department of Agriculture (USDA) authority to issue standards that address the nutritional composition of school meals and snacks served and sold to students on campus: *Nutrition Standards in the National School Lunch and Breakfast Programs* and *Nutrition Standards for All Foods Sold in School* or Smart Snacks in School. Both standards focus on increasing healthy food offerings in the school food environment, including fruits and vegetables and whole grain-rich products, as well as reducing the levels of sodium, saturated fat, and trans fat. In addition, the standards set grade level-specific calorie requirements. School districts were required to comply with the revised federal meal standards beginning July 1, 2012, with provisions phased in through school year 2022-2023. Implementation of Smart Snacks standards commenced July 1, 2014. A critical stakeholder in the successful implementation and ongoing sustainability of school meal and Smart Snacks reform is students, who are directly impacted by these initiatives and yet often have the smallest voice.

Methods

This Final Report presents the results of qualitative focus groups and individual interviews conducted with high school students affiliated with a non-profit organization, Funders' Collaborative on Youth Organizing (FCYO). FCYO is a social justice organization that trains and organizes youth around various issues related to student health and wellness. Five in-person focus groups were conducted with high school students (n=15) who attended schools in predominantly low-income communities. In addition, individual follow-up interviews were conducted with students (n=9) from the focus group sample. The focus groups and interviews centered around student perspectives with respect to school meals and Smart Snacks, media coverage of school meal reform, the cafeteria experience, and student involvement in school food reform.

Key Findings

Key findings and highlights from this report include:

- High school students strongly supported school meal and Smart Snacks standards reform; despite initial challenges with acceptance, students observed that more of their peers are consuming fruits and vegetables as a result of the changes
- Students highlighted the critical importance of school meals that provide nourishment for those who are food insecure in their communities
- Popular media did not accurately portray students' support for school meal reform and instead focused on misleading portrayals that students disliked healthy food
- School meal reform would have achieved better initial acceptance if schools had focused on nutrition education and communication related to the intention of the new standards

- Students pointed to several areas of concern within their school food environments – issues that had existed prior to the revised meal standards and not yet addressed by implementation – including, quality and presentation of meals, chaotic cafeteria environments, and inadequate meal times
- Addressing these areas of concern offer a critical opportunity to ensure that the full intentions of reforms efforts are realized, and students will be less likely to opt for alternatives to the school meal program
- Students offered a wide range of recommendations to facilitate implementation of the revised meal guidelines and to improve school food environments more broadly
- Students want to be engaged with school meal and Smart Snacks reform, as well as to have their voices more accurately represented in the media. Students are passionate about improving their school food environments and are keen to be involved in policy development, implementation, education, and other areas of nutrition and wellness reform in their respective school communities

Conclusions

In summary, high school students – as critical stakeholders in the implementation and sustainability of school meal and snack reform efforts – offered their strong support for federal efforts to address healthier school environments. In the time since implementation, students have observed increased consumption in fruits and vegetables amongst themselves and their peers as a result of the revised school meal standards. However, several pre-existing issues of concern were identified with their school meal experiences, including poor quality and palatability, challenging cafeteria environments, and inadequate meal times. These concerns highlight that implementation of the revised meal standards has not yet been matched by strategies to facilitate students to eat the healthier options. Addressing these concerns offers critical opportunities to ensure that the full impact of the school meal reform can be realized, and that students will be less likely to turn to alternative options, such as snacks sold in vending machines. High school students in this study assert an urgent need for action since school meals are an important safety net in their respective school communities. This report offers timely and policy-relevant student-driven recommendations to improve school food environments in low-income communities.

Background

The school food and nutrition environment has generated substantial media and public interest in the years following the bipartisan Healthy, Hunger-Free Kids Act of 2010.¹ This Act gave the United States Department of Agriculture (USDA) authority to issue standards that address the nutritional composition of school meals and snacks served and sold to students on campus: *Nutrition Standards in the National School Lunch and Breakfast Programs* (hereafter referred to as revised school meal standards)² and *Nutrition Standards for All Foods Sold in School* or Smart Snacks in School (hereafter referred to as Smart Snacks)³. The former required schools to increase healthy food offerings, including fruits and vegetables and whole grain-rich products, as well as reduce the levels of sodium, saturated fat, and trans fat in school meals and set grade level-specific calorie requirements (summarized in [Appendix A](#)). School districts were required to comply with the revised federal meal standards beginning July 1, 2012, with provisions phased in through school year 2022-2023. The Smart Snacks standards applied similar nutrition standards to foods and beverages sold outside the Federal reimbursable meal programs during the defined school day, with a focus on whole-grain rich products, fruits and vegetables, micronutrients of public health concern, in addition to calorie, sodium, fat, and sugar limits (summarized in [Appendix B](#)). School districts were required to comply with Smart Snacks beginning July 1, 2014.

This Final Report presents the results of qualitative focus groups and interviews conducted with high school students affiliated with a non-profit organization, [Funders' Collaborative on Youth Organizing](#) (FCYO). FCYO is a social justice organization that works with youth on training and organizing around various issues related to student health and wellness ([Appendix C](#)). High school students were members of a Youth for Healthy Schools program and had a range of previous experience and knowledge with school meal and snacks initiatives at their respective schools. Five in-person focus groups were conducted with high school students (n=15) who attended schools in predominantly low-income communities. In addition, individual follow-up interviews were conducted with students (n=9) from the focus group sample. Additional information about the methodology and sample is provided in [Appendix D](#). The focus groups and interviews centered around student perspectives with respect to school meals and Smart Snacks, media coverage of school meal reform, the cafeteria experience, and student involvement in school food reform (see interview guide in [Appendix E](#)). In addition, while the revised standards addressed a wide range of provisions, the interviews focused on specific topics related to fruit, vegetable, and sodium requirements and whole grain-rich provisions.

This summary report is organized into the following key topics that emerged during the focus group and individual interviews related to high school students' experiences with school meals and the school food environment, including the implementation of revised school meal and Smart Snacks nutrition standards:

- School meals are an important safety net
- Students support school meal reform

- Communications and nutrition education would improve student acceptance
- Students are eating more fruits and vegetables
- The school meal experience in low-income high schools: pressing issues and solutions for school-level implementation
- Student involvement in school meal reform
- More appealing meals would deter students from alternative options

School meals are an important safety net

High school students expressed that the critical role of school meals in their communities was that of providing daily nourishment, sometimes the only form of nourishment that some students received. Several students reminded us of their ongoing concerns about hunger and food insecurity amongst peers, highlighting why successful implementation of the revised school meal standards was critical for their communities:

- *Well, in my community, there's a lot of poverty...at least more than 50% of the people around my community depend on food stamps to get food....and I feel like that's not really enough so we depend on school meals to eat those fruits and vegetables that we need to grow up.*

Students support school meal reform

Overall, students expressed support of USDA's revised meal standards and related efforts to improve the school food environment. They perceived federal laws to improve the school food environment as a positive effort to improve students' health, and in fact, students asserted that it was a misperception that young people preferred the meals prior to the revised standards. Thus, while there were popular meals items prior to the revised standards, students recalled that the meals were not healthful or appealing prior to the revised standards.

- *One thing I've learned with the feedback with this thing [school meal reform] is that people assume that the youth like the old food...it really wasn't any better honestly. It's not like people were like, 'oh bring back our old food.' It's not anything like that.*
- *Okay, 'cause I think a lot of times people say students won't eat the food if it's healthy. There's the assumption that young people don't want to eat healthy foods.*

In describing their support for the revised school standards, students closely linked efforts with the First Lady Michelle Obama, who they understood as championing school meal reform and school health broadly. Students reported appreciation for the First Lady's initiative that brought national attention to issues of nutrition and health.

- *I support her [Michelle Obama] efforts 'cause I know a lot of students, a lot of kids are not getting the necessary nutrients that they need and by Michelle Obama talking about*

the importance of eating healthier, exercising, and just being physically active, I feel like a lot of students are...trying to be healthier.

- *If she [Michelle Obama] didn't push for it [healthy school environments], it wouldn't have been a topic in the first place. So, I'm thankful for that. I think that whole healthy movement was very beneficial.*

However, students reported that in general, popular media was not framing the issue in a balanced manner that reflected their own experiences and views, leading to misperceptions amongst their families, communities, and the public in general:

- *Instead of saying how bad the food is or how students don't want to eat healthy, they should really show statistics that show, for example, in the past year these students have lowered their health risk in diabetes or high blood pressure because of the Healthy Hunger Free Act.*
- *I feel like they [media] are all very biased and don't always think about the sources. They also give misleading information...when my parents or other people say 'Oh it's because Michelle Obama changed the standards, that's why it's nasty,' when I feel like if you actually look and analyze the data...she's only doing it for the benefit of the students.*
- *Some articles that are pro change are making it seem like the USDA has done enough. Like there's nothing that needs to be changed more. And then there's the anti side that makes it seem like every child or youth hates the change, or that every child or youth prefers the old ways better than this.*

As a result, students reported frustrations that they were perceived as rejecting healthy foods and provided examples from their after-school programs and off-campus food vendors of items that are both healthy and appealing to youth. Students advocated for their high schools to provide meals and snacks that were comparable to those healthy and tasteful examples:

- *I think most of us are trying to change our ways into eating different...across the street from our school they have a place where they sell healthy food and everyone from my school hangs out there after school and will eat there and do homework. So, students do want to eat healthy food. Instead of going to Jack-in-the-box, we all run over there.*

Communications and nutrition education would improve student acceptance

High school students recalled that the initial poor reactions to the revised standards were due to limited communications on school meal reform surrounding implementation. They asserted that efforts to educate the school community about the importance and intentions of school meal reform would have improved student reception of the changes.

- *I feel like it [school meal changes] would be more strong if they let us know like "hey, we're going to change this food because it does this to your body and it does this to your brain and when you're here for 7 hours or more..." It would help students connect...and more students would act positively to the change, instead of just passing it [the standards] and not knowing why.*
- *I just think education is a big part of it, in general. I think people would be more likely to eat it if they knew why it was good for them or why. Because I know when they rolled out the new standards, I remember...I knew it was coming because I worked for [local organization], but I remember that day and I remember [organizer] told me to kinda see how people reacted to it. They didn't really tell us, they just kind of changed the food and everybody was just like 'whoa.' Like they didn't really...say anything.*
- *Maybe have assemblies in the school to explain the importance of it – like why the benefits are good for you. 'Cause if you just go to school one day, and they're like, 'Here, you're gonna have salad and a piece of grilled chicken', it's healthy with fruit, but if they don't explain to you why it's good instead of getting chips and a hot dog and fries, then maybe it might not seem positive, but if you explain the benefits of why it's better to eat healthy, than maybe more students would like understand it.*
- *Especially if it's explained like how it was to me, that it's [poor nutrition] not only affecting your mentality and your mood, but when you're in school, especially, how your grades and your learning gets affected. If it's explained like that, together, it will get more people's attention.*
- *I think they should, especially implement it [nutrition education] when they're young so you can grow...because in reality, it's hard to just...if you have a certain way of eating for a long time, like it's their lifestyle, it's very hard to transition from one day eating something to the next day being 100% healthy. I think if you get classes over time, by the time you graduate or you're done, you're gonna be a very changed person.*

Instead, most students recalled that implementation at their high schools occurred suddenly and with limited explanation:

- *I don't think it was ever explained to us. I think it was mostly like, kind of like forced, like 'You have to take the milk. You have to take two fruits' and that's kind of like how we all learned...it was never, we were never really taught.*
- *They literally just – we came to the cafeteria and it was completely different food. No one informed us of why or where it came from.*

Students' comments reflected a desire for more education and engagement surrounding school meal reform. Students wanted to be involved with school meal reform and are interested in learning about health. These observations are notable, given previous studies that documented the importance of early and widespread communication about initiatives to change the school food environment.⁴⁻⁷ Lastly, consistent with recent literature documenting the gradual acceptance of school food environment changes,^{4,8,9} a few high school students noted that changes in their schools also reflected this gradual pattern:

- *It was actually my sophomore year when they changed it, and I remember when everyone introduced it, everyone was like, 'What is this? Where is our normal food?' And by our junior year, a lot of people liked it.*

Students are eating more fruits and vegetables

Despite students' descriptions of initial implementation, they still noted positive outcomes as a result of the revised meal standards at their respective high schools. The most noticeable was an increase in fruit and vegetables intake; specifically, students were pleased with having fruit as a daily option and also reported that fruit is the most popular item amongst their peers.

- *So now we're starting to eat a lot more fruits and vegetables, even if they're not fresh or organic, we still are eating healthier things.*
- *Well, sometimes I notice more vegetables or fruits in our meals, and less meat, so that's pretty good. Or less fried things. I think they've stopped fried food.*

Recent literature indicated that students are consuming more fruits and vegetables as a result of the revised standards.¹⁰⁻¹² Students in this study spoke positively about the increase in fruit and vegetables in school meals.

The school meal experience in low-income high schools: Pressing issues and solutions for school-level implementation

Students identified several areas of concern out of their experiences with school meals that were unrelated to the revised school meal standards. It is important to emphasize that the implementation of the USDA revised meal standards had not yet addressed these ongoing and pre-existing issues. The following issues and solutions were offered by students:

Improve meal quality and presentation at the school building-level. Students reported a wide range of disconcerting experiences with rotten, unripe or moldy fruits and vegetables, undercooked meats and spoiled milk provided at their schools. In addition, they commented on poor and unappetizing presentation of meals.

- *My friend's milk ended up being spoiled, and she got sick the whole day, so she had to go home. She threw up. And ever since then, she never drinks school milk.*
- *It's to the point where the carrots look ashy. It gets me upset because I love carrots.*
- *Some teachers say, 'It's so bad for you guys' or 'I'm sorry, that looks nasty' or 'I tried it and ugh.' They couldn't eat it [school meal].*
- *Maybe they [media] should go around interviewing students at school, like, why don't you like your school meal? Because I guarantee a lot of students are going to say it's the taste, it's the quality; they're not gonna say it's because they have to eat vegetables or they have to eat fruits. They're gonna say it's the quality.*

Transition to scratch cooking. Related to students' perceptions of the quality of food, they advocated for moving away from heavily processed and packaged foods and instead desired fresh, locally-sourced, and scratch-cooked meals:

- *It [entrée] will look like, mushy, and it will look like, it will look like they just slopped it on the plate. Like it was prison or something.*
- *She [Michelle Obama] could change the standards all she wants, but the food will never be better if we keep getting the food from where we do. Like companies that sell prepackaged food instead of getting it from our local farmers.*
- *Well, like at my middle school, they actually made the food, but now, in high school, they bring frozen food, and they just put it in the oven, heat it up, and give it to us. That's why I don't like it.*
- *I would say like, the food is healthy, but it's all packaged, so it makes us not want to eat it, because sometimes it looks nasty, or sometimes it doesn't have flavor.*
- *They [news outlet] would show Michelle Obama promoting healthy school foods and then they show a school meal and it looks like someone actually took the time and actually worked to cook something, but then if you walk into our schools, you would see soggy chicken nuggets or overcooked fries, or you would smell burnt Sloppy Joe meat.*
- *If we had fresh vegetables and fresh fruits from locally grown farms, I think if the food our parents cooked, like if our school lunches looked like those, people would want to eat them because they look good so they would actually want to try them and taste them and eat it.*
- *Where they prepare all the food at, the whole area would have to be bigger. They would need space for a stove and everything, 'cause then they would actually be back there preparing lunch, like actually cooking things, and you know, there would be more options for people to eat stuff, and there would be more fruits and vegetables, and the salads would be better.*

Students perceived that tight budgets were a barrier to improving the quality of food in their high schools:

- *I feel like the schools in order to be healthier, they need more money, they need to give more money to the students' lunch because organic food and healthier food usually, no, not usually, they are more expensive than fast food places. That's why people are more inclined to go to fast food places 'cause they're cheaper, they cost less and it's more convenient for them compared to organic food and healthier food."*
- *[The federal government should] provide the district with more money to get better food 'cause supposedly, we have lack of funding. Or just, you know, come down there and actually see what we go through or try to eat the foods that we eat. Maybe they will realize how bad the food is.*

Improve cafeteria infrastructure and organization. Students described the structure of cafeterias and meal services as a deterrent to participation. Long lines and later lunch periods often meant the most desirable items (e.g. preferred entrée items or pieces of fruit) were not available. Further, students noted that they would not get the school lunch if they saw a long line or menu item they did not like; in these cases, students would go to alternative options, such as vending machine, school stores, or purchase from the ‘peer-to-peer’ sales (discussed below). Alternatively, students reported that they or other students would go hungry.

- *On the days I don't feel like standing in line, because the lines can get really long, or sometimes they run out of food, or the food that I want, and so, I just don't eat.*
- *P: There's a lot of kids and sometimes we don't have a place to sit and it gets really crowded, so sometimes I don't get lunch. M: You just don't get to eat? What do you do? P: Well, sometimes, I go to the vending machine or the student store and I get something.*
- *So many students getting lunch, it's like the Hunger Games, man. You gotta really just run to the front of the line, or you gotta cut, but then that just makes the line go even longer...There's just so much going on, 'cause it's really loud, and some students are really soft-spoken, so they [staff] can't hear the number [at point of sale], and some people's numbers don't work, and some people want to argue, like 'But I had lunch yesterday' or like, 'Oh, let me have free lunch just for today. I'll turn in my slip tomorrow.'*
- *So, if they, whoever, like, didn't get lunch, because they run out of food, they start sending you to another line. If I go to the pizza line and they run out of food, they send you to the hamburger line, and if there's no more hamburgers, they close the sandwich line first.*
- *And you couldn't be late because, especially if your class was all the way in the third floor and the cafeteria was down in a really low floor, if you were late, it would take a while and you wouldn't finish lunch or they would run out of food and that was also an issue.*

Increase lunch time. Students noted that lunch periods did not provide adequate time to consume their meal. For many, this was due to challenging cafeteria infrastructure that took up time just to obtain a meal.

- *My lunch is 30 minutes long and usually I have to wait in line 20 minutes, so I only have ten minutes to eat, so that's not a long time.*
- *And I'd say, by the time you get anywhere near the end of the lunch line, lunch is over, 'cause we have thirty minutes to eat, and not everybody has enough time – there'll still be people in there when the bell rings for lunch to end – they still be getting' their lunch, or they'll just be like, lunch is about to end, and then they just walk off, and then they just come down during the next lunch, which means that they're missing their class time, which means they're missing their class, they're not*

doing their work, they're not learning – all because they was hungry, and they wanted something to eat.

And, consistent with a recent California study that found that long lines and scheduling issues were most commonly cited as barriers to adequate eating time,¹³ one student commented that healthier foods take longer to eat than their old entrée items; thus, exacerbating the problem of limited time. She stated that this was not considered by decision makers during the implementation of school meal reform.

- *Also they didn't accommodate time to eat more grainy foods if that makes sense. Like, you know, it's quicker to eat a pizza than to eat rice and chicken, and a lot more people – some people were eating it more than before, and they didn't account time for it, so a lot of times, people didn't finish their food.*

Student involvement in school meal reform

As part of their respective youth organizations, students were involved in projects related to school meal and snacks reform. While some recalled that it was difficult to connect with their food service manager and/or principal to facilitate change, others shared success stories of their partnered efforts:

- *We've met with them [Food Service Manager] like two or three times and one of the times we met with them, we had a taste testing where it was food that could be part of the school lunches, so we had a taste testing and she asked me and the other youth in our organization what we would like and what we think would be better? We told her about them and she told us what things she could do and what things she couldn't do...she tried to make as many changes as she could. Like, we told her about the spice rack and we ended up getting seasonings in our school.*

The importance of engaging students in school nutrition initiatives are noted by existing literature.¹⁴ Students also noted that through their efforts to address these issues, they gained new understandings about the constraints of their high school food services department, noting that many procurement decisions were made at the district level.

- *Something that always bugs me is that students at my school...they're like "why don't you guys ever use the money and go pay for good food?" They don't understand that we don't make that decision; it's the district that does.*
- *I think the, well, I think it's whoever is distributing or makes the decisions for the school to get those foods, so in my case, it would be my district because they're the ones who partner with the corporations and they're the ones who find the providers.*

More appealing school meals would deter students from alternative options

In describing their school meal experiences, all students noted that on a daily basis they would *first* look to the school meal as an ideal option and *next* would turn to alternative options – such as Smart Snacks and ‘peer-to-peer’ sales – only when they passed on the school meal or were unable to obtain one due to cafeteria challenges (as noted above). Students’ descriptions of daily food decision-making suggested that continued improvement in the quality of the school meals (i.e. scratch cooking), would increasingly deter students from turning to alternative options.

‘Peer-to-peer’ sales. Students noted ‘peer-to-peer’ sales, described as food and beverage items – prepackaged snacks, beverages, and homemade items (e.g., sandwiches)– sold by fellow individual students on school campus that were not part of a school entity fundraising activity. A wide range of ‘peer-to-peer’ sales examples was provided, including Hot Cheetos, donuts, cookies, tortas (Mexican-style sandwiches), burritos, and Starbucks coffee drinks. All students reported that such items were widely available during school hours prior to the revised school meal standards and popular amongst students as an alternative entrée or snack option. Students recalled that the availability of these items have not changed since the implementation of revised school meal standards.

Smart Snacks. When asked to describe any changes to available snacks in the past year, which followed the period of the Smart Snacks implementation, the majority of students noticed changes to the snacks options at their high schools. One student commented that items had switched as a result:

- *They recently switched all the items. I think it was last year they had it, so this year when we came into school they no longer had those items. The ice creams, now they’re not chocolate ice creams, they’re fruit flavored, like strawberry. A lot of our chips are baked and then the snacks are like, corn nuts...stuff like that. And the drinks, they’re all vegetable or fruit drinks.*

Some students noticed and were unhappy that their high schools had implemented changes to their snacks because the new options were more expensive:

- *Like in the vending machines, all they have is like, Pop Tarts...they used to have two Pop Tarts, now they only have one, but you still pay the same price.*
- *I don't even think there's a way to track and see if individuals would even purchase it or not, because they're too expensive. I know, like they sell Nutrigrain bars, the ones are like \$2 or \$1.50, which is ridiculous.*

One student described that he prefers homemade ‘peer-to-peer’ sale items because they are freshly made:

- *Since they sell a variety of things, we have more than one option, a lot of us tend to buy it, not because it's junk food, but because, in general, it tastes better than the school food. I guess it's just the fact that it's freshly made as opposed to how the stuff in our cafeteria is made.*

Importantly, in describing their daily food decisions, students noted that vending, school store, fundraising and 'peer-to-peer sale' items came second in their considerations after the school meal. Students' first choice was the school meal and they are opting for these alternatives when they did not like the quality or type of meal offered and/or were not able to obtain a meal due to congestion in the cafeteria. This finding offers a critical opportunity to improve student intakes by addressing the solutions offered by students in this report.

Student recommendations for improving the school food environment

Several recommendations emerged out of students' experiences with school meal and snacks reform:

- Increase opportunities for students to engage with media to accurately portray their perspectives and experiences with school meal reform
- Incorporate nutrition education into school meal and Smart Snacks standards implementation to enhance student awareness and acceptance to the changes
- Continue serving a variety of fresh fruits and vegetables
- Install salad bars to allow students to customize their choices
- Provide equipment and necessary training to increase scratch cooking for school meal meals and move away from processed entrée items
- Improve quality and palatability of fruits, vegetables, and other meal items
- Increase funding for school meals to allow for healthier ingredients to be purchased
- Improve cafeteria structure and organization to allow for more streamlined movement and provision of meals
- Increase lunch time to allow students adequate time to consume their meals
- Decrease the price points of healthier snacks to encourage student purchasing
- Provide more opportunities for students to be engaged with district- and school-level staff involved with school meal and snacks reform implementation
- Ensure that there is enough food available each day so that the cafeteria doesn't run out of popular items before all students are served
- Increase opportunities for students to be involved in the policymaking process related to school nutrition and wellness policies

Conclusion

This report outlines the recent experiences and perspectives of high school students, who are critical stakeholders in the implementation and sustainability of school meal and snack reform

efforts. While the high school students in this study are likely more informed than ‘typical’ high school students as a result of their affiliation with FCYO, several of their insights were consistent with findings from other studies involving students. Students **strongly supported** school meal reform and federal efforts to address school meals and snacks, stating that the intentions of these policies aligned with their desires for healthier food environments. However, they asserted that their positive perceptions and support for school meal reform is not being accurately portrayed in popular media. Further, students reported **enjoying the increase in fruits and vegetables** and perceived that their peers are consuming more as a result of the revised school meal standards. As school meal reform advocates, students provided strategies to facilitate acceptance to the standards, including **stronger nutrition education and communications**. Importantly, students also reported several ongoing issues, indicating that the implementation of school meal reform has not yet been matched by strategies to facilitate students to eat the healthier options. Students in this engaged group have advocated for change surrounding these issues prior to the implementation of school meal reform, including **improving the quality and palatability of meals**, transitioning to scratch cooking, improving cafeteria infrastructure and increasing lunch period time. Addressing these issues will ensure that the full impact of the revised meal standards to improve the school food environment can be realized and that students will be less likely to turn to alternative options, such as Smart Snacks and ‘peer-to-peer’ sale items.

This report highlights a call for school professionals, researchers, and policymakers to increase opportunities for youth to be engaged in policy development, implementation, and sustainability of school meal and snacks reform efforts at the local, state, and national level. Students supported the Healthy, Hunger-Free Kids Act and the movement towards healthier school meals and were eager to be included in these important conversations and contribute to solutions to improve school meal environments. High school students in this study asserted an urgent need for action since school meals are an important safety net in their respective school communities.

Appendix A

USDA Revised School Meal Standards Summary

USDA School Breakfast and School Lunch Programs Nutrition Standards:¹

- Fruit and Vegetable Requirements
 - Require students to select a fruit or vegetable as part of their reimbursable meal
 - Offer fruits and vegetables as two separate meal components
 - Offer fruit daily at breakfast and lunch
 - Offer vegetables daily at lunch
- Whole-grain Rich Requirement
 - Beginning in school year 2014-15, all grains offered must be whole grain-rich
 - “Whole grain-rich” foods contain grains that are at least 50% whole grain by weight

Summary of meal pattern requirements

Meal Pattern	Breakfast Meal Pattern			Lunch Meal Pattern		
	Grades K-5	Grades 6-8	Grades 9-12	Grades K-5	Grades 6-8	Grades 9-12
	Amount of food per week (minimum per day)					
Fruit (cups)	5 (1)	5(1)	5 (1)	2 ½ (½)	2 ½ (½)	5 (1)
Vegetables (cups)	0	0	0	3 ¾ (¾)	3 ¾ (¾)	5 (1)
Veg: Dark green	0	0	0	½	½	½
Veg: Red/orange	0	0	0	¾	¾	1 ¼
Veg: Beans/peas	0	0	0	½	½	½
Veg: Starchy	0	0	0	½	½	½
Veg: Other	0	0	0	½	½	¾
Additional veg	0	0	0	1	1	1 ½
Grains (oz.)	7-10 (1)	8-10 (1)	9-10 (1)	8-9 (1)	8-10 (1)	10-12 (2)
Meats (oz.)	0	0	0	8-10 (1)	9-10 (1)	10-12 (2)
Fluid milk (cups)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week						
Min-max calories	350-500	400-550	450-600	550-650	600-700	750-850
Saturated fat %	< 10	< 10	< 10	< 10	< 10	< 10
Sodium (mg)	≤ 430	≤ 470	≤ 500	≤ 640	≤ 710	≤ 740
Trans fat	Nutrition label or manufacturer specifications must indicate zero grams of trans fat per serving					

- Sodium Limits
 - Gradual reduction of the sodium content of meals over ten years:²

Target 1: School Year 2014-15	Target 2: School Year 2017-18	Target 3: School Year 2022-23
<ul style="list-style-type: none"> • Lunch <ul style="list-style-type: none"> ➤ ≤1230 mg (K-5) ➤ ≤1360 mg (6-8) ➤ ≤1420 mg (9-12) • Breakfast <ul style="list-style-type: none"> ➤ ≤540 mg (K-5) ➤ ≤600 mg (6-8) ➤ ≤640 mg (9-12) 	<ul style="list-style-type: none"> • Lunch <ul style="list-style-type: none"> ➤ ≤935 mg (K-5) ➤ ≤1035 mg (6-8) ➤ ≤1080 mg (9-12) • Breakfast <ul style="list-style-type: none"> ➤ ≤485 mg (K-5) ➤ ≤535 mg (6-8) ➤ ≤570 mg (9-12) 	<ul style="list-style-type: none"> • Lunch <ul style="list-style-type: none"> ➤ ≤640 mg (K-5) ➤ ≤710 mg (6-8) ➤ ≤740 mg (9-12) • Breakfast <ul style="list-style-type: none"> ➤ ≤430mg (K-5) ➤ ≤470 mg (6-8) ➤ ≤500 mg (9-12)

¹ A comprehensive overview of USDA meal pattern requirements and nutrition standards, including resources and tools, is available at <http://www.fns.usda.gov/school-meals/nutrition-standards-school-meals>

²It is important to note that as of FY2015, schools are no longer required to meet sodium targets below Target 1 until the latest scientific research establishes that the reductions are beneficial for children (Consolidated and Further Continuing Appropriations Act, 2015).

Appendix B

USDA Smart Snacks Summary

Nutrition Standards for Foods

- Any food sold in school must:
 - Be a “whole grain-rich” grain product; or
 - Have as the first ingredient a fruit, a vegetable, a dairy product, or a protein food; or
 - Be a combination food that contains at least ¼ cup of fruit and/or vegetable; or
 - Contain 10% of the Daily Value (DV) of one of the nutrients of public health concern in the 2010 Dietary Guidelines for Americans (calcium, potassium, vitamin D, or dietary fiber).*
- Foods must also meet several nutrient requirements:
 - Calorie limits:
 - Snack items: ≤ 200 calories
 - Entrée items: ≤ 350 calories
 - Sodium limits:
 - Snack items: ≤ 230 mg**
 - Entrée items: ≤ 480 mg
 - Fat limits:
 - Total fat: ≤35% of calories
 - Saturated fat: < 10% of calories
 - Trans fat: zero grams
 - Sugar limit:
 - ≤ 35% of weight from total sugars in foods

*On July 1, 2016, foods may not qualify using the 10% DV criteria.

**On July 1, 2016, snack items must contain ≤ 200 mg sodium per item

Nutrition Standards for Beverages

- All schools may sell:
 - Plain water (with or without carbonation)
 - Unflavored low fat milk
 - Unflavored or flavored fat free milk and milk alternatives permitted by NSLP/SBP
 - 100% fruit or vegetable juice
 - 100% fruit or vegetable juice diluted with water (with or without carbonation), and no added sweeteners.
- Elementary schools may sell up to 8 fluid-ounce portions, while middle schools and high schools may sell up to 12 fluid-ounce portions of milk and juice. There is no portion size limit for plain water.
- Beyond this, the standards allow additional “no calorie” and “lower calorie” beverage options for high school students.
 - No more than 20 fluid-ounce portions of:
 - Calorie-free, flavored water (with or without carbonation); and

- Other flavored and/or carbonated beverages that are labeled to contain < 5 calories per 8 fluid ounces or ≤10 calories per 20 fluid ounces.
- No more than 12-ounce portions of beverages with ≤ 40 calories per 8 fluid ounces or ≤ 60 calories per 12 fluid ounces.

Other Requirements

- Fundraisers
 - The sale of food items that meet nutrition requirements at fundraisers are not limited in any way under the standards.
 - The standards do not apply during non-school hours, on weekends and at off-campus fundraising events.
 - The standards provide a special exemption for infrequent fundraisers that do not meet the nutrition standards. State agencies may determine the frequency with which fundraising activities take place that allow the sale of food and beverage items that do not meet the nutrition standards.
- Accompaniments
 - Accompaniments such as cream cheese, salad dressing and butter must be included in the nutrient profile as part of the food item sold.
 - This helps control the amount of calories, fat, sugar and sodium added to foods by accompaniments, which can be significant.

Appendix C

Funders' Collaborative for Youth Organizing

The Funders' Collaborative on Youth Organizing (FCYO) is a collection of national, regional and local grant makers and youth organizing practitioners dedicated to advancing youth organizing as a strategy for youth development and social transformation.

FCYO's mission is to cultivate resources for young people (ages 12-24) taking action to build healthy and equitable communities. FCYO bridges funders and organizers to support youth organizing and its commitment to systemic change and social justice. Since its inception, FCYO has been focused on increasing philanthropic, intellectual and social capital necessary to strengthen and grow youth organizing.

The goals of FCYO are to:

- To ensure that young people from low-income families and young people of color become key leaders in the movements for healthy schools and communities, now and in the future.
- To guarantee that young people of color from low-income families – who are most impacted and disproportionately harmed by the illnesses related to childhood-obesity – have a strong and effective voice in framing the national policy debate about the solutions to this crisis in the education, food, and health policy arenas.
- To increase the capacity of local youth organizing groups to amplify their impact, by connecting local work to statewide and national strategies for change.

Youth for Healthy Schools Overview: Youth for Healthy Schools (Y4HS) is an organizing network of 15 youth and parent organizations representing communities of color, that are collectively leading a movement for school and community wellness. Supported through the FCYO Healthy Communities II Initiative (HCII) and the Robert Wood Johnson Foundation, Y4HS builds youth power in organizing for healthy school environments. HCII's primary strategy is to uplift and connect youth advocacy and organizing campaigns to amplify their reach and impact, injecting youth voices directly into the national conversation about childhood obesity, school nutrition standards, and the health and wellness of poor communities and communities of color. The foundation of HCII is a fellowship program that uplifts and connects the leadership of young people rooted in community based organizations.

Structurally, the initiative has seven host sites with fellows and an additional eight partner sites. Students are recruited by organizers at the respective sites, often through word of mouth from fellow peers. The work of Y4HS network sits at the intersection of racial and economic justice, educational justice and food justice, amplifying the voices of young people in school and community policy related to health and wellness, locally, regionally, and nationally. All organizations receive technical assistance focusing on improving organizing, policy and communications. For more information, please visit: (<https://fcyo.org/>)

Appendix D

Methods

We conducted five focus groups (n=15 students total) with high school students (aged 14-18) during a Youth for Healthy Schools meeting organized by Founders for Youth Collaborative (FCYO) (Appendix C). After the focus groups, we followed up with 9 students to conduct semi-structured telephone interviews. The follow-up interviews aimed to gather more individual experiences, as well as provide in-depth understandings of findings that emerged from the focus groups. Table 1 lists characteristics of the high schools that the students attended at the time of the focus groups.

Table 1 Characteristics of the high schools

Characteristic	N (%)
Locale	Suburb 6 (40%)
	Urban 9 (60%)
Free & reduced price lunch eligibility (tertiles)	Medium 5 (33%)
	High 10 (67%)
School size (tertiles)	Middle 8 (53%)
	High 7 (47%)
Majority ethnicity	Majority Hispanic 12 (80%)
	Majority Black 2 (13%)
	Other 1 (7%)
Region	West 10 (67%)
	Northeast 2 (13%)
	South 3 (20%)

Recruitment

Focus Groups: Prior to the Youth for Healthy Schools meeting in Los Angeles, the FCYO Director emailed students and parents/guardians about the focus groups, including consent and assent forms. Interested students were asked to obtain parental/guardian consent prior to traveling to the meeting. Following focus groups, the FCYO Director worked with the students' individual school organizers to connect with students and invite them to participate in individual telephone interviews. This study was approved by the University of Illinois (UIC) Institutional Review Board (#2015-0720) and the University of Connecticut (UConn) Institutional Review Board (H15-165).

Instruments

Both the focus group guide and the semi-structured interview guides (Appendix E) were informed by the literature and iteratively revised by the study team and officials at the Food and Nutrition Service of the USDA. The guides consisted of open-ended questions with probes. The focus group guide asked about students' experiences and perceptions of the cafeteria and school meal reform, as well as competitive foods and beverages. The semi-structured interview guide asked further about school meal experiences with the intention of capturing individual stories; as well, the interviews included questions about media and school meal reform (e.g., how have you seen school meals represented in the media?) and students' respective involvement with school meal reform projects.

A coding guide was developed using the focus group interview guide and also reviewed and refined by officials at the FNS USDA. Codes were grouped into nine code families based on the areas of interest. In addition, the coding guide was further revised for application to the semi-structured interview transcripts. The main revisions occurred during initial coding of follow-up interview transcripts, as new codes emerged or were added *in vivo*.

Procedure

Based on the students' schedules during the conference, we conducted five focus groups with three students in each. Focus groups were conducted by a lead moderator and room assistant and lasted roughly 60 minutes. Follow up telephone interviews lasted between 30-60 minutes. Both were audio recorded for transcription with students' permission. Parent consent and student assent were obtained prior to both focus groups and interviews. The assistant took notes during both focus groups and interviews, as well as after each post-focus group and post-interview debriefing session.

Analysis

Focus group and interview transcripts were reviewed for errors and then uploaded into Atlas.ti software program (v7) for organization and coding. Coding allows for large quantities of data to be categorized into 'meaning units' for efficient exploration of data and easy retrieval.¹⁵ To begin, analysts independently read through each transcript and coded one focus group transcript using the coding guide.¹⁶ The analysts then met to discuss memos and discrepancies between applications of codes; this process led to further refinement of the coding guide and initial understandings of emergent themes. Analysts reached inter-coder agreement of 84% on a second focus group transcript before beginning to code additional transcripts.¹⁶ Analysis involved continuous meetings and discussions to identify patterns and theme generation; these findings were shared with the research team and officials at USDA intermittently for questions and clarification, a process that led to further deepening of the themes.¹⁵

Member checking: An important step in the analysis process was a member checking discussion group held with the students after the analysts created a preliminary findings document. Students read the document prior to the call and provided feedback to analysts to clarify and review interpretations of the data. Accurately representing student voices was an important measure to enhance rigor and to align with their organizations' goals of student empowerment.¹⁴ In addition, we kept an audit trail with detailed study notes and decisions, as well as reflexive notes during analysis and writing.

Appendix E

Interview Guide

Introduction

Thank you very much for agreeing to participate in this telephone interview. This is Yuka and Margaret. We really appreciated your participation in July and are so pleased that you could join us again. This time, we are interested in learning more about school meals and snack food and beverages, and also about communication and media issues that you discussed during the FCYO meeting in July.

Just like last time, we want to remind you that your participation is entirely voluntary. You may choose to end this interview at any time. You may choose not to answer any questions you wish. Any of these decisions will not affect your relationship with FCYO, our universities, or your school organization. As you saw in the assent document, we would like to audio-record this interview, is it ok if I turn on the recorder now?

[Only if YES, proceed. If no, take notes only]

School Meals

First, can you remind us how often you eat school meals per week?

- a. Can you tell us more about why you choose to eat school meals on some days?
- b. Can you tell us more about why you choose to not eat school meals on some days?
- c. Since we spoke last, you've started school again, do you notice any changes to the school meals since last year?
- d. During the focus groups, you mentioned [INSERT FOLLOW UP QUESTIONS if there is anything unclear from this particular students' FG], can you tell me more about - -
- e. Last time the focus groups talked about 'black market' snacks that were available, foods or beverages that students bring to school to sell on their own. Do you have those types of items available at your school? Probe: How often would the students sell this in your school?

Media and School Meals

In Los Angeles at the FCYO meeting, there were sessions on the first day about how the media portray school meal standards. Can you tell me what you remember from that session?

- a. Have you had similar experiences in your particular school with media?
- b. What types of media have you seen or heard covering school meals (e.g., Twitter, local newspapers, Facebook)
- c. How has the media portrayed school meals? Is it similar to how you would describe your experience? [Clarify which types of media they are referring to]

- d. What do you think about Michelle Obama’s efforts to improve the school food environment?
- e. How do your peers at school talk about the changes to school food environment?
- f. What are the important issues for media to cover about school meals in your experience?
- g. If you could tell a story in the media about your school meal experiences, what would your story be? What outlet would you use (social media, newspaper, etc)?

Youth for Healthy Schools (FCYO)

Please tell us about your involvement with the Youth for Healthy Schools project.

- a. What initiatives are you leading or taking part in?
- b. Did you have a different/new project last year? Will you be starting a new one next year?
- c. What is the goal of your project/campaign?
- d. How are you communicating this project to the school and community?
- e. What kind of successes have you had so far?
- f. What are your struggles with the project/campaign?

Is there anything else you’d like to share about anything we’ve talked about it?

Questions for Member Checking:

Our Findings Report

We recently sent you a report that contained results from the focus groups we did with you and your peers in July. Have you read through this report yet?

- a. What parts of the report do you agree with (if any)?
- b. What parts of the report do you not agree with (if any)?
- c. Do you think anything is missing in this report based on your school meal experiences?

Appendix F

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