Key Findings

Overall, intervention schools increased participation in the School Breakfast Program (SBP) by 49% more than comparison schools.

SBP participation among the student breakfast skippers at intervention schools increased by 81% more than the students at comparison schools.

Students reported fewer barriers to eating breakfast at school following the intervention.

Common student-reported barriers included that it “takes too much time,” that the “bus arrives too late,” that “school breakfast tastes bad,” and that they are “not hungry in the morning.”

Students reported an increase in support to eat breakfast at school from other students and school staff following the intervention.

Cost-benefit analysis showed daily profits ranging from $90 to $489 after recovering up-front and daily costs.

Students in intervention schools reported no change in calorie intake despite the increase in SBP participation.

Overall, students in the intervention schools ate more fruit servings compared to students in the comparison schools.

There was no significant change in student body mass index between intervention and comparison schools over one school year.
Hello!

This study was inspired from a discussion I was involved in where Minnesota child health advocates expressed a need for data that show the importance of school breakfast programs for lawmakers. I went to the literature and discovered that this has been a neglected area of school food environment research. Research involving high schools students and in rural communities was especially needed.

Project BreakFAST was funded in 2012 to identify practical strategies to improve participation in school breakfast programs in Minnesota. Involving nearly a thousand 9th and 10th graders in rural communities throughout the state, the program has been remarkably successful in identifying and targeting barriers to participation in school breakfast programs: access, stigma, and food appeal.

This report summarizes our collective work and provides study findings, including best practices for responding to student-identified barriers to eating the school breakfast. As importantly, this report provides an analysis of the economic sustainability of implementation. A collection of resources created from Project BreakFAST is accessible at our website, http://z.umn.edu/projectbreakfast.

I sincerely thank the study schools and students, University of Minnesota Extension and research teams, and our guiding partners.

Susie Nanney PhD, RD
Associate Professor
Department of Family Medicine & Community Health
University of Minnesota
**Purpose**

This project aimed to expand and promote school breakfast program (SBP) participation among high school students in rural Minnesota. Additional aims were to examine the potential impacts SBP participation may have on student health, academic performance, and behavior; and to quantify the economic feasibility of expanding SBP offerings in schools of varying size.

**Methods**

Project BreakFAST involved a total of 16 secondary schools in rural Minnesota, split into two equal groups. Group 1 participated during the 2013–14 school year, group 2 during the 2014–15 school year (Figure 1).¹

To conduct the strongest evaluation possible, the intervention was structured as a randomized controlled trial: half of the participant schools in each group were designated as intervention schools, the other half served as comparison schools. This ensures that any changes observed are a result of the intervention (as opposed to some other general change; for example, it is possible that changes in statewide policy or educational practices could improve school breakfast outcomes even without the intervention). Our hypothesis was that school-wide SBP participation would be higher in the intervention versus the comparison group.

To determine which students were eligible to participate in the study, we asked all 9th and 10th grade students present on the day of data collection at each participating school (N=5,767) to complete a brief screening survey. Students were eligible to enroll in the BreakFAST study if they were in 9th or 10th grade, spoke and wrote English well, had access to a phone, were typically in school at the beginning of the day, and ate breakfast three or fewer days per week (N=2,512).

Depending on school size, between 50 and 75 of the eligible students at each school were randomly selected and invited to participate. Students of color were oversampled to more accurately discern trends in this population of students. Parents and student received a letter describing the study and inviting the student to participate. Student assent was obtained at the time of measurement. The final consented sample size was 904 students.

We collected data from two sources:

1. **Student data.** Participating students completed a survey with questions about their history of participation in school breakfast programs, attitudes regarding breakfast, and their perceptions of social support and barriers to accessing breakfast at school. Students also completed at least one phone call with a trained dietitian to answer questions about their diet, and allowed us to record their height, weight, and body fat percentage.

2. **School administrative data.** Participating schools provided data regarding school breakfast purchases, attendance, academic performance, and number of disciplinary events in school for all 9th and 10th graders. Schools also provided data for these students as they progressed through high school.

Data collection took place at three points in time: prior to the school year, at the end of the school year, and one school year later (not provided in this report).

The impact of the intervention was measured in terms of:

1. Student participation rates based on reimbursable meals served (all 9th and 10th grade students)

2. Overall student caloric intake and diet quality (participating students)

FIGURE 1. LOCATION OF PROJECT BREAKFAST SCHOOLS

WAVE ONE
1. Albany High School
2. St. James Secondary
3. Apollo Senior High
4. Montevideo Senior High
5. Le Sueur – Henderson High School
6. Owatonna Senior High
7. Cambridge – Isanti High School
8. Hutchinson Senior High

WAVE TWO
9. New London Spicer
10. Wilmar Senior High School
11. Bemidji Area Schools
12. Dassel – Cokato
13. Brainerd Senior High
14. Morris Area Secondary
15. Lincoln High School – Thief River Falls
16. Rocori High School

3. Body mass index and percent body fat in a random sample of participating students (participating students)
4. Perceived social support and barriers to accessing school breakfast (participating students)

Visit z.umn.edu/projectbreakfast for published papers, presentations, and more.

Intervention

The intervention consisted of implementing evidence-based strategies to address the most significant student-reported barriers to eating breakfast: access, stigma, and food-appeal.

Intervention schools:
• Formed School Breakfast Expansion Teams (SBETs) to brainstorm implementation strategies, make decisions, and promote new SBP offerings. Each SBET brought together school stakeholders with a wide range of perspectives: students, teachers, food service and custodial staff, administrators, and parents.
• Expanded breakfast serving locations outside the traditional cafeteria setting with a cart or table in a hallway with high traffic or other visible common area.
• Allowed students to eat breakfast outside the cafeteria to prevent them from having to choose between eating breakfast and socializing.
• Offered a “second chance” breakfast option after first period for students who arrive to school outside traditional serving times or are not typically hungry early in the morning.
• Provided a selection of “Grab n’ Go” food items which students can easily take with them but which also meet USDA nutrition regulations.
• Implemented student-driven marketing campaigns managed by a professional project partner specializing in this work. In comparison-group participant schools, student-driven marketing campaigns were run by marketing / drama classes and/or student leaders.
• Promoted a formal “kick-off” of the new SBP offerings during the first day or week of the school year.
• Gave students the chance to taste-test potential food items for free and provide feedback.
• Held formal training sessions with staff and participants in collaboration with the University of Minnesota Extension, which also served as a school liaison in an ongoing support role. The Minnesota Department of Education provided regulatory guidance.

Much more information on all of these intervention strategies, including training videos, example marketing materials (posters, videos), and lists of popular food offerings, is available on our website: z.umn.edu/project-breakfast. Details regarding implementation processes, lessons learned, and advice from participant schools can be found in this report under “Results.”

At the school level, participation in school breakfast at the time of screening ranged from 3-38%. Free/reduced-price lunch rates ranged from 20-58%. Between 2% and 33% of these student groups at each school were racial minorities.

The Importance of Food Security

14% of the 9th and 10th grade student enrollees in our study were identified as “food insecure,” meaning they did not have access at all times for enough food for an active, healthy life. Compared to their food-secure counterparts, these students:

• Were less likely to participate in regular physical activity
• Were less likely to participate in multiple organized athletics
• Were more likely to report poor or fair health
• Eat fewer calories
• Have lower cumulative GPAs
• Have lower GPA percentile rankings

<table>
<thead>
<tr>
<th></th>
<th>Food Secure</th>
<th>Food Insecure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strenuous activity more than half hour per week</td>
<td>79%</td>
<td>62%</td>
</tr>
<tr>
<td>Participate in two or more sports teams</td>
<td>47%</td>
<td>22%</td>
</tr>
<tr>
<td>Reported “poor” or “fair” health</td>
<td>48%</td>
<td>71%</td>
</tr>
<tr>
<td>Calories per day</td>
<td>1740</td>
<td>1531</td>
</tr>
<tr>
<td>Average cumulative GPA</td>
<td>2.9</td>
<td>2.4</td>
</tr>
<tr>
<td>GPA percentile</td>
<td>47%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Who are breakfast skippers?

Students who reported eating breakfast three or fewer days per week for the purposes of this study were termed “breakfast skippers,” and a random selection of students from this group were invited to participate.

During a normal school week, how many days do you eat breakfast?

<table>
<thead>
<tr>
<th>Days</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>17.1%</td>
</tr>
<tr>
<td>1</td>
<td>7.2%</td>
</tr>
<tr>
<td>2</td>
<td>9.4%</td>
</tr>
<tr>
<td>3</td>
<td>12.8%</td>
</tr>
<tr>
<td>4</td>
<td>9.7%</td>
</tr>
<tr>
<td>5</td>
<td>43.8%</td>
</tr>
</tbody>
</table>

Of the 904 “breakfast skippers” in our study:

- 15% report 6+ hours of moderate activity per week
- 15% report 6+ hours of strenuous activity per week
- 15% skip breakfast for weight control purposes
- 49% rate their general health as “excellent” or “very good”
- 39% of males have BMIs categorized as overweight or obese
- 34% of females have BMIs categorized as overweight or obese
- 54% are female
Results

SBP Participation

- Overall, intervention schools increased participation in SBP by 49% more than schools in comparison groups.
- SBP participation among the cohort of breakfast skippers increased by 81% more than cohort of students in comparison groups.

The intervention was remarkably successful in increasing SBP participation. Intervention schools (blue) increased breakfast participation among all students by 56% while comparison schools only increased by 7% (Figure 2). The difference was even more dramatic among students identified as “breakfast skippers,” where the increase in SBP participation was 105% at intervention schools compared to 24% at schools in comparison groups (Figure 3).3

Barriers to Eating Breakfast

When we followed-up with student participants one year after the intervention, we found that student-reported barriers to eating school breakfast decreased (Figure 4).4 The percent of students participating in the study who cited time as a barrier (“takes too much time” and “bus arrives too late”) decreased by 13% and 14%, respectively. The percentage claiming “school breakfast tastes bad” decreased by 15%, and those who chose to skip breakfast because they are “not hungry in the morning” decreased by 7%.

Social Support / Stigma

The students in the intervention group showed a significantly-higher level of social support post-intervention than those in the comparison group.5 Most of the overall social support changes

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Eating Behaviors Throughout the Day
Students who increased participation in the SBP decreased their frequency of eating at a fast food restaurant after school.6

Delayed/Low-Impact Interventions
Comparison schools did implement a lower-impact intervention the year after the intervention schools. This more-closely resembled a “real-world” expansion of SBP than an intervention: although they also received training and support from University of Minnesota Extension, they were not provided with the same comprehensive marketing packages that formal intervention schools received.

In these “real-world” examples:
• School-level participation increased from 13% at baseline to nearly 23% at follow-up.
• Student cohort participation increased from just under 8% at baseline to nearly 22% at follow-up.7

Grades
The average unweighted GPA of all students was 2.8. In this study, we did not observe changes in GPA related to the intervention, or across time, in either intervention or comparison schools. Many factors influence academic performance, however, and not seeing a change in GPA in this study does not necessarily mean that skipping or eating breakfast is unrelated to academic performance.

No Increase in Calorie Intake or Weight Gain

Increased breakfast participation did not lead to an increase in caloric intake or weight.

DIET
Students in intervention schools reported no change in calorie intake despite the increase in SBP participation.

Overall, students in the intervention schools ate more fruit servings compared to students in the comparison group schools.

WEIGHT
There was no significant change in body mass index between schools / students in the intervention and comparison groups. Weight is difficult to impact, as the school environment is only one influence upon a student’s overall diet and activity behaviors. We have collected a 3rd measurement (results pending).

Best Practices

SBETs / Planning
When interest in signing onto the Project BreakFAST study started with the food service director, the first task was to get administration on board with the project. Schools mentioned that meeting with administration early, being prepared for their questions, and addressing their concerns up front were important steps.

Once administration and the food service director were on the same page, committees were formed to start the planning process. We refer to these as School Breakfast Expansion Teams, or (SBETs). Schools in the first group (2013–14) reported very informal SBETs whereas the schools in the second group (2014–15) had solid SBETs in place well in advance of the

SBETs set goals and created plans for communication, marketing, and school breakfast program (SBP) logistics: deciding where the cart would be located, finding the best equipment to use on the cart, obtaining a functional point-of-sale machine, deciding serving times, selecting menu items, coordinating taste-testing. In one school, this work was divided into three sub-committees; in schools with informal or no SBET, the food service director or kitchen manager did much of this work. At this stage of the process, one of the keys to success was a good rapport between administration and food service.

Some SBETs set goals and created plans for communication, marketing, and school breakfast program (SBP) logistics: deciding where the cart would be located, finding the best equipment to use on the cart, obtaining a functional point-of-sale machine, deciding serving times, selecting menu items, coordinating taste-testing. In one school, this work was divided into three sub-committees; in schools with informal or no SBET, the food service director or kitchen manager did much of this work. At this stage of the process, one of the keys to success was a good rapport between administration and food service.

Some SBETs met only a few times while others met on a regular basis, beginning in late winter or spring and continuing through the fall when the program started. The importance of forming a strong committee was one of the lessons learned from the schools in the first group (2013–14).

Policy Changes
The majority of schools had policies in place stating food was not allowed in the hallway and/or classroom, which conflicted with new SBP initiatives such as Grab n’ Go. When the new SBP was implemented, some administrators informed staff that food would be allowed in their classrooms; in other cases, administration left it to the discretion of teachers. Teachers who did not allow food in their classrooms reportedly became more open and flexible to doing so as the school year progressed. Teachers reported that students were very respectful and kept their areas clean.

Schools that struggled with the new SBP reported that these policies did not change with the implementation of the Grab n’ Go program. Lack of support from administration was identified as a barrier to a successful program.

Foodservice Staff
The foodservice staff was critical in the preparation and implementation of the new SBPs. Many were involved in project start date. Most SBETs included the food service director, head cook, kitchen staff, and principal or assistant principal, along with student representatives. Some SBETs also included teachers (art, industrial tech, family consumer science, health), custodial staff, school nurses, school social workers, Extension liaisons, staff from Community Blueprint (professional marketing consultant firm), and even one superintendent.

Best Practices

Best practices for successful implementation of new School Breakfast Program (SBP) offerings, according to Project BreakFAST participants:

**IN PLANNING PHASE:**
- Form a strong planning committee
- Meet with administration early - prepare for their questions and address their concerns up-front
- Establish and maintain good rapport between administration and food service staff
- Ensure school policies align with goals of SBP; work with administration to modify policies that do not
- Involve foodservice staff members in every stage of the process
- Anticipate and address staffing logistics

**DURING IMPLEMENTATION:**
- Principals: show enthusiasm, be advocates for new SBP
- Teachers: be flexible with classroom policies; promote the SBP in your classrooms
- Work to obtain student buy-in, which is instrumental to SBP success
- Involve students in marketing efforts with peer-to-peer marketing and promotion
- Market directly to students: announcements, flyers, videos, social media, food samples, free breakfast days
- Place Grab N’ Go carts where they are most visible and accessible, in areas with heavy student traffic (not necessarily near the cafeteria)
- Offer “second chance” breakfast after first period to target students who are not hungry in the morning
- Consider purchasing new equipment to facilitate SBP expansion.
- Consider unique food offerings, such as smoothies, which were very popular with students.
various facets of planning and implementing the Grab n’ Go breakfast carts. Some principals described involving their foodservice staff members right away by taking them to the UMN workshop and early planning meetings, including them on committees and consulting them when determining the logistics of the program. Many study participants felt it was important to involve foodservice staff throughout the whole process of planning and implementation. At some schools, these employees were champions of the SBP, helping to promote them to students and assisting the research team with data collection. Many principals stated the foodservice staff felt they were there for the students, loved to interact with the students, and enjoyed their work, which made transitions much easier.

Another food service manager reported that the new Grab n’ Go breakfast helped to create a positive relationship between the students and foodservice staff. Many food service managers noted the enthusiasm the foodservice staff had for the new Grab n’ Go breakfast, and described their staff as feeling proud about their jobs. High student participation helps the foodservice staff see the benefit of the program.

Another food service manager found it very difficult to get foodservice staff on board. They did not like change and it was difficult to expand their duties without increasing their regular amount of hours. A food service manager described setting up the Grab n’ Go cart as a lot of extra hard work, with staff not as excited about the changes the second year as they were in the first.

Many foodservice directors had to figure out how to manage staff logistics with the addition of a breakfast Grab n’ Go cart. Some hired new staff members right away, while others rearranged existing employees’ duties and hours. One food service manager described utilizing her staff better and making them more productive. Some participants that had to increase staff hours or hire another staff member reported that the increased SBP participation paid for the increase in staff time.

Many of the foodservice directors described working with their staff, health inspectors, and other local public health officials to create plans, design the layout of the cart, purchase equipment, and set-up their Grab n’ Go breakfast carts the summer before implementing the program. Many schools reported that the foodservice director acted as the liaison between the University of Minnesota extension, research team, and principal.

Custodial / Maintenance Staff

Although many study schools were concerned about the potential mess the Grab n’ Go breakfasts could make around the school, many reported this ended up not being a problem. After setting clear expectations for the students regarding the waste from the Grab n’ Go breakfasts, the students were for the most part responsible and picked up after themselves. Some study participants, however, reported that janitorial staff with an aversion to change were actually a barrier to successful SBP implementation.
Schools often included their custodial staff on the SBETs to keep them informed of the changes as well as to have their input.

**Principal / Administration**

The involvement of principals at participant schools ranged from minimal to hands-on. Some schools described the principal as the primary contact for the study, gathering data that the foodservice staff did not have readily available, coordinating the students and the study personnel. More often, principals provided administrative support, helped get teachers on board with the program, communicated with teachers about changes, talked with custodial staff about waste, changed policies (such as eating in the classrooms), and resolved conflicts and concerns regarding SBP changes.

A few school principals in the study were very hands-on, organizing and managing the planning and implementation of the Grab n’ Go breakfast cart along with the foodservice staff. These principals had a great relationship with the foodservice staff and were very supportive and encouraging of the changes they wanted to implement. They promoted the new SBP with announcements, assisted students in working with Community Blueprint, and even took starring roles in the promotional videos. Principals organized kickoff meetings for teachers and staff to discuss the new SBP changes; their upbeat, positive, enthusiastic attitudes were effective at getting people involved in the planning and promoting process and increasing student buy-in.

A few schools described the principal as being minimally involved in making changes to the SBP, only involved in the first few meetings. Some of the principals initially talked to students about the program and handed over the reins to the foodservice director.

**Teachers**

Many schools described teachers as being receptive to the Grab n’ Go breakfast, allowing students to eat in their classrooms, excusing tardy students who were in the back of the breakfast line, and placing posters and flyers promoting the SBP in their classrooms. Some teachers were a part of the SBETs. In some schools, the marketing, art, and drama teachers took charge of the marketing piece of the SBP expansion. One school described how the welding class created stands for the Grab n’ Go breakfasts.

Although some schools reported that teachers had an initial fear of students being disruptive or messy in the classrooms, they found that students were actually very responsible. Some schools described teachers as being very positive about the SBP changes, eating breakfast with the students. Other study participants reported that their teachers may not have been entirely onboard with the changes, but they were happy the teachers did not sabotage the program.
Students
Student buy-in was instrumental to the success of the SBPs. Most schools supported student involvement throughout the planning and implementation phases, recruiting students to serve on the SBETs. Students taste-tested menu items, handed out food samples during open houses, and answered questions about the SBP changes. Schools reported that peer-to-peer marketing was particularly effective.

Students were very vocal about their likes and dislikes and were not afraid to share their thoughts with foodservice personnel, teachers, and other students. Student feedback not only shaped the SBP menu, but also how it was offered.

Marketing, Promotion, & Communications
Communication was a huge factor in the study’s success. Schools communicated with parents regarding the SBP changes in newsletters and in person at parent nights and open houses. A few schools also ran articles in the local newspaper. The largest stakeholders, however, were the students themselves. Schools made announcements over loudspeakers and on paper to students. The SBPs were promoted with posters and signs in school hallways, social media, promotional t-shirts, samples of new menu items, and videos.

Early in the year, teachers were informed about changes to the SBP and/or school policies. A few schools did this in their teacher workshops before the school year began. One school had staff members provide an educational talk about the high school’s SBP changes on the radio; another translated newsletters to parents regarding the SBP changes to Spanish and Somali.

Marketing the new SBPs was instrumental in the success of this project. Many schools launched huge marketing campaigns with fun & creative themes, many of which were created with input from students, teachers, bus drivers, and maintenance staff. A few schools collaborated with business, marketing, and/or art classes to create marketing materials; many enjoyed working with Community Blueprint as well. Visit z.umn.edu/projectbreakfast for examples.

Although many schools reported having fun creating the promotional videos, a few schools thought it was too much work and would not do it again.

Promotional and marketing activities by participant schools included:
• SBP promotional float in the homecoming parade, with students handing out miniature boxes of cereal.
• Photo booths where students could have their pictures taken alongside the school mascot with milk mustaches.
• Punch cards where students received a punch in their card each time they purchased breakfast in the morning; completed cards were entered to win prizes.
• “Free breakfast day,” which was a particularly effective marketing strategy.

Sampling the new breakfast menu items was an important way for schools to receive feedback from students on what they liked and disliked. Students provided feedback of samples verbally, through surveys, and social media. Many study schools described offering early taste testing the spring before the SBP changes were implemented to help foodservice shape breakfast menu items as well as give a sneak-peak of the program to students and pique their interest.

Grab N’ Go
Each of the participating schools implemented changes in different ways. Many schools called their new program “Grab N’ Go,” offering different foods for kids to eat from a cart including fruit smoothies, scratch-made breakfast sandwiches, burritos, and/or cinnamon rolls. One study school offered breakfast at five different locations throughout the school for the students. Another reported student backlash after they took hot breakfast out of the cafeteria completely, in lieu of a Grab n’ Go cart.
Many schools offered Grab N’ Go options along with a traditional hot breakfast in the cafeteria before school started. Study schools discussed how a small group of students utilized the traditional cafeteria breakfast every day and many schools saw a benefit in keeping it open.

Several study schools described putting a Grab N’ Go cart out right away in the morning for students in convenient, accessible areas such as the school entrance. A study school reported that their SBP was underutilized because the cafeteria was out of the way.

A few study schools reported that their first-chance breakfast had the same number of students participating after they implemented the Grab N’ Go breakfast, while other study schools saw a drop in student participation in their first-chance SBP.

**Second Chance**

Almost 60% of the first group of Project BreakFAST student participants listed “not hungry in the morning” as a barrier to eating school breakfast. To address this issue, most participant schools offered “second chance” breakfast after first period, between 9:00 AM and 10:00 AM. Many schools offered cold Grab n’ Go items such as cheese sticks, milk, fruit cups, and packaged grain products on breakfast carts.

Although second chance breakfast presented logistical challenges, many study participants cited it as driving large increases in SBP participation: one school reported an increase from 25 students before second chance was offered to 200 students afterwards. Another school, which did not report a very successful SBP implementation, was not able to provide a second chance breakfast.

**Menu Items**

Many school breakfast programs added a variety of items to the second chance Grab n’ Go cart. Most added cold, pre-packaged items easy for students to handle on the move. Fruit cups and grain products were popular. Some participants offered hot breakfast sandwiches and burritos. Many study schools worried about the breakfast cart line items becoming stagnant and decreasing student participation, so these schools tried to keep fresh menu items. One participating school offered smoothies, which were very popular with students.

Many schools purchased equipment for their second chance breakfast program, including the aforementioned smoothie maker, serving bowls, laptops for purchases, carts, cam chillers, computer risers, keypads, and more. As SBPs became more popular, some schools had to purchase more equipment to increase serving capacity.

**Location**

Most study schools set up the breakfast cart where students could easily see and access it during passing times. Many schools had to relocate the cart a few times before they found the right spot, and discovered it was worthwhile to add additional breakfast carts to serve multiple locations.

“We had a pretty active planning group led by the high school principal, which I think really helped the implementation because he was on board … he set the tone for ‘We’re going to do this, and it’s going to be a good thing,’ and that’s exactly what happened.”

—Food Service Director

“With our increasing population of students that are living in poverty, more and more of our students now qualify for free and reduced lunch, I think any time we have an opportunity for students to be fed and it’s only going to increase their ability to become more engaged in classrooms, and obviously, the ultimate goal is to improve student achievement at that point.”

—Principal
Most schools allowed students to eat in the halls and the classrooms, which required many study participants to change their school policies. In some cases, teachers also had to be flexible to allow students to eat in their classrooms. Some study schools designated classrooms where students were and were not allowed to eat.

**Economic Analysis**

**Research Questions**

1) What is the up-front cost of expanding SBP service and eating locations to include a Grab n’ Go and/or second chance options and a student-led marketing campaign?

2) What is the daily revenue generated by increasing school breakfast sales?

3) How long will it take to recoup the up-front costs, based on daily revenue?

**Why is this important?**

We know that many schools may be interested in improving access to their school breakfast program. While we have shown that the strategies of the Project BreakFAST intervention are successful, we needed to know how if schools outside of the research study and with limited funds could feasibly achieve the same results. We used Applied Economy strategies to assess the cost of the intervention and the eventual revenue based on the breakfast sales increases seen at the study schools.

**Results**

Ten study schools participated in the cost-benefit analysis. On average, schools with greater than 1,000 students saw as much as $489 in daily profit; smaller schools still generally saw a range of $90 - $223 in daily profit.

The longest it took a school in the study to recoup their up-front costs was 100 days. Most schools took about 1 month to recoup these up-front costs – even those that spent as much as $9,000 up-front. One school, with a dramatic increase in sales and very low up-front costs, broke even in only 6 days.

Notably, the intervention schools received a marketing package from an agency valued at $4,000 to support the development of the student-led marketing campaign, which was included in these schools’ up-front cost calculations. Comparison group schools did not receive this marketing package, and spent as little as $1300 in up-front costs. Also notably, the schools that did use the local marketing agency did not see dramatically different increases in SBP participation, suggesting that it is feasible for a school outside of the study to use their own marketing and promotion strategies rather than pay for professional services.8

Table 1 shows the range of daily profit among large, medium, and small schools.

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### TABLE 1. RANGE OF DAILY PROFIT AMONG LARGE, MEDIUM, AND SMALL SCHOOLS

<table>
<thead>
<tr>
<th>ENROLLMENT</th>
<th>MEALS TO RECOVER DAILY OPERATING COSTS</th>
<th>DAYS TO RECOVER STARTUP COSTS</th>
<th>DAILY PROFIT</th>
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<tr>
<td>Large</td>
<td>48</td>
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<td>$212.49</td>
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</table>

* "Large" schools have more than 1000 students, "medium" schools have between 500 and 1,000 students, and "small" schools have 500 or fewer students.
Resources

PROJECT BREAKFAST
healthdisparities.umn.edu/research-studies/project-breakfast

PROJECT BREAKFAST TOOLKIT
extension.umn.edu/family/health-and-nutrition/toolkits-and-resources/project-breakfast

COMMUNITY BLUEPRINT
communityblueprint.com
Credits and Acknowledgements

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- University of Minnesota Extension
- Minnesota Department of Education
- Community Blueprint
- Kathleen Milbrath, School Meals Specialist
- Midwest Dairy Council
- St. Catherine’s University

## FUNDING

The study was funded in February 2013 by the National Heart, Lung, and Blood Institute (Grant Number R01HL113235).