Fit Kids at School:

Executive Report Part II

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Introduction

This report includes data from the Fit Kids at School project updated through the Spring of 2014. This report includes four main parts:

1) The First part describes the **summary of interviews conducted in May 2014 with 9 principals and 7 health aides.** The interviews included a series of open-ended questions (tailored to either the principal or health aide) as well as items that ask for a rating from 1 (very negative) to 10 (very positive) about the program. Summaries are provided with example quotes, highlighting answers to questions such as "*What do you believe are the greatest strengths of the Fit Kids at School Program?*" And *"What do you believe are the greatest challenges/issues for the Fit Kids at School Program?"*

2) The second part summarizes the characteristics of the children in the database that are in non-FUSD elementary schools as well as the two FUSD middle schools. This includes the summary statistics of 'cohorts' of children who have participated in both the Fall 2013 and Spring 2014 measurement times. In this section, we present **'baseline'** (time 1, fall 2013 for this group) information on **risk status by Body Mass Index Percentile values**, which is the primary outcome measure for the project. BMI percentile score is an indicator of body composition and strongly related to future health risks. For the schools where measurements were available, we also present changes from the Fall of 2013 to the Spring of 2014.

3) The third part of this report includes an **update on the minutes of activity per week offered** at each school. Specifically, we focus on the non-FUSD schools and evaluate whether they **a) offered all three activities consistently** and **b) compared whether their minutes of activity offered per week were similar** to the FUSD elementary schools.

4) The fourth and final part consists of **conclusions and updates on developments** related to Fit Kids activities going forward, such as grant proposals and dissemination activities.

Executive Summary

Part I: Interviews with health aides and principals:

Overall, the Fit Kids at School program appears well received. **Health aides and principals rate the overall program highly (8.9 on a 1-10 scale)** and share the view that the greatest strength of the program is that it teaches children healthy habits at a young age. The principals also value the role the health aide plays in providing structured recess activities. Both health aides and principals believe that **the children really enjoy the program,** with one principal mentioning that perhaps children's enjoyment of the program is the most important outcome of all. Principals also rate their health aides highly. In addition, health aides indicate a positive working environment.

The biggest challenges mentioned were the **lack of a health aide as a certified position**. This appears to influence challenges such as a lack of training of the health aides (particularly with respect to classroom management), and a perception on the part of several health aides that their positions are a temporary job for them. Other notable challenges are **scheduling constraints** (principals) and space constraints (health aides). Several health aides expressed concern over the BMI measures as the main outcome.

Going forward, the principals **would like to see the program continue** and expressed concern over the grant funded nature of the project. They would like to build on the lessons learned from the previous years and continue to integrate Fit Kids at school as a structural part of the curriculum**. Several would like to see the evaluation,** and potentially expanded with a **greater focus on nutrition and food waste.** Another major theme was a desire **to move towards a certified position for the health aides** (indicated by both health aides and principals), which would allow for more training and a sustainable presence going forward.

Part II: Body Mass Index Percentiles:

This report provides an update to the Body Mass Index Percentiles presented in the first report. This report includes data from the non-FUSD schools elementary, including Mountain school, San Fransisco de Asis, Williams, Cottonwood, Camp Verde, and Dr. Daniel Bright. The report also includes updated information from the two Middle Schools (Mount Elden and Sinagua). Data from two time points (Fall 2013 and Spring 2014) is included for Mountain School, Williams and the FUSD Middle Schools. The other schools only have Fall 2013 included at this point. The total number of children included in this new data was **N=2,059 for the elementary schools alone, with another N=1,740 for the middle schools**.

The BMI percentile data suggests that **in the non-FUSD schools, overweight and obesity rates were about 10% higher** (about 35% total overweight or obese) compared to the 10 FUSD elementary schools (25.0% total): Camp Verde (39.3% total) and Williams (35.4%) were notably higher and Dr. Daniel Bright (27.4%) was also high given that the mean age of the children measured was only 6.7 years old. Cottonwood (35.6%) was also higher, but the children were a little older on average (9.7 years old), which may explain part of the difference. San Fransisco de Asis was slightly lower than the FUSD schools at 23.3% total with a mean age of 9.7 years old**. The most notable exception was Mountain school**, which has the **lowest prevalence** of overweight and obesity of any school (only 7.7% total, 3.0% obese).

We had follow-up data from the Spring of 2014 for two elementary schools: Williams and Mountain school. Williams showed notable improvement, **with 23.5% of children who were at risk in the fall of 2013 improving their risk status** (12 of 51 children, from obese to overweight or overweight to healthy weight), and only 5.5% previously non-overweight children worsening (5 of 91 children). Mountain school reduced their obesity to only 1.8%, but increased their proportion of children who were overweight to 9.5%.

Of the children measured both in the fall 2013 and spring 2014 in the middle schools (N=1,430), a total of 37.5% were overweight or obese in the Fall of 2013. I**n the spring of 2014, this had dropped to 36.3%.** This drop is not expected, as children in this age range are expected to increase their percentiles. The average follow-up period was brief, **only 137 days on average** (as some fall measurements actually occurred in January). A total of 68 children improved their risk status (**a full 12.7%** of children who were at risk in the fall), with 52 children worsening.

Part III: Program Implementation:

Minutes of activity per week were assessed for the spring of 2014, adding to the data shown in Report Part I. The findings show that the estimated minutes per week of activity offered were very stable and consistent with previous measurement points at about **270 minutes per week.** We compared the **newly added schools to the original 10 FUSD elementary schools** and **the findings were highly similar**. This suggests that the program is implemented as intended (all components and consistently) across all FUSD and non-FUSD schools. All children in the schools participate in the activity rotation special each week. **An additional 175 students participate in optional lunch recess every week, and an additional 100 children in pre-school activities.** The numbers in the current report did not adjust for some weeks being shorter because of external activities (such as testing days, snow days, holidays etc.), so the numbers presented are likely slight underestimates of the actual numbers.

Similar to previous reports, the health aides, on average, **spend about 70% of their time on teaching the activity classes, about 20% on lunch recess and 10% on prior-to-school arrival**. Their total instructional time per week is about 15 hours and comes down to about 4 activity classes a day, one lunch recess and prior-to-arrival activities.

Part IV. Future steps:

We believe that these reports are the first step towards wider evaluation and dissemination of the Fit Kids at School and clinical programs. To this end, we have explored several steps that need to be taken in order to facilitate this process. Exploring ways to communicate the information to the principals and health aides may be a valuable step, to the extent in which this has not happened yet. Secondly, following several meetings with the respective Institutional Review Boards at NAH and NAU, the THRIVE initiative (Translational Health Research Initiative) has been narrowed down as a starting point to explore to what extent the current findings can be used for grant submissions and peer-reviewed scientific publications. THRIVE is a collaboration between Northern Arizona Healthcare and the NAU Vice President for Research to facilitate collaborative health research and grant funding. A THRIVE application will go to the NAU Vice President for Health Research (Dr. Bob Trotter) and the Senior Vice President for Population Health management of NAH (Dr. Steven Lewis) and is currently being prepared. THRIVE guidance could help facilitate the process of understanding to what extent the current data can be disseminated (and which component can be included moving forward, such as standardized testing scores) and facilitate attaining larger grants. To move forward, over the next year, it is proposed to:

a. **Submit the THRIVE proposal** and **a more comprehensive NAH/NAU/FUSD IRB** to gain clarity on what the collected data can and cannot be used for;
b. If approval is granted, **disseminate the findings in two manuscripts submitted to peer-reviewed journals** and **present at national conferences**;
c. **Submit a larger grant proposal focused on translational research** to continue the evaluation process of the Fit Kids at School Program, with federal agencies or foundations being considered as possible funding sources.

Part I: Interviews

Interviews with health aides and principals were conducted between May 10th 2014 and June 1st 2014. A total of 9 principals and 7 health aides were interviewed. All consent procedures and questions were approved by the NAU Institutional Review Board. The interviews were about 10-15 minutes in length and were completed by two Research Assistants from NAU's pre-doctoral clinical health psychology program.

The interviews consisted of two parts: 1) a series of open-ended questions about their perceptions (strengths and challenges of the program) and future directions for the program and 2) a rating including a series of questions related to perceived effectiveness of the Fit Kids at School Program. The specific open-ended questions are listed in Table I.1 and ratings are listed in Table I.2. The first three open-ended questions and first two ratings of each interview were applicable to both health aides and principals. The final questions were specific to the principals or health aides.

Table I.1: Open-ended interview questions for health aides and principals

Health Aides AND Principals:
1. What do you like/greatest positive about the program?
2. What have been the greatest challenges/ what do you not like about the program?
3. What do you think are the kids' perceptions of the program?
Health Aides only
HA4. How would you describe your interaction with a) your colleagues and b) the principal?
HA5. What career development opportunities would you like to see?
Principals only
P4. What do you see as your role/responsibilities for implementing this program?
P5. Is the health aide meeting your expectations in terms of job fulfillment?
P6. In an evaluation like this, what kinds of outcomes would you like to see?
P7. Going forward, what is your vision of the Fit Kids at School program at your school?

As can be seen in Table I.2, the overall rating of satisfaction and effectiveness with the Fit Kids at school program was high among both health aides and principals. Principals also rated their health aides very highly. Finally, the health aides rated their job satisfaction highly as well.

Table I.2: Interview questions that included ratings from 1 being very negative to 10 being very positive

Principals and Health Aides	Average rating Health Aides	Average rating Principals
What is your overall perception/satisfaction of the Fit Kids at School Program?	8.9 (range 7-10)	8.9 (range 7-10)
How effective do you think the Fit Kids At School program is (in terms of outcomes such as BMI, activity levels, nutrition, misbehavior)?	8.5 (range 7-10)	8.3 (range 7-10)
Principals only: What is your overall rating of the health aide (their position) as being effective in your school with the Fit Kids at School program?		8.7 (range 7-10)
Health Aides only: What is your overall job satisfaction rating (from 1 very dissatisfied to 10 very satisfied)	8.8 (range 7-10)	

General open-ended questions

The comprehensive list of quotes from the interviews is listed in Appendices A (principals) and B (health aides).

1. **Open-ended question 1:** What do you think is the largest strength of the program:

Summary: Both principals and health aides have a positive perception of the Fit Kids at school program. They believe that the biggest strength of the Fit Kids program is that it teaches children healthy habits of activity and nutrition at an early age in a fun way. The principals appreciated the ability of the Fit Kids instructor to facilitate structured recess and the impact on behavioral issues.

Example quotes:

"The program provides the students with another opportunity to be active, and teaches them more of the nutrition that the kids don't get in a regular PE class. It is important that children learn these healthy active habits early on in elementary school because once they get to middle school, if the kids are not already active, they aren't going the start then. Early exposure to fitness is necessary and Fit Kids provides a lot of equipment which is great especially in the winter when it gets cold and then they can also get outside when it gets nice." (health aide)

"I support the program in many ways, because it is an area that the school needs to work on with kids and help them through, since they have not worked on health in the past. It is an opportunity for [prevention of] childhood obesity, diabetes and heart problems by starting to teach health, nutrition and physical fitness as an integral part of children's daily lives."(principal)

"The Fit Kids instructor is out there with the kids during recess time, and (s)he is helping them learn how to do different games and to work cooperatively together."(principal)

"It gives us another person to help facilitate a structured recess. The kids are less inclined to have behavioral issues, especially the boys. There is organization to recess, and the kids have more opportunities to do something physical as well." (principal)

2. **Open-ended question 2:** What do you think is the largest challenge to the program:

Summary: the biggest challenges mentioned by principals appear centered around the health aide position not being a certified position, which has at times resulted in difficulties with classroom management and health aide turnover. In addition, scheduling was mentioned as a challenge. The biggest challenges mentioned by health aides included space limitations, mixed views on Hop Sports and that the BMI testing was invasive and should not be such a focus of the program.

Example quotes:
"Scheduling has also been challenge: it is a loss of instructional time and [school name] has worked really hard to make their calendar so that it has few fragments in order for the teachers have big blocks of time to teach- Fit Kids complicates that at least once a week." (principal)

"I think the biggest challenge that I have seen that has been better this year but I still know that there's issues in our school district is not having the health aides be certified teachers. I think that there is something that you bring to teaching that you can't necessarily teach, and probably the biggest piece is that classroom control piece. I did lose an instructor partially to that last year, simply because she just never was able to get the kids to where they would listen and do what she asked. …which is the number one thing that will run them from the profession: it's the frustration of not being able to control a class. So if there is any weakness to the program it is that these folks come in I feel like at a little bit of a disadvantage as far as that classroom control. I think that they maybe need more training and maybe a little bit more mentoring with that." (principal)

"Staffing has been a challenge because it is a classified position so health aides put in their time and then move on to a better job. This job is only 36.5 hours a week at $10/hr. As a principal I would like to see it as a certified position but there is the expense of salary. There would be more longevity if it was certified especially with all that the health aides are asked to do for only $10/hr: lesson planning & classroom management and all else. [School name] has been fortunate to employ certified teachers in the health aide position, but unfortunately they don't stay for long." (principal)

"Just finding somewhere when the weather is bad, or scrambling to figure out what we are going to do when the weather is bad. And it's not hard to change up a game or an activity; it's just making sure if I will have enough space, are the kids going to have enough space when they are running at each other…things of that nature." (health aide)

"BMI testing is really abrasive and invasive, there needs to be more of a heads up to the parents. Parents are getting a letter about their kids and it's not a positive letter/experience. A letter in the mail about BMI status may not be well understood and it may not be the best way to communicate a child's health status to a parent. Parents need to be warned and informed about the Fit Kids BMI testing." (health aide)

3. **Open-ended question 3:** What do you think are the children's views of the program?

Summary: The views of both principals and health aides on the children's perceptions of the program were universally positive.

Example quotes:
"I think they love it. When you go down and see the class and watch them interacting with one another, it is a fun time for them. They are active and moving and they are having fun, but they are learning and exercising. I think the programs that they are using for the kids are very motivating and keep the kids engaged." (principal)

"During lunch duty kids will come up to me and show me 'Hey look, I'm eating an apple' so the nutrition part is really sticking with them. I see them in the hallway and they tell me what they are doing this weekend in terms of activities. I think it's good for them to really understand the importance of eating right and living a healthy lifestyle." (health aide)

"They love it. They really enjoy the extra activity and getting to play games. Even the nutrition part, they get really excited about it and you can tell that they are learning more." (health aide)

Additional Principal questions:

P4: What do you see as role for implementing this program?
Summary: the principals see it as their role to provide support to the health aide and Fit Kids program as a whole, setting clear expectations and ensuring Fit Kids is incorporated in the schedule.

As one principal mentioned: *"I guess [my role is] to provide support to the Fit Kids instructor, as well as making sure they have the schedules, dedicated kids and teachers who are all on board with it so that we are all sending the same message, to me that is the support end of it. If there's any equipment or materials needed then I can help support the Fit Kids instructor and make sure that that is there. Making sure that the teachers know that it is not an opt out event. We don't cancel Fit Kids because they want to spend more time on math or something. It is just like any other class. I guess being role model- I need to hit the track at lunch time and run the track with the kids. Just to be a role model. To make the Fit Kids instructor feel just like a regular staff member on our staff- we work hard to make sure she has a place and a space that works and is not a stepchild part of the staff. " (principal)*

P5: Is the health aide meeting your expectations in terms of job fulfillment?
Summary: the principals are happy with the Fit Kids aides. For some, they would have liked more training up front.

"Absolutely. (S)he has done a great job with the students this year. (S)he's self-motivated, needs very little direction, and has a very good rapport with the kids."(principal)

"(S)he goes above and beyond and helps other areas of the school with behavior and preschool because she is also good with management. [Health aide name] will be difficult to replace next year since (s)he does so much, especially because this is not a certified position." (principal)

"[School name] has been fortunate to have health aides that have had past experience in the classroom. Currently, the health aide organized and dependable, a good communicator and great collaborator. If the health aide did not have that classroom experience, it may be a different story."(principal)

P6: In an evaluation of a program like this, what outcomes would you like to see?

Summary: several principals asked for feedback from the program, whether it be in terms of BMI, activity or nutrition. Notably, several principals highlighted the nutrition component, including food waste.

"The Fit Kids program is exactly where it needs to be in the last two years, but there is a need for an evaluation to see where we are at and determine what else needs to happen."(principal)

"I would like to know if Fit kids is making a difference with BMI, and is it changing the kids' nutritional choices, down the road- will these kids be healthier adults, will they exercise more because they had learned it as a young child? Is the program changing them? Is it a long lasting positive impact- as 13 yr, 15 yr, and 20 yr olds and beyond to establish healthy lives? Does Fit Kids in School impact the families? Does the Fit Kids program at FMC impact the family more?"(principal)

"It would be nice to see a perceived benefit as far as fitness goes for the kids that goes beyond BMI. I would like to also see outcomes for skills such as sportsmanship." (principal)

"I am concerned about the amount of food waste- and would like to measure this because the food choices kids make and the food provided for kids relates to health and nutrition components of Fit kids. I would like to see a partnership between health providers, food service providers and Fit Kids to bring an awareness level to children."(principal)

One principal indicated that perhaps the most important component is whether the children enjoy the program:

"The biggest outcome for me at an elementary school is that the kids are enjoying what they are doing, and that what they are doing is going to be somehow life changing or will have an effect on their quality of life. The same way that kids have to learn math and kids have to learn how to read, I feel like this kind of program along with music and P.E. and art and those kinds of things do make the kids better people, and show them skills that allow them to live their lives more effectively."

P7: Going forward, what is your vision of the Fit Kids program at your school?

Summary: The principals mentioned that they would like to see the program continue beyond the grant period, with stable positions for the health aides. They mentioned how they wanted to build on the progress that was made and improve scheduling, programming and teacher training.

"I just would like to see it continue and get stronger. I mean each year we have been able to take a different aspect of it and grow on that. So next year my hopes are that there can be some active intramural kind of events during lunch time instead of just rotating the activities around with the Fit Kids person."(principal)

In addition, the principals had several new ideas/ visions for the future of Fit Kids at School, all focused on expanding or re-focusing the program on certain topics:
"I would like to see the Health Aide being paid more and supported more by Fit Kids in the larger schools to maintain the level of service that [health aide name] has provided so that the kids want to do more. …The program is what the school believes in: eating healthy and being active. [school name] was trying to be a STEM school, now they are trying to be a STEAM school and have hired someone to bring in the nutrition and fitness piece as part of the student nights. It would be a responsibility of Fit Kids to help with that and not the PE instructor's role."(principal)

"I would like to be able to see it continue to be supported at the level that it is. A lot of times when you are working with grant funded programs after a while they start to lose funding and you end up with something that is kind of a shadow of what it was because people wanted in their hearts for it to be what it was but sometimes it is not possible to do that. So what I would really like to see is this program continue as is and then the second part of that I would like to see is maybe a little bit more of an emphasis on the nutrition part of the program. I think it swings more towards the exercise part right now, and I think that the nutrition and healthy eating part might want to take on a stronger role as it moves forward." (principal)

Additional Health Aide questions:

HA4. "So how would you describe your interactions with your colleagues and principal?"

Summary: overall, the health aides appear to interact positively with the other school staff, including the principals and PE teachers.

"Really good. We get along really well and we help each other out. It's a good tight community of coworkers."(health aide)

"I don't interact with the principal much, only when something bad happens on the playground. I am very close with the PE teacher. We talk about what each other is doing." (health aide)

HA5. "What career development opportunities would you like to see/ what would you need to stay in this position long term?"

Summary: The most frequently mentioned components are a desire for an increase in training opportunities (particularly related to classroom management up front, and specific nutrition and activity training), and a desire for the position to be a certified position vs. a classified position.

"Training could be more fined tuned. I was under the impression that health aides were certified teachers. Certain skills can make a difference in communication, containment, and classroom management. A meeting should take place every year for guiding health aides in how to manage a

classroom, because some of the health aides have not taught before or have even worked with children. Two days of training is not adequate." (health aide)

Part time vs. certified status

"I have not thought of being a health aide for Fit Kids as a career, but I am not aware of any further opportunities. I see it only as a part time position on the side."(health aide)

"Personally, I see myself working with the high school students when Fit Kids gets introduced to high school. I'm a certified teacher working in a classified position and think that the job as a health aide would be better suited as a certified position." (health aide)

Conclusions Part I: Interviews

Overall, the Fit Kids at School program appears well received. Health aides and principals share the view that the greatest strength of the program is that it teaches children healthy habits at a young age. The principals also value the role the health aide plays in providing structured recess activities. Both health aides and principals believe that the children really enjoy the program, with one principal mentioning that perhaps children's enjoyment of the program is the most important outcome of all. Principals also rate their health aides highly. In addition, health aides indicate a positive working environment.

The biggest challenges mentioned were the lack of a health aide as a certified position. This appears to influence challenges such as a lack of training of the health aides (particularly with respect to classroom management), and a perception on the part of several health aides that their positions are a temporary job for them. Other notable challenges are scheduling constraints (principals) and space constraints (health aides). Several health aides expressed concern over the BMI measures as the main outcome.

Going forward, the principals would like to see the program continue and expressed concern over the grant funded nature of the project. They would like to build on the lessons learned from the previous years and continue to integrate Fit Kids at school as a structural part of the curriculum. Several would like to see the evaluation, and potentially expanded with a greater focus on nutrition and food waste. Another major theme was a desire to move towards a certified position for the health aides, which would allow for more training and a sustainable presence going forward.

Part II: BMI Percentile scores Update:

Data Collection Update:

This report provides an update to the Body Mass Index Percentiles presented in the first report. This report includes data from the non-FUSD schools elementary, including Mountain school, San Fransisco de Asis, Williams, Cottonwood, Camp Verde, and Dr. Daniel Bright. The report also includes updated information from the two Middle Schools (Mount Elden and Sinagua). Data from two time points (Fall 2013 and Spring 2014) is included for Mountain School, Williams and the FUSD Middle Schools. The other schools only have Fall 2013 included at this point. The total number of children who had their BMI measured during at least one measurement point included in this new data was an estimated N=2,059 for the elementary schools. In the two middle schools combined, the total number of children was N=1,740.

There was data from multiple time points for two elementary schools (Mountain School and Williams). Cohorts, defined as children measured at both the Fall of 2013 and the Spring of 2014 were n=169 for Mountain and n=144 for Williams. The 'cohort' for the middle schools (measured during the Fall 2013 and Spring 2014) included a total of 1,430 children. The measurements are summarized in Table II.1. The data was complete at each measurement point, with the exception of missing ethnicity for the Fall of 2013 at the Camp Verde, Cottonwood and Dr. Daniel Bright schools.

Table II.1: BMI measurement summary for all children participating in the Fit Kids at School program

School	Fall 2012	Spring 2013	Fall 2013	Spring 2014
FUSD Elementary Schools (10 schools) Total all children= 8,385, 'Cohort'=2,349	All 10 schools Complete N=4,457	All 10 schools Complete N=4,479	All 10 schools Complete N=4,484	All 10 schools Complete N=4,519
FUSD Middle Schools (MEMS & Sinagua) Total all children n=1,740, 'cohort'= 1,430 *sinagua 'Fall' measured in January 2014			**Complete** **N=1,539** Sinagua n=826 MEMS n=713	**Complete*** (For Sinagua 240 children no spring measurement) **N=1,632**
Mountain school			**Complete**	**Complete**
San Fransisco de Asis				**Complete**
Camp Verde			**Complete*** (*no ethnicity)	**System errors**
Dr. Daniel Bright			**Complete*** (*no ethnicity)	**Complete*** (*can't link with Fall)
Cottonwood (elementary+ middle)			**Complete*** (*no ethnicity)	**Complete*** (*can't link with Fall)
Oak Creek				**Complete**
Mountain View Prep				**Complete**
Williams			**Complete**	**Complete**

Participant Characteristics

The characteristics of the participants in the Fit Kids at School program is summarize in Table II.2. The BMI percentile data suggests that in the non-FUSD schools, overweight and obesity rates were about 10% higher (about 35% total overweight or obese) compared to the 10 FUSD elementary schools (25.0% total): Camp Verde (39.3% total) and Williams (35.4%) were notably higher and Dr. Daniel Bright (27.4%) was also high given that the mean age of the children measured was only 6.7 years old. Cottonwood (35.6%) was also higher, but the children were a little older on average (9.7 years old), which may explain part of the difference. San Fransisco de Asis was slightly lower than the FUSD schools at 23.3% total with a mean age of 9.7 years old. The most notable exception was Mountain school, which has the lowest prevalence of overweight and obesity of any school (only 7.7% total, 3.0% obese).

Table II.2: Characteristics of the children by school, including proportion overweight or obese

	Number of Children	**Age Fall 2013**	**Gender Fall 2013**	**Ethnicity Fall 2013**	**% Overweight or Obese Fall 2013**
Mountain school	Fall: N=196 Spring: N=191 Total: 204 children 'Cohort' (measured both times N=169)	8.07 years (sd=1.74)	51.0% Girls 49.0% Boys	89.8% White 5.6% Hispanic 2.6% Asian 1.0% Indian 0.5% Polynesian 0.5% Black	**Fall Total: 7.7%** Obese: 3.0% Overweight: 4.7%
San Fransisco de Asis (Spring 2014)	N=176	9.68 years (sd=2.45)	50.6% Girls 49.4% Boys	56.3% White 5.7% Native American 33.0% Hispanic 5.1% Other	**Total: 23.3%** 6.7% obese 16.6% overweight
Camp Verde (Fall 2013)	N=673 (Total 734 children in dataset, but 61 have no BMI data)	8.25 years (sd=1.74)	48.3% Girls 51.6% Boys	N/A	**Total: 39.3%** 21.2% obese 18.1% overweight
Dr. Daniel Bright (KG through 2nd)	Fall N=358 (*Total 475, but 117 had no BMI data) Spring 2014 N=351	6.47 (sd=1.04)	45.3% Girls 54.7% Boys	N/A	**Total: 27.4%** 15.9% obese 11.5% overweight
Oak Creek (KG through 8th)	Spring 2014 N=152	10.84 (sd=2.16)	52.0% Girls 48.0% Boys	67.8% White 26.2% Hispanic 5.3% Black 0.7% Pacific Islander	**Total: 36.2%** 19.1% obese 17.1% overweight
Mountain View Prep (1st through 8th)	Spring 2014 N=262	10.19 (sd=2.08)	52.7% Girls 47.3% Boys	83.6% White 14.9% Hispanic 1.1% Asian 0.4% Black	**Total: 23.9%** 11.2% obese 12.7% overweight
Cottonwood (* 3rd to 5th grade in Fall 2013; 3rd through 8th spring 2014)	Fall 2013 N=453 elem. Spring 2014 N=588 (346 elementary, 242 middle school)	9.74 years (sd=0.90)	48.8% Girls 51.2% Boys	N/A	**Total: 35.6%** 18.9% obese 16.7% overweight
Williams	Fall n=173; Spring n=166 **Total N=195** 'Cohort' n=144 (Measured both times)	7.95 years (sd=1.79)	44.4% Girls 55.6% Boys	67.4% White 2.1% Native American 28.5% Hispanic 1.4% Pacific Islander 0.7% Other	**Fall: Total: 35.4%** 20.8% obese 14.6% overweight

Fall 2013 to Spring 2014 changes:

Elementary:

Four elementary schools (Cottonwood, Dr. Daniel Bright, Mountain school and Williams) had BMI percentile data at both the fall of 2013 and the spring of 2014. However, for only two of these schools (Williams and Mountain) we were able to link the Fall 2013 to the Spring 2014 data through a unique identifier (encrypted ID numbers). Williams showed notable improvement, with 12 children improving their risk status (from obese to overweight or overweight to healthy weight), and only 5 worsening. For Williams, the decrease in obesity/overweight is a substantial change. For children of this age, over a 9 month period, we would expect an increase in the proportion of children who are obese or overweight. Instead, of the 51 children who were overweight or obese at the Fall 2013 measurement, a total of 12 (a total of 23.5%) improved their BMI percentile status in the spring of 2014. Compared to 5 of 91 children who were not overweight at baseline worsened their status (a total of 5.5%).

Mountain school reduced their obesity to only 1.8% (only 3 children in the entire school), but increased their proportion of children who were overweight to 9.4% at the Spring 2014 follow-up. It has to be noted, though, that the total proportion of overweight and obese children was by far the lowest of any school at 7.7% at the Fall of 2013 in Mountain school.

Table II.3: Change in proportion of overweight or obese children from the Fall 2013 to the Spring 2014

School	Fall 2013 Total % overweight or obese	Spring 2014 Total % overweight/obese	% improved of children who were overweight/ obese in Fall 2013	% worsened who were not overweight in Fall 2013
Cottonwood Elementary	35.6%	35.9% (*unknown if same children) Middle school: 37.2%	unknown	unknown
Dr. Daniel Bright	27.4%	30.9% (*unknown if same children)	Unknown	unknown
Williams	35.4%	34.0%	23.5% (12 of 51)	5.5% (5 of 91)
Mountain	7.7%	11.2%	23.1% (3 of 13)	4.5% (7 of 156)

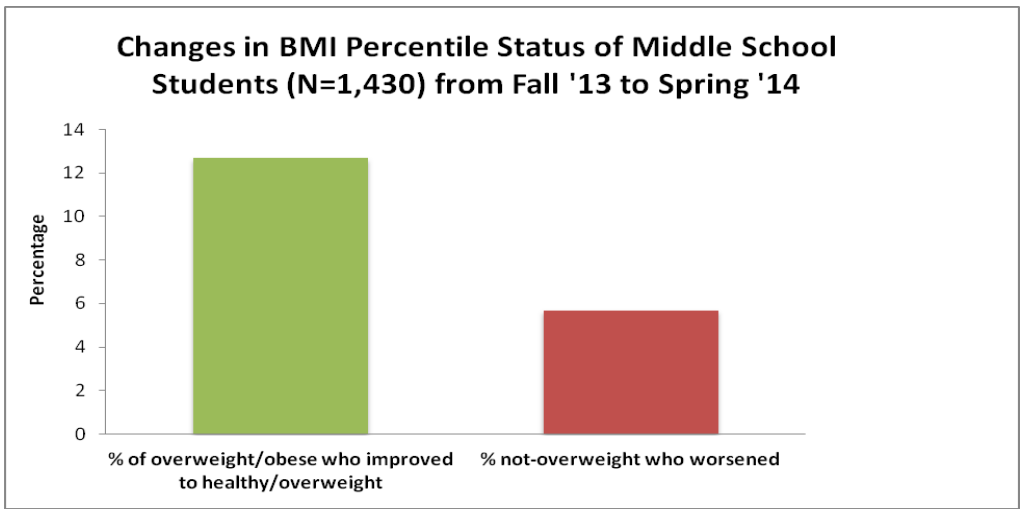
Middle schools:

N=1,740; Cohort=1,430

Of the children measured both in the fall 2013 and spring 2014 in the middle schools (N=1,430), a total of 37.5% were overweight (17.6%) or obese (19.9%) in the Fall of 2013. In the spring of 2014, this total had dropped to 36.3% (16.9% overweight, 19.4% obese). Without intervention, this drop is not expected as children in this age range are expected to increase their percentiles.

The average follow-up period was brief, only 137 days on average (as some fall measurements actually occurred in January). A total of 68 children improved their risk status (a full 12.7% of children who were at risk in the fall), with 52 children worsening (5.7% of all non-overweight children). This is graphically represented in Figure II.1

Figure II.1: BMI Percentile status changes among middle school students from the fall of 2013 to the spring of 2014



Conclusions Part II:

BMI data collection was expanded substantially through the 2013-2014 schoolyear. The data is complete, with only ethnicity missing in three elementary schools in the Fall of 2013. Overall, it appears that outside of the Flagstaff area, prevalence of obesity and overweight are a bit higher (around 35% compared to 25% in Flagstaff). The ethnic breakdown is different outside of the Flagstaff area, although the total proportion of students of minority background is similar (with a greater Hispanic population instead of a Native American population). The Middle schools in Flagstaff had an overweight/obesity prevalence of 37.5% at the fall 2013 measurement. The schools that had two measurement points (fall 2013 and spring 2014) demonstrated BMI risk status improvements (Williams and the Middle schools), with the exception of the school that was by far the lowest in overweight/obesity prevalence in any school measured at the first measurement. Williams showed that almost a quarter of children who were overweight/obese at the start of the Fit Kids at School program improved their risk status, compared to only 5% of children who were not overweight worsening their risk.

Part III: Update on Implementation: Minutes of activity 2013-2014

This report includes a brief update on the minutes of activity for the Spring of 2014. The previous report had only included the minutes of activity per week for the 10 FUSD schools. This report includes the minutes of activity for the 10 FUSD schools, as well as Camp Verde, Mountain charter school, Cottonwood and Dr. Daniel Bright school. Williams only reported the rotating health special, so they are not included in the following data.

One of the major program objectives of the Fit Kids at school program was to increase the physical activity ***offerings*** **per week up to 260 minutes. This means that if a child participates in every mandatory and optional activity , they will engage in 260 minutes of activity per week (in addition to PE, and any after-school activities).** To achieve the goal, a health aide was hired at each school. The Fit Kids at school program had three components to achieve this goal:
1) Activities prior to arrival (optional)
2) Activities during the lunch hour (optional)
3) An activity special class taught every week for at least one class period (mandatory)

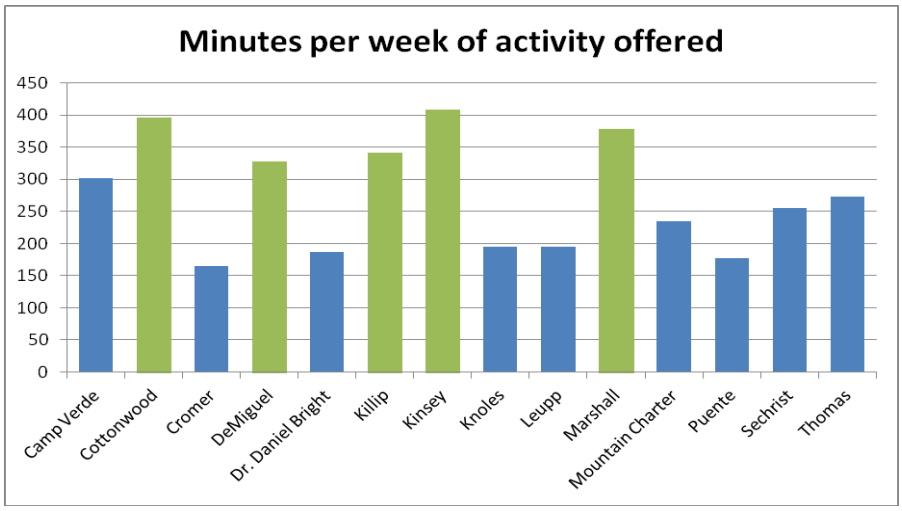
The health aides **recorded their activities every day** and **also recorded the number of children** that attended their classes and lunch recess and prior to school activities. The record completion is high (>95% of records are included in the data).

In Report I, we saw that on average, the **objective of offering an additional 260 minutes of activity per week appears to have been met.** The average minutes per week offered across the first year and a half was almost exactly 260 minutes over week (range from 261.4min/wk in fall 2012, to 257.2 min/wk in spring 2013 to 258.4min/wk in fall 2013).

This appears to **have continued in the Spring of 2014, with an average estimated minutes per week of offerings of 273.9 minutes per week.** Figure III.1 breaks the minutes offered down by school.

(*the calculation the total minutes = the total minutes of weekly prior-to-arrival time + the total minutes of weekly recess time+ (the total minutes of the rotating health special/ the number of rotating health specials taught in a week)).

Figure III.1: Total minutes per week of activity offered by school in the spring of 2014

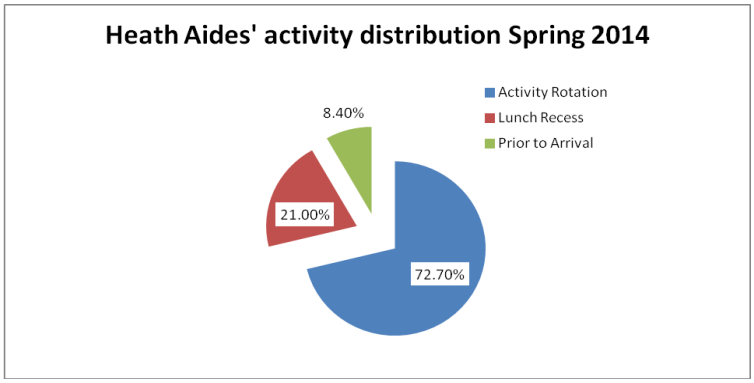


The total minutes of instructional time for the health aide was very similar to the previous measurement points, with approximately 15 hours per week of instructional/activity time (883.8 minutes per week on average). The breakdown of health aides' activities was similar as in the first report, with approximately 72% of the health aides' weekly **time attributed to the activity rotation, about 20% to lunch recess and**

10% to prior-to-arrival activities. *This translates to about four 35 minute activity rotating specials a day, a 30 minute lunch recess and about 15-20 minutes daily for prior-to-arrival activities.*

Key Point:
An average of **9.3 recess activities** were taught per week. An average of **21.5 activity rotation specials** were taught per week.

Figure III.2: Health Aides' activity distribution by activity rotation, lunch recess and prior-to-arrival activities in the Spring of 2014



As mentioned in the first report, since the health aides also recorded the number of children participated in every activity, we have a clear picture of how many children participate in each of the three activities. **All the children in the school** (between 400 and 500 children typically) participate in the mandatory health class every week. In addition, **about 174 children on average participate** in **optional lunch recess** activities every week, **and almost 100 children (an estimated 93)** participate in **optional pre-school activities** every week.

Key Point
These number of children participating per week in the lunch recess and prior-to-school activities are likely **underestimates for a regular week, as for the spring of 2014 we did not exclude weeks that were shorter weeks** (for example because of end of semester activities, early release, snow days).

There was some variability across schools in their offerings, although it appeared minor:

- Two schools also had the health aide involved in implementing after-school activity programs (Dr. Daniel Bright and Mountain Charter)
- Of the 15 schools in this report, prior-to-arrival activities were listed for 13 of them. Puente de Hozho and Williams did not list numbers for prior-to-arrival activities.
- Of the 15 schools in this report, Lunch recess activities were listed for 13 of them. Cromer and Williams did not list number for lunch recess activities.
- All 15 schools listed numbers for the activity rotation special.

Comparing FUSD elementary schools to the schools added for this report:

When comparing the new schools (Mountain charter, Cottonwood, Camp Verde, Dr. Daniel Bright, Williams) to the schools which were listed in Report part I, it appears the program is implemented similarly across the original and new schools in terms of minutes of activity and numbers of students reached. This is reflected in Table III.1

Table III.1: Comparing minutes per week of instructional time and number of children reached between original 10 FUSD elementary schools and new schools for the Spring of 2014

	Spring 2014 original 10 FUSD elementary schools	**'New' schools Spring 2014 data**
Total Minutes of Instructional Activity	858.6 min/wk	867.5 min/wk
Total Minutes per week offered	271.5 min/wk	279.9 min/wk
Total number of children reached	700 per week	653 per week (* without after-school programming, with after-school programming 679)

Part III. Conclusions:

The findings show that the estimated minutes per week of activity offered were very stable and consistent with previous measurement points at about 270 minutes per week. We compared the newly added schools to the original 10 FUSD elementary schools and the findings were highly similar. This suggests that the program is implemented as intended (all components and consistently) across all FUSD and non-FUSD schools. All children in the schools participate in the activity rotation special each week. An additional 175 students participate in optional lunch recess every week, and an additional 100 children in pre-school activities. The numbers in the current report did not adjust for some weeks being shorter because of external activities (such as testing days, snow days, holidays etc.), so the numbers presented are likely slight underestimates of the actual numbers.

Similar to previous reports, the health aides, on average, spend about 70% of their time on teaching the activity classes, about 20% on lunch recess and 10% on prior-to-school arrival. Their total instructional time per week is about 15 hours and comes down to about 4 activity classes a day, one lunch recess and prior-to-arrival activities.

Part IV. Dissemination and Next Steps

We believe that these reports are the first step towards wider evaluation and dissemination of the Fit Kids at School and clinical programs. To this end, we have explored several steps that need to be taken in order to facilitate this process. Exploring ways to communicate the information to the principals and health aides may be a valuable step, to the extent in which this has not happened yet.

Secondly, following several meetings with the respective Institutional Review Boards at NAH, NAU and FUSD, the THRIVE initiative (Translational Health Research Initiative) has been narrowed down as a starting point to explore to what extent the current findings can be used for grant submissions and peer-reviewed scientific publications. THRIVE is a collaboration between Northern Arizona Healthcare and the NAU Vice President for Research to facilitate collaborative health research and grant funding. A THRIVE application will go to the NAU Vice President for Health Research (Dr. Bob Trotter) and the Senior Vice President for Population Health management of NAH (Dr. Steven Lewis) and is currently being prepared. THRIVE guidance could help facilitate the process of understanding to what extent the current data can be disseminated and facilitate attaining larger grants.

In addition, we would like to evaluate whether we can incorporate assessing two areas of research previously not evaluated in great detail: 1) looking at associations between standardized testing and BMI percentile changes and 2) looking at associations between food production records at each school and BMI percentile changes. In a meeting in the summer, the FUSD research director and superintendent have expressed support for assessing impact on standardized test scores if data is not identifiable and only presented in aggregate format.

To move forward, over the next year, it is proposed to:

a. Submit the THRIVE proposal and attain IRB approval from NAH/NAU and gain clarity on what the data can and cannot be used for, and whether standardized test scores can be analyzed;
b. If approval is granted, disseminate the findings in two manuscripts submitted to peer-reviewed journals;
c. Submit a larger grant proposal focused on translational research to continue the evaluation process of the Fit Kids at School Program, with federal agencies or foundations being considered as possible funding sources.

Appendix A: More comprehensive quotes from the interviews with principals:

1. What do you see as role for implementing this program?

Summary: the principals see it as their role to provide support to the health aide and Fit Kids program as a whole, setting clear expectations and ensuring Fit Kids is incorporated in the schedule.

As one principal mentioned: "[My role is] *to provide support, find a qualified person to lead Fit Kids, make sure parents and students understand the programs and help it become part of the school.*" Several principals mentioned that "*choosing the correct person for the position is* key."

As one principal put it in greater detail:
"I guess [my role is] to provide support to the Fit Kids instructor, as well as making sure they have the schedules, dedicated kids and teachers who are all on board with it so that we are all sending the same message, to me that is the support end of it. If there's any equipment or materials needed then I can help support the Fit Kids instructor and make sure that that is there. Making sure that the teachers know that it is not an opt out event. We don't cancel Fit Kids because they want to spend more time on math or something. It is just like any other class. I guess being role model- I need to hit the track at lunch time and run the track with the kids. Just to be a role model. To make the Fit Kids instructor feel just like a regular staff member on our staff- we work hard to make sure she has a place and a space that works and is not a stepchild part of the staff. "

Also, several principals mentioned that they saw it as their role to ensure the PE teacher and Fit Kids instructor established a collaboration:

"*… to provide support between the Fit Kids instructor and the PE teacher to establish collaboration so that they are not doing the same thing and that they understand what they are each doing. It helps for the principal to know what they are doing in Fit Kids so that (s)he can speak to parents. My role is to be a facilitator.*"

2. What do you like/greatest strengths of the program?

Summary: Principals are generally positive about the program as a whole. There seems to be a strong buy-in of the concept of preventive medicine and healthy habits. They also seem to like the health aide's work in providing structured recess activities.

Principals also indicated that they recognized why the program was important. For example:
"I support the program in many ways, because it is an area that the school needs to work on with kids and help them through, since they have not worked on health in the past. It is an opportunity for [prevention of] childhood obesity, diabetes, heart problems by starting to teach health, nutrition and physical fitness as an integral part of children's daily lives. Hands on, active and engaged with our Fit Kids program to instill preventative health measures."

"I think it's getting kids to be more into those kinds of lifelong exercise habits that I think have fallen off over the last fifteen to twenty years as we as a country have become more sedentary. I have a large Hispanic and a large Native American population both of which are at risk for diabetes and heart disease, the research is putting out that those groups have higher incidences than most. I feel like giving the kids the strategies to eat healthier and to exercise and to make them realize that they don't necessarily have to go to the gym or be 'workoutaholics' as you will- that they can do that by walking and choosing different snacks and by doing simple things at home without special equipment or anything. I think starting those things at an early age really will make a difference in the long run."

The principals appreciated the ability of the Fit Kids instructor to facilitate structured recess and the impact on behavioral issues:

"The Fit Kids Person is out there with the kids during recess time, and she is helping them learn how to do different games and to work cooperatively together."

"It gives us another person to help facilitate a structured recess. The kids are less inclined to have behavioral issues, especially the boys. Usually it is the boys we are having issues with. There is organization to recess, and the kids have more opportunities to do something physical as well."

"I think that the classes in general, the recess piece and to have that instructor out there during the recess time to lead the kids through games and things. I also think the instructor I have now has been very positive as far as working through the job with the kids. I think that the actual structure of the program being as prescribed as it is, helps the instructor and helps the kids. Everybody knows what they are getting when they go out there. It is pretty concentrated and effective."

"Currently, our person spends a great deal of time with organized play out on the playground teaching kids sportsmanship and how to get along and all of those kinds of things. And it has really had a behavioral impact- kids being actively involved in a game rather than just hanging out on the playground. So that to me is during their free time that they have been able to have an organized event going on in a healthy competitive environment."

"The supervised play during recess lacks variety. "

One principal mentioned they appreciated the flexibility to adapt the program to the school's needs:
"A strength is the flexibility that each school can do different things, there are defined objectives but Fit Kids can be tailored to each school's needs. They [students and parents] really like the Nutrition & Fitness components at the school."

"I like that Fit kids is scheduled as part of the curriculum; the health aide works well with students and colleagues. The goals of Fit Kids lessons have been strong during implementation and collaboration with the PE teacher has been successful."

3. What have been your challenges with this program? What do you not like about the program?

Summary: the biggest challenges appear centered around the time/ scheduling limitations. Also, a number of principals mentioned they would like to have a certified person as a Fit Kids instructor, as the current position had the potential to lead to turnover and lack of training (particularly with classroom management) was an issue.

Scheduling:

"I guess the biggest challenge is the time constraints. I think that it is a great opportunity for the kids, and I know that they need that extra time, but fitting it into the schedule is always part of the challenge."

"There haven't been too many challenges- I can't think of any real challenges. My staff has done well the kids have done well with it. I think finding physical space is the biggest challenge."

Scheduling has also been challenge: it is a loss of instructional time and [school name] has worked really hard to make their calendar so that it has few fragments in order for the teachers have big blocks of time to teach- Fit Kids complicates that at least once a week.

Related issues: Certification, training, turnover and classroom management:

"It would be great if it could be a certified person. I know that middle schools have a certified person because you'll just get someone of a little higher quality who would have a little more background as to what to do. They may have a P.E. background or a nutrition background… I think it would enhance the program."

"I think the biggest challenge that I have seen that has been better this year but I still know that there's issues in our school district is not having the health aides be certified teachers. I think that there is something that you bring to teaching that you can't necessarily teach, and probably the biggest piece is that classroom control piece. I did lose an instructor partially to that last year, simply because she just never was able to get the kids to where they would listen and do what she asked. And that's not necessarily a given. Some of the kids particularly in title one schools can be hard kids. They are not used to authority, they are not used to rules, they are not used to being asked to do things, and as a teacher that is one of those things that you kind of have to be good at inherently. You can get better at it, but for most people you either have it or you don't. For my beginning teachers even, the ones who are in their first seven years of service, which is the number one thing that will run them from the profession: it's the frustration of not being able to control a class. So if there is any weakness to the program it is that these folks come in I feel like at a little bit of a disadvantage as far as that classroom control. I think that they maybe need more training and maybe a little bit more mentoring with that."

"Staffing has been a challenge because it is a classified position so health aides put in their time and then move on to a better job. This job is only 36.5 hours a week at $10/hr. As a principal she would like to see it as a certified position but there is the expense of salary. There would be more longevity if it was certified especially with all that the health aides are asked to do for only $10/hr: lesson planning & classroom management and all else. [School name] has been fortunate to employ certified teachers in the health aide position, but unfortunately they don't stay for long."

"Challenge that it is a classified position and the health aide has to work well with kids and other teachers and there are many roles that this position takes that certified teachers acquire over many years to become experts in. The human resources aspect of this has been challenging especially because now will be the third health aide in three years that [school name] must replace, because the turnover rate is high for a classified position. The job must be a certified position because the health aide needs classroom management training and experience with strategies for running a 25+ student class."

"Staffing the program has been the greatest challenge. [School name] is unique in the district, such that the school has two Fit Kids Health Aides. One comes in and organizes morning supervised play and teaches Fit Kids until 11am, the other comes in at lunch-time and runs the supervised play for lunch recess and continues teaching the rest of the school day. This time split is due to health issues (sun exposure must be limited) of the original Fit Kids instructor and [the school name] did not want to lose her expertise as a health aide, so they employed a second health aide."

Training and classroom management are important issues:

"During the monthly meetings, Fit Kids instructors should be taught classroom management. Sit down and talk about how a school works, and understand what that school culture is. There is a gap in training for classroom management and [principal name] has reached out and offered to provide this training, though there has never been a response from Fit Kids agency."

Communication with Fit Kids
The principal would like to see more communication with the Fit Kids director and meet on a regular basis.

The Fit Kids clinics did not work in the past and some parents deny Fit Kids- [the principal] wants to know why and how to follow-up. Fit Kids should work more with these at risk children in the schools.

4. Is the health aide meeting your expectations in terms of job fulfillment?

Summary: the principals are happy with the Fit Kids aides. For some, they would have liked more training up front. For many, they mention that it will be hard to replace them.

"Absolutely. (S)he has done a great job with the students this year. She's self-motivated, needs very little direction, and has a very good rapport with the kids."

"Yes, in general. On a scale of 1 to 10, I would say an 8."

"Absolutely"

"My health aide this year is fabulous. (S)he is a great person and a great individual who works really hard. She applied for this job, got it, and she couldn't be more thrilled to have it. So her/his heart is in it and I think that (s)he is doing really well with it."

(S)he goes above and beyond and helps other areas of the school with behavior and preschool because she is also good with management. [Health aide name] will be difficult to replace next year since (s)he does so much, especially because this is not a certified position.

Yes, because (s)he is a certified teacher and has the experience; this has made a big difference. It is a hard position to fill, especially since the health aides are more than just an aide. (S)he feels fortunate that [School name] has had good health aides with certified classroom experience; however, at other schools , the principal has heard that this is not the case.

"The health aide is a parent of a student at the school, therefore, (s)he is really involved at the school with PTO and many other areas, but (s)he still needs additional classroom training. However, (s)he does go above and beyond for their job and meets many other opportunities that the school offers to him/her to become more involved at school."

[School name] has been fortunate to have health aides that have had past experience in the classroom. Currently, the health aide organized and dependable, a good communicator and great collaborator. If the health aide did not have that classroom experience, it may be a different story

Both have been meeting the schools expectations. The health aides are not certified teachers so they have each had to learn how to manage a classroom, work with teachers, and stick to a planned schedule. One of the health aides has one year of experience over the other health aide and a learning curve has been observed. The extra year of experience has allowed that health aide to be more capable in her job and manage a classroom. The two health aides work well together, especially with communication and collaboration.

Autonomy:
In a school environment, the health aide may be asked to do different things outside of the job description because the school needs help and the health aide needs to be allowed to say whether or not it okay rather than have to call the Fit kids agency and check. Health aides should have more autonomy and agency in that regard.

5. **In an evaluation of a program like this, what kinds of outcomes would you like to see? Examples: standardized testing, GPA, nutrition, detention**

Summary: several principals asked for feedback from the program, whether it be in terms of BMI, activity or nutrition. Notably, several principals highlighted the nutrition component, including food waste.

"The Fit Kids program is exactly where it needs to be in the last two years, but there is a need for an evaluation to see where we are at and determine what else needs to happen."

"BMI changes. However, the principal recognizes that the school has many other factors (other programs) that can influence BMI. (S)he wants to see daily activity changes and structure. Brain breaks was tried and didn't seem to last and be significant."

"There is not a way to tell, until the future reveals itself. I would like to see the benchmark points from before and after the installment of Fit Kids."

"I would like to know if Fit kids is making a difference with BMI, and is it changing the kids' nutritional choices, down the road- will these kids be healthier adults, will they exercise more because they had learned it as a young child? Is the program changing them? Is it a long lasting positive impact- as 13 yr, 15 yr, and 20 yr olds and beyond to establish healthy lives? Does Fit Kids in School impact the families? Does the Fit Kids program at FMC impact the family more?"

"I guess I would like to see if it has changed student's attitudes about exercise, and I don't think their eating habits- that it effects that nearly as much as it does how they feel about play and being active."

"It would be nice to see a perceived benefit as far as fitness goes for the kids that goes beyond BMI. I would like to also see outcomes for skills such as sportsmanship. "

"I am concerned about the amount of food waste- and would like to measure this because the food choices kids make and the food provided for kids relates to health and nutrition components of Fit kids. I would like to see a partnership between health providers, food service providers and Fit Kids to bring an awareness level to children."

One principal indicated that perhaps the most important component is whether the children enjoy the program:

"The biggest outcome for me at an elementary school is that the kids are enjoying what they are doing, and that what they are doing is going to be somehow life changing or will have an effect on their quality of life. The same way that kids have to learn math and kids have to learn how to read, I feel like this kind of program along with music and P.E. and art and those kinds of things do make the kids better people, and show them skills that allow them to live their lives more effectively."

6. **Going forward and looking ahead what is your vision of the Fit Kids program at your school?**

Summary: The principals mentioned that they would like to see the program continue beyond the grant period, with stable positions for the health aides. They mentioned how they wanted to build on the progress that was made and improve scheduling, programming and teacher training.

"I would like to see it continue. I would like to see some type of a jogging trail that is added out on our playground that the health aide will be able to use with the children. Even without that though, I think that she is able to work with the kids and get to know them and to be able to influence them to have good health practices."

"I just would like to see it continue and get stronger. I mean each year we have been able to take a different aspect of it and grow on that. So next year my hopes are that there can be some active intramural kind of events during lunch time instead of just rotating the activities around with the Fit Kids person. Like we have it scheduled out that Mondays meet so and so on the field and this is what you are going to do. But now I'd actually like for them to be able to do some organized intramural kind of environment for the older kids."

"My vision is that Fit Kids as part of the special area team, not something that is extra. I want the Health Aide to feel part of the staff as a stable position and for Fit Kids to continue in the school."

"I would like to be able to see it continue to be supported at the level that it is. A lot of times when you are working with grant funded programs after a while they start to lose funding and you end up with something that is kind of a shadow of what it was because people wanted in their hearts for it to be what it was but sometimes it is not possible to do that. So what I would really like to see is this program continue as is and then the second part of that I would like to see is maybe a little bit more of an emphasis on the nutrition part of the program. I think it swings more towards the exercise part right now, and I think that the nutrition and healthy eating part might want to take on a stronger role as it moves forward."

In addition, the principals had several new ideas/ visions for the future of Fit Kids at School, all focused on expanding or re-focusing the program on certain topics:

I would like to see the Health Aide being paid more and supported more by Fit Kids in the larger schools to maintain the level of service that [health aide name] has provided so that the kids want to do more. Set consistent high expectations for students. I believe that Fit Kids is successful for [school name]. The program is what the school believes in: eating healthy and being active. [school name] was trying to be a STEM school, now they are trying to be a STEAM school and have hired someone to bring in the nutrition and fitness piece as part of the student nights. It would be a responsibility of Fit Kids to help with that and not the PE instructor's role."

"To incorporate it more into our weekly schedule. In other words, not so that they are so much set off to the side but maybe giving more time in the day, more transition time, and hopefully more training to occur to where the types of activities they can… I don't know. He or she may already have a book that they can pull from, but I would like to see more lesson planning integrated into the program. Again, they're not taught lesson planning so they don't really understand that."

"People now fear letting kids go out and play on their own, so parents don't let kids out as much anymore; and kids are in front of a screen and mindlessly eating. I have noticed that in classrooms the students are allowed to snack throughout the morning and I'd like to regulate that so the kids are mindful about eating. I hope Fit Kids can help change that perspective of food."

"Can Fit Kids health aides help with RTI? Help with special areas/reading? What is the consistency across schools?"

"Fit Kids can be a comprehensive health-based program as long as what they are doing continues to focus on health, nutrition, and physical fitness and provide additional programming and community support in schools for the family. My vision is to become a permanent part of the school, though I understand that it is under a 3-year grant. There needs be a community health worker in every school. I see them providing health, nutrition, and physical fitness activities that are age appropriate for our students. Vision also includes school based health programs, for example, in Connecticut the New Haven Project started by Dr. J. Palmer. Schools have a high level of accountability (academically) to the children but when a parent needs to remove the student from class to go to the dentist or doctor, the kid is losing time for academics. The dentist and optometrist can come in and conduct screenings at school and even social emotional support can be offered for students by a social worker."

7. What do you think are the kids' perceptions of the program?

Summary: Simply said: the principals believe the children enjoy the program.

"I think they love it. When you go down and see the class and watch them interacting with one another, it is a fun time for them. They are active and moving and they are having fun, but they are learning and exercising. I think the programs that they are using for the kids are very motivating and keep the kids engaged. I like to see them inside and I like to see them outside. Especially this year- we have been able to have a great blend of both indoors and outdoors with the weather that we have had. Being able to be outside a lot this year has been really good."

"They like it. The teachers here sometimes think it takes away from instructional time. I would say it's a minority of teachers who feel that way, some of them like the planning time Fit Kids gives them, some of them likes the extra physical activity, so it's a back and forth deal where not everyone is on board and thinks this is great and not everyone thinks it is bad. The teachers who are really adamant about teaching the common core standards really want that extra teaching time, and would rather not have the program. Then there are the teachers who prefer the extra planning time, and would rather have the program."

"It's fun. It's just games. It's fun, it's cool, they love it. They love the Health Aide. It is very motivational for them."

"I think the littler kids right now are enjoying it more, and I think that interest wanes as they get older. I think that because it is not game-oriented the way the P.E. is, I think it's a little harder to structure it for the bigger kids… especially for the bigger boys. It tends to look, at least from my perception, it tends to look a little bit like an aerobics class sometimes. Whereas P.E. they are playing different games that are physical and running around and doing those things, and I think that as the kids get older they tend to lose their energy about it as they go up in the grades."

"The kids get it: they understand what it means to be healthy, understand what health eating is (info from parents and school, balance in protein and carbs, activity level to burn calories). They are excited about it and the program has been positive."

"Kids enjoy going to Fit Kids, but it also is attributed to the person who leads the program here. Whenever the principal steps in to the room the students love the exercises, the video/tv component (HOPS), kids are active when they are in there. The interactions that she has seen have been positive."

"The kids look at it as health and they have a positive outlook on it. Some kids have said that they enjoy Fit Kids more than they enjoy PE."

"The kids love Fit Kids and they respect the health aide. They see Kit Kids as getting out and being active so the importance of health is always at the forefront."

"At this point, Fit Kids has been a "well-oiled machine" and I don't have anything that I'd would like to change. The special area teachers (PE, Music, Art,& Fit Kids) are in the same location so they have more time and availability to collaborate with one another on projects or program."

"There is an excitement to be active and the kids love it. Moreover, he says that there may be a lesser degree of pressure perceived by the kids who may not be as athletically inclined when they are participating in Fit Kids as compared to PE."

"I've only had one kid come to the principal's office in the last two years because he/she did not feel they were validated or made to feel comfortable in the Fit Kids class. Having only one kid express concerns is uncommon and that he has more students come to his office because of those issues in PE."

"I would like to see Fit Kids grow in terms of children's own awareness of fitness levels and would be more equipped to be better sportsmen/women when it comes to playing games together. I'm satisfied with the program overall and there is certainly room for it to grow and become more vital."

Appendix B: More comprehensive summary of Health Aide Interviews:

1. **"What do you like about the program- strengths?"**

Summary: The health aides believe that the biggest strength of the Fit Kids program is that it teaches children healthy habits of activity and nutrition at an early age in a fun way. They also mention that they like their job.

"I think it's great that we are able to work with all of the kids, being able to get to know all of the kids. Having the freedom to do the nutrition lessons as we see fit- whether that's hands on or visual- not being restricted to anything set."

"I love the whole program- the fact that it gets the kids active. I like that it is a positive thing rather than a negative thing- 'it is do not do this, it is let's do this!' I would say for our school that it has gone really well and that there really haven't been any hiccups. It has been accepted well- we have a lot of support from not only staff but also parents."

"I like it because there is only a gym teacher on [part of the week]. I get the gym and I have all of the equipment I need. I am able to play different games with the kids, and I think a lot of the other instructors are able to."

"I just love being able to play with the kids all the time. I feel like the classes work well. I feel that they would need it more than just once a week though. But my schedule is already packed so I'm not sure how we would do that."

"I like being outside with the kids, playing sports, teaching them sports. Strengths are getting the kids outside in another type of activity in addition to their one PE class a week; once a week {PE} in school is not enough. Teaching them games gets them out of their comfort zone with sports and trying new things."

"The program provides the students with another opportunity to be active, and teaches them more of the nutrition that the kids don't get in a regular PE class. It is important that children learn these healthy active habits early on in elementary school because once they get to middle school, if the kids are not already active, they aren't going the start then. Early exposure to fitness is necessary and Fit Kids provides a lot of equipment which is great especially in the winter when it gets cold and then they can also get outside when it gets nice."

2. "What do you not like about this program- what are the challenges?"

Summary: The main issues are varied, but the most commonly mentioned were space limitations. The views about the Hop Sports program were mixed, with some liking it, and some health aides thinking it focused too much on screen time, taking time away from being outside. Two health aides mentioned they felt that the BMI testing was invasive and should not be such a focus of the program.

"…the challenge with that is that there are not enough hours in the day. I am spread thin as far as everything that needs to be done."

Space issues:
"Just finding somewhere when the weather is bad, or scrambling to figure out what we are going to do when the weather is bad. And it's not hard to change up a game or an activity; it's just making sure if I will have enough space, are the kids going to have enough space when they are running at each

other…things of that nature. But the staff is very supportive- I haven't run into any issues with that at all."

"I have to share my room with the after-school program. They are not the nicest to me, so I have to move. They tell me I have to move all my stuff (chairs, tables). It was like that since the first day."

"Challenge is the actual space- when you can't go outside they are confined to a classroom. With 30 kids in a class, it can be difficult to manage them and keep them active."

Mixed views on Hop sports:
"I like the program. I don't like the hop sports program, but I never use it. So it's not a challenge for me, I guess."

"The biggest challenge is kindergarten- they aren't coordinated yet. They like the videos though, but there aren't many we can use with them."

"The Fit Kids program is too focused on the screen. HOPS sports screening is disappointing because I'd would rather have kids outside moving. I feel that I do have the freedom to take them outside but I'm not sure how that varies at other schools. These days, half the battle is tearing kids away from a screen and getting them outside."

Focus on BMI:
"I do not focus on the health aspect because the PE teacher does most of that, and I'm more of a sports person. I don't like the BMI testing in Fit Kids because the numbers shouldn't define a kid. Weighing the heavier children feels invasive and I hope that the parents already know the weight status of their kids, especially if they are overweight. I hope that the children are not counting calories at a young age because of BMI testing, and would rather see them make healthier choices than restrict their food intake. Counting calories isn't something children should be thinking about."

"BMI testing is really abrasive and invasive, there needs to be more of a heads up to the parents. Parents are getting a letter about their kids and it's not a positive letter/experience. A letter in the mail about BMI status may not be well understood and it may not be the best way to communicate a child's health status to a parent. Parents need to be warned and informed about the Fit Kids BMI testing."

3. "So how would you describe your interactions with your colleagues and principal?"

Summary: overall, the health aides appear to interact positively with the other school staff, including the principals and PE teachers.

"Um, pretty good. I am busy enough to where I really don't, other than lunch time and maybe before school hours, um, really socialize with anybody because I try to get outside. Even if we aren't outdoors, I am in the gym helping with duty in the morning. I haven't run into any issues."

"Really good. We get along really well and we help each other out. It's a good tight community of coworkers."

"I don't interact with the principal much, only when something bad happens on the playground. I am very close with the PE teacher. We talk about what each other is doing."

"Great, they all work together and it has been positive."

"Good. I'm in the same hall as 3rd grade so constantly interacting with the teacher to check if they are too loud or interrupting lessons. I stay in constant contact with the teachers of the classes that come to Fit Kids during the day and let teachers know how their students behaved."

"I love everyone that I work with, it's a good school environment."

4. "What career development opportunities would you like to see/ what would you need to stay in this position long term?"

Summary: The most frequently mentioned components are a desire for an increase in training opportunities (particularly related to classroom management up front, and specific nutrition and activity training), and a desire for the position to be a certified position vs. a classified position.

"I would say definitely a lot more, because we aren't certified teachers yet are put in a classroom and are expected to know how to handle a classroom and [for me personally] having worked in classrooms in years before this, I could see where not having that experience would be problematic. I have heard from others that behavioral issues have been a problem, and I think if we had training in that area that it would go a lot smoother."

"Training could be more fined tuned. I was under the impression that health aides were certified teachers. Certain skills can make a difference in communication, containment, and classroom management. A meeting should take place every year for guiding health aides in how to manage a classroom, because some of the health aides have not taught before or have even worked with children. Two days of training is not adequate."

"It's up to each school to keep the program, and I see that the Fit Kids program is a benefit to elementary schools as a free resource. In CA I was a teacher and so this health aide position allowed me to "get a foot in the door" to get a job next year teaching at the same school. I'm not a nutritionist or a dietitian and I feel that it is a grey area telling kids what is and is not a GO Food. Health aides should have the opportunity to receive nutrition training, especially with the job of teaching kids healthy eating habits. As a parent, I would also want health aides to be well-educated in nutrition, not just have a teaching credential."

"I would really like to attend any kind of workshop that will teach us new games and things to make the games we already do a little more exciting, or if we can change them up. Just stuff to give you new ideas on things you can say to the kids or do to the kids to avoid burnout on our job and to keep things fresh and new."

"I would like to figure out better ways to get information home and the families involved. Especially when families are on a budget."

Part time vs. certified status

"I would love to continue to work- I like schools and I like the idea of it. I think that our nation needs health in schools. From there, I would like to be able to do this on a larger scale and get paid better for it."

"It is tough because I really love my job. But I also bought a house this year and the salary is just not quite enough. But do you want to do something you love."

"I have not thought of being a health aide for Fit Kids as a career, but I am not aware of any further opportunities. I see it only as a part time position on the side."

"Personally, I see myself working with the high school students when Fit Kids gets introduced to high school. I'm a certified teacher working in a classified position and think that the job as a health aide would be better suited as a certified position."

5. "What do you think are the kids perceptions of the program?"

Summary: the health aides believe the children really enjoy the program, demonstrated by their enthusiasm.

"I think they really enjoy it. I think a lot of what we do nutrition-wise, even though it looks like some of them aren't really paying attention or don't care, they do because there are times during the day when they will come up to you and say 'I had broccoli in my lunch today!' Or they will say something along the lines of 'I played for a long time outside on Sunday, my heart was working!' It's really cute to hear some of them say things like that, even when you think they don't get it- they do. They're grabbing it."

"They are crazy about it. They love it. It is fun time. It is their favorite elective. It is what they look forward to the most, all week long."

"They love it. They really enjoy the extra activity and getting to play games. Even the nutrition part, they get really excited about it and you can tell that they are learning more."

"I think the younger we start with them the better it is going to be."

"Most of the kids come running and screaming in my room every day. They come running down the hallway to me."

"Kids love it, they are excited to come to class and always want to know what they are going to be doing today. They look forward to it and it is a very positive program."

"I'm not sure how to rate effectiveness but I cannot imagine the children not having Fit Kids and would like to see the program stay."

"During lunch duty kids will come up to me and show me 'Hey look, I'm eating an apple' so the nutrition part is really sticking with them. I see them in the hallway and they tell me what they are doing this weekend in terms of activities. I think it's good for them to really understand the importance of eating right and living a healthy lifestyle."

“They come in to come in to my class full of enthusiasm and are excited. I’ve worked in middle schools and high schools and you don’t really get that with the PE, a lot of kids think they’re too cool at that point and don’t want to exercise and do things like that. Whereas the elementary kids come in and they say, ‘oh we’re playing tag, yeah!’ super excited”

“Kids dig it; they love it at school. Our school tries to use it as a reward system, so if kids have good behavior then they get extra Fit Kids time.”

“Hiliary has been very supportive and amazing to work with. I would give the program an A+.”