Q1 Please provide your contact information below.

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Title and Organization	**Maria Fareri Children's Hospital, MY C. H. O. I. C. E. Creating Healthy Options in the Childhood Experience**
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Q2 Please describe your company or organizations overall goals and mission.

For the last two decades, childhood obesity has become a major public health concern incurring high healthcare costs and health ramifications. This epidemic has contributed a large amount to the morbidity of children including early onset of type II diabetes and increased likelihood of developing heart disease as adults. Pediatric residents from Maria Fareri Children's Hospital, a member of the Westchester Medical Center Health Network (WMCHealth), developed MY C.H.O.I.C.E. with the mission of decreasing the childhood obesity rate by affecting behaviors and attitudes of the students allowing them to make life choices that will prevent obesity and the related complications. We specifically targeted students in the Alice E. Grady Elementary School in Elmsford, NY which currently have a higher prevalence of obesity when compared to those in surrounding school districts.

Q3 Please indicate which category your organization falls under.

Health Care Provider

Q4 Innovation Executive Summary. Please describe the innovation, and how it addresses the social determinants of health. Please identify how the innovation addresses the 6 innovation criteria (i.e. ROI, scaleability, feasibility, evidence based support for innovation, relevance to the Medicaid population and speed to market).

My C.H.O.I.C.E., developed and led by pediatric residents from Maria Fareri Children's Hospital, is a creative and sustainable 6-week health education program. The program consists of 1-hour weekly sessions with the aim of affecting the behaviors and attitudes of the students, allowing them to make life choices that will prevent obesity and the related complications. The program is specifically targeting Alice E. Grady Elementary School in hopes to decrease the 23.6% childhood obesity rate in Elmsford district. We identified that the prevalence of obesity in this school district is greater than that in surrounding school districts and thus created our program to address the social determinants of health that may be contributing to this discrepancy. By incorporating food samples from a local supermarket, our program provides families with access to foods that support healthy eating patterns that they may have otherwise not been exposed to. We also incorporate physical activities that can easily be done in the home, for families that may feel unsafe in their environments.

Return on Investment: The funding for this project was made possible by the Westchester Medical Center Health Performing Provider System (WMCHealth PPS) at the Center for Regional Healthcare Innovation (CRHI). It is projected that if we just invest $1,526 per child that has an elevated BMI to reduce obesity by one percentage point, we would produce a cost-effectiveness ratio of $50,000 per quality-adjusted life-year. Investing in the program will allow us to vastly improve the health of our 6th graders as children and into their adulthood and contribute to creating less of a financial burden to our healthcare system. We spent approximately $5,750 in supplies and $40,000 in kind time that was split amongst residents, supervising pediatricians, and school faculty members. We partnered with ShopRite Supermarket who helped us by donating fresh produce for the sessions every week. Additional CRHI funding helped provide the students with materials such as pedometers and jump ropes. These expenses are miniscule when compared to the $14 billion in direct medical costs that childhood obesity alone is responsible for in the US.

Scalability: It is our goal to expand the program to 6th graders in other school districts with high prevalence of obesity.
Feasibility: This innovation demonstrates feasibility and sustainability because we have incorporated a standardized curriculum that 2nd year residents can teach during a mandatory Community Medicine rotation. The curriculum is written up so that the residents will be able to read and teach the curriculum every week. By incorporating MY CHOICE into the pediatric residency curriculum, it will secure resident participation as well as in kind funding from the residents' time.
Relevance to the Medicaid population: Although we did not identify students based on Medicaid status, we found that the majority of the student body comes from low socioeconomic households. Approximately a quarter of the children living in Elmsford live below the poverty level and about 50% qualify for free or reduced price school lunch which serves as an indirect indicator of Medicaid recipients. We know that Medicaid recipients are more likely than others to be obese and thus focusing on preventive care may help them avoid chronic conditions such as obesity before they start. Our program works to reduce unhealthy habits that lead to obesity which can in turn improve the health of Medicaid recipients while also decreasing program costs.

Evidence based support for innovation: We have a 1 hour long session every week, covering topics such as nutrition labels, physical exercise, federal My Plate guidelines, and food advertisements. We engage the students by making the sessions fun and interactive. For example during one session, students guess and measure out how much sugar are in common drinks. At the end of each session, the students try the vegetable and fruit of the week and are then provided with a sample to share with their families. The curriculum is culturally sensitive of various diets and restrictions, incorporating non-meat alternatives as a source of healthy protein. Our visual aids incorporate different foods, including tortillas, tofu, and flan as healthy vs unhealthy foods. We introduce the students to fruits or vegetables that they might not usually eat, such as raw mushrooms, raw radishes, and kiwis.
Our results, detailed below, demonstrate an overall positive change in health attitudes and lifestyle choices amongst the students who participated. Anecdotally, students shared their supermarket stories in which they would encourage their parents to choose healthier options. Another student researched an application for his phone in which he scans the barcodes and the application makes suggestions for healthier alternatives. These are only a few examples of the positive changes we have seen since implementing our program that provide support for innovation.

Speed to market: Given that we have an already established curriculum that has demonstrated statistically significant positive changes amongst our participants as well as pediatric residents available to lead each session, we can easily launch our program every year.

Q5 Was your innovation implemented? If so, please explain when, the number of people impacted, and the

results.

Yes (please specify when and the estimated number of people impacted):

Our program was implemented for a 6-week period during the 2017-2018 school year. We obtained consent from 45 students in Alice E. Grady's Elementary school 6th grade science class to participate in our curriculum. Data were collected at baseline and post intervention to assess program impact on self-reported food intake and physical activity, measures for previous day dietary intake, nutrition knowledge, TV viewing, physical activity participation and body mass index (BMI) among 41 students. Data was collected using the CATCH Kids Club After-School Questionnaire, a validated, self-administered questionnaire. At the end of the school year, BMI and the questionnaire were repeated. Prior to our intervention, 60% of the children had normal BMI classification, 6% were overweight, 31% obese and 3% were underweight (n=35). After our intervention 63% of the children had normal BMI classification, 34% were obese and 3% were overweight. The mean percentiles were not statistically significant which indicates there is no difference (pre=68%ile, post=69%ile), thus accomplishing our outcome of a stable BMI. We found that immediately post intervention, assessment of food intentions showed an increase from a mean of 3.6 to 4.8 in a 8 question sub-section in the participants intent to eat healthier foods (p=0.000028). There was a statistically significant increase in bean, whole wheat bread, and vegetable intake. Healthy food outcomes, food knowledge and physical activity were also noted to increase on average among the participants. Lastly, hours spent watching TV and playing video games per weekend showed a significant decrease amongst participants.

Q6 Please identify the SDH Domain that your innovation addresses. (Select all that apply.)

Education,

Health and Health Care

Q7 I give the Department of Health the right to share the information submitted in this application publicly (for example: on the DOH website). I understand that there is no monetary reward/reimbursement for my submission or for attending the summit should my innovation be selected.

I consent to have my innovation shared