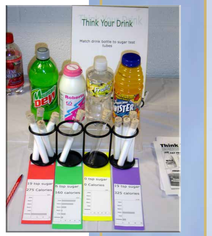
Improving the Nutrition of Foods Offered at Special Olympics through Guidelines and Resources

Kristine L. Onken, RD/LD

Iowa Leadership Education in Neurodevelopmental and Related Disabilities Program (ILEND)
Center for Disabilities and Devevelopment, University of Iowa Children's Hospital

Anne Tabor, MPH, RD/LD (preceptor), Nutrition Services, Center for Disabilities and Development; **Alice Lenihan**, MPH, RD, LDN, Clinical Director for Special Olympics–North Carolina; **Mary Pittaway**, RD, Special Olympics–Montana

Introduction



The goal of my project was to gain hands-on experience in public health with a focus on nutrition and exercise by improving the quality of the foods provided at the Special Olympics. There are no standards for the foods servedat the Special Olympics and typical foods sold are high in sugar, fat, and sodium. My project consisted of reading the Institute of Medicine's guidelines and researching other recommendations for foods sold, making and administering a survey to determine current practices, determining interest in adopting standards, and writing up guidelines and providing resources for the Special Olympics' personnel to make the foods they serve healthier. The results of the survey were published in a Special Olympic's newsletter and a facebook discussion was created to encourage cross education and support among personnel.

Obesity has increased greatly in the last 30 years, making it a Public Health priority. Childhood disability has also dramatically increased over the last four decades, from three percent in 1969 to over six percent in 1995 as defined by "the presence of a limitation in the usual childhood activities due to a chronic condition" (Newacheck and Halfon, 2000). The Surgeon General stated that it must be made a major priority to decrease the incidence of obesity among children, adolescents, and adults with disabilities (U.S. Department of Health and Human Services, 2005). Some health consequences of obesity include the metabolic syndrome, cardiovascular disease, type 2 diabetes, non-alcoholic fatty liver disease, obstructive sleep apnea, and many others. Obesity can also cause secondary conditions related to an original disability, like mobility limitations, extreme levels of deconditioning, fatigue, pain, pressure sores, depression, and social isolation (Liou, Pi-Sunyer, & Laferrere, 2005). Children with cerebral palsy, spina bifida, and ones that are nonambulatory have been shown to expend less energy than children without (Bandini, Schoeller, Fukagawa, Wykes, & Dietz, 1991). Also, children with spina bifida, spinal cord injury, and down syndrome have all been shown to have a lower resting metabolic rate (Anson & Shepard, 1996).

Secondary analysis of the National Health and Nutrition Examination Survey (NHANES) shows the rate of overweight as defined as a BMI ≥ 95th percentile for age and sex is significantly higher in children with mobility limitations compared to their peers who were not mobility limited (29.7% compared to 15.7%, Bandini, Curtin, Hamad, Tybor, & Must, 2005). The Youth Risk Behavior Survey showed that students who self-reported "any physical disabilities or long-term health problems" were more overweight than their peers who did not report any physical disabilities or long-term health problems (16.7% with 95% confidence interval 13.77-19.61 compared to 12.8% with 95% confidence interval 12.00-13.64, Eaton et al., 2006). Also, a lack of knowledge or awareness predisposes this population to obesity. People with disabilities may be less aware of the health risks associated with excess body weight and have limited knowledge or understanding of its consequences (Jobling, 2001). They also might have problems understanding and/or following through with self-monitoring (Simpson, Swicegood, & Mark, 2006). As you can see, obesity is a huge problem in this population with its own set of barriers and unique approaches needed.

Background

My practicum was through the Iowa's Leadership Education in Neurodevelopmental and Related Disabilities Project (ILEND) through the Center for Disabilities and Development (CDD) in Iowa City, Iowa. This is a graduate-level traineeship that is committed to provide family-centered, coordinated care to children with disabilities. Training opportunities are presented in multiple ways: an interdisciplinary clinical environment, the classroom, the community, and the homes of families who have children with disabilities. It is funded through the Maternal and Child Health Bureau, Health Resources and Services Administration. My preceptor was Anne Tabor, the dietitian at the CDD and the clinical director for the Iowa Special Olympics. My project fit the goals and objectives of the ILEND program because it helped improve the health of children with disabilities on the community level through healthier food options at Special Olympics' events.

Activities

The first activity done was a literature search to see what research has been done and what resources were already available. There were some nice resources available through the Institute of Medicine, the University of Minnesota School of Public Health, the Center for Disease Control and Prevention, and others. After the literature search, I needed to find out what the different states' Special Olympics were already doing in regards to making the foods they offer healthier. I consulted with my preceptor Anne Tabor, Alice Lenihan who is the clinical director for North Carolina's Special Olympics, and Mary Pittaway from Montana.

Next, I created a survey using the University of Iowa's Websurveyor. A pilot survey was sent out first and then the finalized survey to all the Clinical Directors and Health Promotion personnel from all fifty states. The pilot survey asked questions about what their position in the organization was, questions about the foods: how they got them, if the exact foods are known before the event, when they are offered and the location they can be found at, if they have made any changes to the foods they provide or have created guidelines themselves, their thoughts and beliefs about the obesity rates in this population, what types of resources they would find helpful, who their partners and donors were, and barriers they expect to have. It was sent out to eight states: Massachusetts, Montana, North Carolina, Iowa, Florida, New York, Minnesota, and Nebraska.

After the pilot surveys were completed, we realized it did not address the exact foods they were offering. The second question was redone to ask about the specific foods served. The foods offered were divided into different categories (meals, family rooms, and vending/concession). It was still asked if the foods were donated or purchased, but the rest was changed. For the lunches, a list of different common main dishes, side dishes, and drinks were made that they could mark if they served them or not. Also included was an "other" option where they could add other foods not listed. For the family rooms and vending/concession, they listed what they offered. Questions asking about who the person was that did the food planning and purchasing, if they think guidelines are a good idea, and what they thought their biggest problem was in regards to serving healthier foods were also added. The survey was e-mailed out to 98 Special Olympic employees who covered the job duties of Clinical Directors and Health Promotion personnel.

After getting results back, I created resources and guidelines. I focused on five areas: guidelines and recommendations, aides for menu planning, benefits for serving nutritious foods, tips to saving money when buying food, and vendor resources. These areas were the areas that were addressed in the research and were the most important aspects in the survey.

For the guidelines and recommendations area, the resource was divided into specific recommendations for foods served at events and general healthy diet recommendations. The specific recommendations were further broken down into examples of good foods to serve which included the Center for Disease Control and Prevention, New York State Health Department, and University of Minnesota recommendations, and school recommendation guidelines. The general healthy diet recommendations included information on the DASH diet and MyPyramid recommendations, along with portion size recommendations from the American Cancer Society, Mayo Clinic, and Weight-Control Information Network. It also included additional resources.

The Aides for Menu Planning resource had information about different on-line menu planners that can be used for free, sites that tell the nutrient composition of different foods, and the Iowa State University nutrition calculator. This is a handy calculator you can type in information about a food and it instantly tells if it passes the Healthy, Hunger-free Kids Act and why if it didn't pass. The menu planners included the MyPyramid menu planner, the National Heart, Lung, and Blood Institute Interactive Menu Planner, and the School Nutrition Association menu planner. The nutrient composition information included a comparison of the nutrients of common foods from the University of New Hampshire, the macro- and micro-nutrient composition of thousands of foods from the United States' Department of Agriculture, and macronutrient information for brand name products and restaurant foods.

Two other resources were included primarily based on the survey information that some people found it hard to persuade higher management that serving nutritious foods is important, and ways to save money when buying food. The first resource was a handout they could give to higher management outlining why serving nutritious foods at Special Olympics' events is important. It covered aspects about this populations' high obesity rates, how it reflects positively on Special Olympics possibly leading to more funding, how Special Olympics has made a priority of health and how it is a Public Health priority, that this is the direction everybody is heading so it is bound to happen soon, and how obesity contributes to numerous chronic health issues. The other handout gave tips on how to save money when buying food.

The last area addressed was one of the most important areas. It was a handout for vendors with healthy suggestions for foods to donate. I tried to address all people that are in the continuum of serving unhealthy foods to healthy foods. It has an introduction and then the rest is divided into drinks, breakfast items, main dishes, side dishes, and desserts. They are each divided into three columns: one of foods to try to avoid donating, better foods to donate, and best foods to donate. It gives specific ideas (sub sandwiches, fruit, water, etc.) to donate. This is one of the biggest issues Special Olympic personnel had because getting foods donated would be the cheapest method of getting food, and cost is their biggest barrier.

After e-mailing the resources and guidelines, I contacted Karl Hejlik, Senior Manager, Health and Research Communications for Special Olympics, to have an article published in the Special Olympics' newsletter. The article shared the results from the survey and also mentioned another aspect I did, which was set up a Facebook discussion on the Healthy Athletes Facebook discussion page for personnel to share what they have done so far to make the foods they serve more nutritious, tips, and barriers they face to provide social support and collaboration.

Results

41 surveys were returned for a response rate of about 42%. Most were Healthy Athletes Coordinators or people who assumed their job duties (13), directors (12), and administrators (10). A majority of people (33) had food donated and also purchased some themselves. In total, 28 out of 41 people served healthy main options for their meals of sub sandwiches with lean meat, while 35% offered less healthy options like pizza, hot dogs, and hamburgers. There were a wide variety of side dishes offered, the most popular being fruit (34 out of 41) and regular chips (27), although some states were becoming healthier and serving baked chips (13). Other good side options were granola bars, vegetables, and yogurt. 97% of the people offered water at their events and 14 still offered regular soda. The concessions were the areas that served the least healthy foods, which included things such as hot dogs, pizza, chips, and candy.

Most people acknowledged that Special Olympians are more obese than the general population. A total of 19 people said they were higher in obesity rates while 5 said they were a lot higher than the general population. All but two surveyed indicated it was important or very important to decrease the current obesity rate in this population.

As noted earlier, people reported that changes to make the foods healthier have been made. 29 people reported they had discussed the nutritional quality of the foods they served and it led to changes. Changes were led by athletes, coaches, and feedback from families, as well as vendors and sponsors. The biggest barrier to not serving healthy foods reported was the budget and lack of funding. Four people already had guidelines for the foods they served at Special Olympics events that addressed portion size, not serving soda, staying away from sweet desserts, and using baked chips instead of fried.

A majority of people (54%) believed that we needed guidelines for the foods served at Special Olympics. Some ideas for the guidelines were portion control, following the Food Guide Pyramid, having balanced meals, healthier choices for snacks, and most importantly of all, finding affordable healthy options. A lot of people wished their donors would donate healthier options and about half of them are considering other donors in their areas.

There were many lessons learned during this practicum. I have never created a survey before so coming up with clear questions that got the answers I was looking for was a challenge. The survey was edited many times until it posed questions that were easy to answer, not too much of a burden on participants, and got the complete answers we were looking for. A good way we determined if our survey was satisfactory was by sending out a pilot study, which I would recommend everybody doing. It gave us very valuable feedback we wouldn't have gotten otherwise. In conjunction, another challenge was getting adequate response numbers. Of the 99 surveys I sent out, we got 42% back, or 41 surveys. Although this is not significantly below other survey response rates, rates would have been better if we had funding for an incentive for filling out the survey. Since we didn't, I believe the reminders I sent out helped.

There were several other barriers during this project. There was no central directory to find Special Olympics' staff e-mail addresses so I had to look up each state's individual website and find the appropriate persons to send the survey to individually. Even doing that, many lists were incomplete or not clear on each person's job duties. To overcome this, I ended up calling a lot of the states specifically to get the information. This was effective, but very labor and time intensive. Also, working with fellow Special Olympic staff that are a long distance away and have many other commitments made it difficult to communicate and get the

Recommendations and Conclusions

During this practicum, there were several Public Health Competencies that were applied. One discipline-specific competency that was applied was "Identify critical stakeholders for the planning, implementation, and evaluation of public health programs, policies, and interventions." My critical stakeholders were my practicum preceptor, Anne Tabor, Alice Lenihan the clinical director for North Carolina's Special Olympics, and Mary Pittaway of Special Olympics Montana. Another discipline-specific competency I applied was "Describe steps and procedures for the planning, implementation and evaluation of public health programs, policies and interventions." As I went through all the steps for a public health intervention, I can describe them comprehensively. I applied all that goes along with planning, I can describe implementation, and I can also describe evaluation, including process and outcome evaluations.

I also applied four crosscutting competencies. The first competency I applied was "Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities." I applied this competency in many different ways. Orally, I communicated with my preceptor, we did several conference calls to Alice, and I also talked to the different states' Special Olympics' offices to get their input on the appropriate people to send the surveys to. I applied written communication skills through e-mails, when writing the survey to make sure it was clear, concise, and got the complete answers needed, and when writing up resources and guidelines to send to the different state Special Olympics to use. These had to be written very clearly and be very user-friendly to ensure use and minimal amounts of confusion.

The second crosscutting competency I applied was "Develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served." I learned about the different cultural values and traditions by seeing children with disabilities in the clinic, taking a class on health aspects of people with disabilities, talking to their families, researching the topic, and corresponding with other professionals in the field. I applied what I learned by being culturally sensitive with the survey and resources I sent out, making sure not to offend anybody and including different ethnic foods in the recommendations, although this could have been expanded.

The third crosscutting competency I did extensively was "Engage in dialogue and learning from others to advance public health goals." I spent a great deal of time communicating with Anne Tabor, Alice Lenihan, and Mary Pittaway; communicating about what we wanted addressed, how we wanted to address it, what we wanted to include, and what we should do with the information. This has greatly expanded my public health understanding through learning about their views, opinions, experiences, and how they wanted the project done.

The last crosscutting competency I applied was "Promote high standards of personal and organizational integrity, compassion, honesty and respect for all people." Throughout the practicum, I tried to stay on top of the project, get my work done in a timely manner, communicate politely and understandingly, have patience with other public health practitioners knowing they are involved in a lot of other projects and have limited time, and being honest and assertive with my opinions, yet working with others to find a common ground. I promoted high standards not only within the practitioners that were involved with this project, but also with the other states' Special Olympics' personnel that I communicated with.

There are many more aspects that can be addressed in the future in regards to obesity in this population. The Special Olympics could create a logo that they place on healthy foods to bring attention to and let participants know that this food is healthy and a good choice to choose. They also could have a "healthy food of the event" where they have promotional posters, lots of dishes that contain that healthy food, and recipes participants can take home and make themselves. As this project was a first step, what can happen next is mandating they follow the guidelines and have the guidelines expand to cover foods they serve for overnight events. Many of the people who work with Special Olympics don't know what foods are deemed "healthy," so Registered Dietitians could be hired to help set menus and determine healthy snacks to offer. Also, partners could be required to only donate healthy foods in order to decrease availability of the less healthy foods.

As the Healthy Athletes have started working with participants one-on-one at events, they can utilize their dietitians to go to their houses, set up clinics, or do phone interviews where the participants can be seen on a much more regular basis to help them continue their changes. Group activities can be planned to teach them how to cook, shop, etc. and to increase social support. These changes would be implemented in phases and once they are complete in the United States' Special Olympics, they can be implemented at the World Games and serve as an example for other organizations to follow.

All of the socioecological levels need to be addressed better in the future. For intrapersonal, interventions need to include one-on-one effective counseling on a level they can comprehend. On the interpersonal level, family members, significant others, and friends need to be included so they can encourage them when they are at home or going out to eat to make healthy choices and to exercise, and make changes themselves to provide optimum support. Many more things can be done on the community level: the environment can be changed, healthy food options can be promoted in grocery stores and restaurants, smaller food portions can be provided, and changes need to happen in workplaces, schools, places of worship, and salons. The policy level would include making my intervention mandatory, placing taxes on high calorie foods, subsidizing low calorie foods to make them less expensive, not allowing high calorie foods be bought through federally funded programs like the Supplemental Nutrition Assistance Program, giving insurance breaks to people who maintain or work toward a healthier weight, giving tax incentives to work places who provide exercise facilities, and many more. We have just taken a small step in a area we need to be taking leaps and bounds in.

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Special Olympics

Poster Design–CDD Graphics