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Susan Henderson, MD

Safe Routes to School: Launching the program at Oak Grove Elementary School

Capstone report

Interest

In September of 2009, I attended my daughters' elementary school Parent Teacher Association (PTA) meeting and the president announced a funding opportunity that was available for infrastructure changes to make our neighborhood safer for pedestrians and bicyclists. Living in Atlanta, a car-dependent sprawling city, had been a shock for me since I had moved from Montreal, Quebec, where I had attended medical school. Montreal is a city that is easy to get around in without a car, and I had not owned one for five years living there. There are over 500 kilometers of bike paths, many of them separate from the streets. I attended the meeting where the funding was announced which was held at the Georgia Department of Transportation (DOT). Another parent from the same school and I were present and represented the only volunteers there among employees from the counties' DOTs. The Safe Routes to School (SRTS) program was in its infancy in Georgia. It appealed to me because it 1) was focused on primary prevention, 2) had a grassroots feel, and 3) concentrated on the built environment. Having been a Peace Corps volunteer in West Africa in the early 1990s, I was able to appreciate the community building that was present in this program. In addition, I chose Oak Grove Elementary School because daughters were attending school there for the next 6 years. I had a vested interest in making the community and school better.

Why is it necessary?

Childhood obesity has risen in epidemic proportions. Childhood obesity is defined as a Body Mass Index (BMI) in the 95th percentile and above. According to the National Health and Nutrition Examination by the Centers for Disease Control and Prevention (CDC), the prevalence of obesity was 4% for ages 6-11 between 1971-1974 . In 2003-2006 it had risen to 17% of the population. Of note, 18.4% of preschoolers ages 2-4 were obese in 2009 (Pediatric Nutrition Surveillance System). Along with the rise in obesity comes a decrease in physical activity, with the frequently quoted statistic of less than 15% of students walking or biking to school according to the National Household Travel Survey in 2001.

History of SRTS

In the late 1970s in Odense, Denmark, one of the highest fatality rates existed for child pedestrians. The local government decided to institute traffic calming and infrastructure changes. The number of accidents has been reduced 82% since then. They coined the term "Safe Routes" to emphasize the safety component of the program. In 1997, there was a pilot program in the Bronx, NY. In 1998, the DOT gave $50,000 to Marin County, CA and Arlington, MA for

projects. In 2003, pedestrian and cycling advocates gathered for a conference to determine how they could institute a program on a national scale, and in 2005 US Congress passed the Safe, Accountable, Flexible, Efficient Transportation Act- A Legacy for Users (SAFETE-LU). This 836 page piece of legislation addressed primarily highway planning but squeezed in is the Safe Routes to School portion which allocated $612 million to the program. The National Safe Routes Partnership is a parallel program which targets nine states predominantly affected by obesity and is funded jointly by the Robert Wood Johnson Foundation, Kaiser Permanente, Bikes Belong, and the CDC. Funding will need to be reapportioned this year. However, even though current funding has been secured, it still has not been allocated to infrastructure grants that were approved in 2009.

Program

Prior to the creation of the Safe Routes to School program, Oak Grove was already a very active school. There is a nature path to walk on adjacent to the school, the school sponsors Field Day every spring as well as a 5 K Fun Run. They have a track club that meets on Fridays in the fall and spring. There is an extra-curricular dance class. It is in a neighborhood school that is nestled into the community; for this reason we decided it would be an excellent school to have for the SRTS program.

Our first step was forming a SRTS task force. There was much enthusiasm initially. We had the school principal, nurse, and physical education teacher involved from the school administration. Parent volunteers were key, and we had 15 sign up at the registration in the fall. In addition, Dekalb County Police, Public works, and a Dekalb County Commissioner have all been involved in some decision making.

We focused on parent, faculty, and student **education**. Parent education began with a PTA meeting in January, 2009 led by Robin Tanner, School Health Coordinator from the Dekalb County Board of Health, in which she talked about the benefits of walking and biking to school. The parent attendance was more than three times normal. The key point of our program has been to encourage children to walk to school at least once a week. We picked Wednesday as the designated Walk to School day. For those who live to far, the Oak Grove United Methodist Church (approximately 0.3 miles away) has volunteered space for parents to park and walk. On an ongoing basis, we have put announcements about walking and biking to school in the Oak Tree, an electronic newsletter that comes out weekly. In addition, in February, 2010, we published an article in The Acorn, a monthly newsletter entitled “Walking to school: the social, physical, and environmental benefits.” The marquis in front of the school has also been used for SRTS announcements. Faculty education has been carried out in January, 2009 and September, 2009. We focused on our goals as well as curriculum components that the teachers could use in the lesson plans. We have met with the school principal on multiple occasions to update her on our progress. Student education consisted of a Safety Fest carried out by the Physical Education

teacher, the Dekalb County Board of Health, and volunteers from Federal Express. The focus was on pedestrian and bicycling safety. The entire school participated in Safety Fest, as they rotated through by class. In addition, a map was printed by the Dekalb County Board of Health to illustrate walking paths that the students use. This was distributed to all students at the beginning of the program.

For **encouragement**, we had multiple small items to give away. For every Wednesday that the children walked, they would receive a sticker, pencil, eraser, granola bar, or shoelaces. In the fall of 2009 we had a student art competition in which students draw or painted why it was a good idea to walk or bike to school. There were over 70 entries and they were judged by an art teacher at a nearby school, so as to not bias the results. First, second, and third place winners all received certificates and gift cards to Target. In addition, the drawing of the first place winner was placed on a t-shirt which was sold to students and parents for $5.00. Oak Grove parents and students wore the t-shirt on International Walk to School Day in October, 2009.

We started the SRTS project with punch cards that the children would carry and then volunteers would punch each time they walked. We soon discovered, however, that the cards were lost or torn and we replaced these with waterproof bands that were attached to their backpacks. Each time they walked, a tab would be torn off. The problem with this system was that the younger children could not help themselves and tore off all the tabs. For the future, we plan to have a similar band that can be attached to the backpack and punched. The grand prize at the end of the Spring 2009 and Fall 2010 walking sessions were bicycles that were donated from Bicycle South and McDonalds respectively. The grand prize for Spring 2010 is two watches earned as a Gold level status from the Georgia SRTS program. Children who have completed a certain number of walks will be eligible for the draw. We had County Commissioner Jeff Radar come to announce one of the draws and plan to have him come again.

We have had several changes in the area of **engineering**. First five crosswalks were striped at intersections where there are many walkers. A new intersection light has been placed at Fair Oaks and Oak Grove, along with disability ramps and pedestrian countdown signals. In addition, intersection lights are slated to be installed at Oak Grove and Briarcliff and Oak Grove and LaVista. We conducted a Walking Safety Audit in December of 2009 to identify shovel-ready projects. In this walk, we covered a 0.5 mile radius of the school. Johan Gurbal, Dekalb County Transportation Division Supervisor, and Patrece Keeter, Engineer, were present at the walking audit among others.

Dekalb County Police Department has been very active in its **enforcement** activities. The Special Operations Unit set up a speed monitoring unit on Oak Grove Road outside the school in November, 2008. 9511 vehicles passed the school over the course of 72 hours, which has a 25 mile per hour (MPH) speed limit during arrival and dismissal time. At arrival time, the average speed was 32.9 MPH and at dismissal it was 35.3 MPH. As a result of this data, the Dekalb

County Police Department has stepped up its efforts in its presence. The Interactive Community Police (ICP) have played a large part in our "Walking Wednesdays" by escorting groups of students using the Walking School bus and being stationed in front of the school. Our group also advocated for a crossing guard at Kirkland Road, who was hired recently and provides extra enforcement by her presence.

Evaluation encompassed two parent surveys conducted in Fall 2008 and Fall 2009 and a student tally conducted in Fall 2009. The survey response rate was 53% in 2008 and 58% in 2009. In 2008, 18% of the parents reported that their children walked to school on a regular basis. In 2009, after a year of our program, the percentage was 28%, a 64% increase in regular walkers. On designated walking days, the number would be over 200 consistently, the equivalent of over a third of the entire school. The number one barrier for walking and biking to school was the safety. 54% replied that having more sidewalks would change the decision to walk to school. There was a section for quotes on the survey. The negative ones were as follows:

"We live too far to walk. It would take over 30 minutes."

"I don't even feel comfortable walking. The crime rate is too high for elementary kids to walk to school unless they live across the street."

"Walking to school is not a consideration- [we live] too far away, [there is] crime, [there are] speeding vehicles, [it takes too much] time. The school is promoting it too much, making my child feel badly that she is not participating. This is elementary school; the children are under 11 and don't need to be pressured/ made to feel guilty for not walking to school."

The positive comments were uplifting:

"My children are enthusiastic about walking to school. I feel that it is a great opportunity to incorporate more exercising into our family. It also helps with decreasing pollution and traffic concerns."

"I am very impressed with the community walking program at Oak Grove Elementary. The program is a testament to the strength and values of the families in the neighborhood. I wholly support it."

"Thank you for starting Safe Routes to School in the Oak Grove community!"

The student tally surveys students in their classroom on two separate occasions on days of the week that are not designated "walking days." The SRTS task force carried out the survey in the fall with volunteers. We discovered that younger children (pre- through 1st grade) raise their hand multiple times, so it was more effective to have them physically move under a sign that designated their arrival and departure at school. The student tally showed a nearly 20% walking population, with a slightly higher percentage in the afternoon.

Funding

70-90% of the $612 million that was allocated to the SRTS program from 2005-2009 has been designated for infrastructure projects such as sidewalks, bike paths, traffic calming, and lighting. 10-30% is designated for non-infrastructure costs, such as the personnel and incentives that are awarded.

In November of 2009, Norma Klanderman and I applied for a $272,000 SRTS infrastructure grant along with Sylvia Smith, Dekalb County engineer. The grant included sidewalks on North Akin and Crestline, speed monitoring signals in front of the school, and lighting for the back path. We had to document the need for the infrastructure changes, describe the SRTS program at Oak Grove, and put in photos and an aerial view for support. Only one grant was awarded per DOT district; unfortunately, a school with a more established program received the grant. We requested the scoring of the grant application and received the following information back: 1) Problem identification 30/35, 2) Proposed project 15/20, 3) Program information 20/30, and 4) Project cost estimates 15/15. We plan to reapply for the grant in 2010. We also received $200 from the PTA and $750 from the Dekalb County Board of Health. We applied for a School Health Index (SHI) grant through the Dekalb County Board of Health in conjunction with the Nutrition and Wellness committee and received it for $5000 ($2300 allocated to SRTS). In this grant, an objective had to be defined that was achievable. We chose 25% of the eligible student population (living <1 mile from school) would walk or bike at least once a week; the school did not have this information. Dan Drake at Dekalb County Board of Education provided the information along with a map showing the number of students that lived <0.5 miles, 0.5- 1.0 miles, and > 1 mile from school. Our current walking rate is about 230, with the target being 75. With the money from the SHI grant, we plan to buy reflecting safety vests, flashlights, signs to carry, pedometers, and tracking bands to attach to the backpacks.

Stages of change

A theory I often use in clinical medicine is the stages of change theory. In the precontemplative stage, people are not even thinking about walking or biking. They are simply uninterested, ambivalent, or too busy to consider it. Some may not even know about it. In the contemplative stage, parents and children are thinking about walking but have not yet walked. In the preparation stage, they have either planned to join a walking school bus, bought equipment, or have a date in mind when they plan to walk to school. In the action stage, they are walking. At this point, they either maintain their behavior (continue to walk) or relapse (go back to driving). If they maintain it, they go off the chart and the behavior becomes stable (they walk on a regular basis).

Conclusion

This has been an enjoyable and challenging project for me over the past year and half. I need to remind myself of all we have accomplished in a relatively short time. In addition, in the stages of change model, we have probably moved many people from the pre-contemplative stage to the contemplative stage; this can not be measured without focus groups and more surveys. Future plans include a bike rodeo this spring and funding for an electronic tracking system.

One of the most rewarding parts of this project was working with the people who helped and supported me. These include my children Daria, Tara, and Mitra, my husband Dale Hu, the SRTS task force from Oak Grove Elementary, Dekalb County Police Officer JA Obester, SRTS School Coordinator for Metro Atlanta Abby Tanner, Robin Tanner (Dekalb County Board of Health), and my Co-Coordinator without whom this project would not have been possible, Norma Klanderman.