Q4: Live Outside the Box—raising awareness of obesity in the school environment

Karla Calleja, Greater Southern Area Health Service (NSW)

Introduction

The rates of childhood obesity in New South Wales (NSW) have trebled in the 10 years from 1985 until 1995.1,2 Most recent data from the NSW Schools Physical Activity Nutrition Survey, reported that almost one quarter of school aged children living in NSW are overweight or obese.2

Like other chronic medical conditions, the onset of obesity is slow, occurring over a significant period of time, usually years. Once established, is difficult to treat.3

Obesity is associated with a wide range of negative impacts. Immediate impacts in childhood and adolescence can include social problems associated with the stigma of obesity, with longer term risks including an elevated risk of cardiovascular disease, diabetes and some cancers.4

With this knowledge, overweight and obesity has become a state and national health priority.

Causes of overweight and obesity

The increase in consumption of energy dense snack foods, a decrease in physical activity, increased participation in sedentary activities (including small screen entertainment such as television, computer games) and a drop in fruit and vegetable consumption are all acknowledged to play a pivotal role in the development of overweight and obesity in children and young people.2

Although close to the recommended levels of consumption of fruit (including fruit juice) have been recorded by children aged 2–4 years (95.5%) and 5–12 years (91.8%), around 60% of the fruit consumed was in the form of fruit juice (NSW Health, 2001).5 Excluding fruit juice, the reported percentage of children consuming the recommended daily amounts of fruits drops to 78.3% among 2–4 year olds and 70.2% among 5–12 year olds.6

The proportion of children reported to be consuming the recommended daily amounts of vegetables is significantly lower than the rates for fruit, with less than one in seven children aged 2–4 years (15.6%) and one in eight aged 5–12 years (12.1%) consuming the recommended quantity of vegetables.6

Physical activity patterns of school aged children in NSW reveal that that boys are generally more active than girls, and those living in rural areas are more active than those in metropolitan areas.2 Results from the same study revealed a trend of girls from low income areas being less active than those from high income areas.2 Overall, approximately 75% of girls and boys met the recommendations of 1 hour or more of physical activity each day.

Overweight and obesity in Southern Tablelands

There is currently no specific data on the levels of overweight and obesity in children in Goulburn or the Southern Tablelands region. However, Goulburn experiences high levels of socioeconomic disadvantage, a factor associated with higher overweight and obesity rates.
Q4: Live Outside the Box

In 2006, Greater Southern Area Health Service in partnership with NSW Cancer Council and Schools as Community Centres, launched Q4: Live Outside the Box in Goulburn, located in the Southern Tablelands of NSW.

The innovative school based program was adapted to the rural setting from a program originally piloted by the NSW Central Coast Health Promotion Unit in 2004. In planning, principals highlighted work load and sourcing resources, limited time in class, consistency across the school environment and inclusive of all students as important elements of any school based healthy eating and activity program. Q4: Live Outside the Box met all of these elements.

Components of Q4
The program focused around an individual passport challenge, with weekly newsletter articles, activity sheets for classroom and homework activities, a fun, active launch, support for canteens and food related events and prizes also forming part of the program. Radio advertising was conducted leading up to and following the program.

The Q4 Passport Challenge
All students in participating schools received a passport which was distributed to schools 2 weeks prior to the recording period.

The fruit, vegetables and extra food eaten, physical activity undertaken and amount of TV/computer used correlates to points. Students receive more points for limiting unhealthy behaviours, such as eating extra foods and watching the TV for significant periods of time, and increasing healthy behaviours, such as increasing the amount of vegies and fruit eaten and active play undertaken. Parents are required to sign off on the points and behaviour on a daily basis. Points are totalled for each day, and for both weeks, with a grand total for the entire 2 weeks.

Canteen Involvement
To support the implementation of the ‘Fresh Tastes @ School Strategy’ (NSW Healthy school canteens) a network of local canteen workers/volunteers had been meeting on a regular basis facilitated by Goulburn Community Health Service. This network was utilised to inform canteen managers about the Q4 program and support canteens to tie fruit and vegetable based specials during Q4. Schools without canteens were provided with support and ideas to host food related events.

Supporting Q4 in class
Schools were provided with a range of resources, including posters, a directory of web based and multimedia resources, as well as in class and homework activities across all learning areas. Teachers were encouraged to use these resources to reinforce the messages of Q4 both during and following the program.

Prizes and certificates
All students participating in Q4 who returned their booklets received a certificate, with an additional three prizes for each class taking part in Q4. The prizes were in keeping with the themes of the program, and included basketballs, footballs, water bottles and free passes to the local pool. Although the booklets indicated there would be prizes for the students who had the highest points total, schools were encouraged to award the prizes based on effort and participation (Only one school chose to award the prizes based on highest number of points). Certificates and prizes were presented at school assemblies following the conclusion of Q4.

Pool Party Launch
A pool party was held to celebrate the launch of the program in Goulburn in keeping with the active and healthy food messages of Q4. All students at participating schools were given free entry passes in to the pool.
The launch was promoted through the schools via newsletters and announcements and advertising on the local radio stations. A variety of healthy food was prepared by a group of parent volunteers and a local P&C and served at lunch time. In total, there were 14 dishes available to sample free of charge with in excess of 650 people attending the free day.

Results of the program

Passport results

School participation

78% of the public primary schools within Goulburn chose to participate in the first ever Q4: LOTB, with 75% of the schools from Goulburn who did not participate indicated they had heard about the program whilst it was running and would like to participate next year.

The return rate of passports from schools varied significantly. Of all the passports distributed across the schools, ranging from 8% passports returned, to 100% passports returned. The largest school participating in the program, had the lowest return rate of 8%. The schools with the top two return rates had less than 90 students each, and were from villages surrounding Goulburn.

In considering all schools, there was an overall return rate of 49%, with the average return rate among schools being 55%.

Points totals

When considering the total number of points it is important to remember that this system of recording behaviour is not without bias and is open to inaccurate recordings.

The school scoring the highest total number of points, had the lowest average points per student. The school with the lowest return rate had the highest average points per student. Overall, 67% of schools (6/9) increased their total points from week 1 to week 2 indicating general positive shift in overall behaviour recorded.

7/9 schools increased their total points in week 1 to week 2 from fruit, vegetables and extra food consumption indicating a positive change in behaviour across these aspects of lifestyle. The trends with computer/TV use was more mixed. In this section, points were awarded for limiting TV/computer use, and only 5/9 schools were able to decrease the total amount of TV watched. A further one school recording no overall change, and three recording an increase in TV viewing/computer use.

In considering the total amount of fruit and vegetables eaten over the recording period, the result showed that a total of 13 261 pieces of fruit were eaten, which equates to students each eating 1.5 pieces of fruit each day for the 2 weeks. With regards to vegetables, students recorded eating a total of 21 512 vegetables during the Q4 recording period. A total of 28 508 points were awarded to students participating in Q4 for active play which translates to 7 127 hours of active play over the two weeks. The average number of points received for active play was 46.2 points for active play over the Q4 period, which equates to 45 minutes of physical activity outside school hours for every day of Q4.

The Goulburn version of Q4 was supported by special menu items at canteens, healthy food events in schools with no canteens, health related resources for teachers and radio commercials dispelling common myths surrounding children and obesity. Participating schools were provided with a full term worth of newsletter articles educating parents about topical health issues like reading food labels and packing healthy lunchboxes. In excess of 650 people attended the program launch—a free pool party featuring cooking demonstrations and a healthy BBQ.

Results from canteens (and other food related events)

Staff error and resignation impacted significantly on the recording and reporting of canteen support and activity. It is unclear how many canteens ran special events to coincide with the program, however all participating schools were adhering to the NSW Fresh Tastes @ School strategy during the program.
Of the three schools participating in Q4 that did not have a canteen, two ran a food related event during Q4, however all three have initiated a range of health initiatives following the conclusion of the program. Feedback from these schools has reported that Q4 was the catalyst to some of these events and activities were run due to the positive response from parents and children about Q4.

Principal and teacher feedback

Principals were sent surveys to provide feedback on the program and success or otherwise in their schools. Seven of the nine returned surveys (78%), and of the principals who returned surveys, all rated support from program co-ordinators in explanation of program, communication throughout Q4, responses to requests and overall support as either ‘Excellent’ or ‘Very Good’. Likewise, principal’s rates the quality of Q4 passports, newsletter articles and health eating resource directory provided as either ‘Excellent’ or ‘Very Good’. 71% of principals returning surveys indicated that the feedback they had received from teachers had been predominantly positive, many listing suggestions for improvement to the program.

Possible program changes

A range of areas for improvement were identified by parents, principals and program co-ordinators. Access to and cost of transport remains a significant issue in regional areas and is especially pertinent to schools drawing on children from farming communities. In subsequent years, assisting out of town schools to arrange transport to the free launch, or possibly holding the launch during school hours should be considered.

Additional area identified for possible change include:

- direct communication with teachers and possibly a lead teacher at each participating school might increase return rate and feedback from teachers
- drawing more on the Parents and Citizen groups of schools involved may help to increase ownership of the program and lessen the burden on health and education staff
- exploring other avenues for funding to increase advertising on radio about Q4 messages and increase the number schools taking part.

Conclusion

Q4: Live Outside the Box was the first program of its kind to be co-ordinated by GSAHS in the local area with schools. Not only was the program concept new to schools and students, but it was new territory for the program co-ordinators also.

A variety of results reflect very positively on the program and the local schools involved.

The anecdotal and formal feedback received indicates that local principals are keen to see the program implemented again in following years, many indicating that the barriers and issues faced in 2006 could be easily overcome. Principals also provided strong, encouraging feedback regarding the support provided by the program co-ordinators, the program itself and indicating that the program has been successful in establishing and fostering the relationship with between schools, the health service and SACC.

Following Q4, some of the participating schools have applied for small grants, and are implementing regular fruit days at their schools. These initiatives, will have sustained, positive impacts on the school and its students.

Although the return rate averaged 50% across all schools, significant communication issues within some schools were identified following the program. The data collected also provides an insight into the impact a brief intervention in the schools environment can have on self reported lifestyle behaviour.
Importantly areas requiring further investigation and strengthening have been identified, and should be given due considered before being run again.

It is difficult to make direct comparisons between Q4 in 2006 in Goulburn and the Central Coast pilot year, as data from passports was not collected in the first year Q4 implemented on the Central Coast. Rather, many of the difficulties experienced during implementing the program were identified in the first year and addressed in subsequent years.

Q4: Live Outside the Box is not likely to be the sole solution to childhood obesity. However, Q4 and programs like this, can be used by local practitioners to help establish and foster relationships between the health service, schools and the community and can be one part of a comprehensive, equitable and multi-sectoral to address childhood obesity.

References


3. NSW Centre for Public Health Nutrition (CPHN) 2005 Best Options for promoting healthy weight and preventing weight gain in NSW, NSW Dept Health, Sydney.


Presenter

Karla Calleja is a Health Development Officer in the Southern Tablelands Cluster of Greater Southern Area Health Service in NSW. Karla has been in her current role for two years, has a background in public health nutrition and health promotion, and enjoys the challenges of working in regional New South Wales.