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CASE 5

Active Schools: A Method to Combat Sedentary Behaviour?

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Amelia Brooks, Director of Education with Maple Leaf District School Board (MLDSB), was sitting in her office completing a report on improving student engagement within the classroom. As she was working, she received a phone call from a principal, Jessica Myles, who was concerned about the health and well-being of her students. Jessica had been noticing that her students were becoming increasingly inactive during recess, were consuming unhealthy foods high in sugar and fat, and had a decreased interest in partaking in school sports activities. As the head of her school, Jessica felt it was important to make changes, but she needed advice on how to make them.

As many as 54% of families in Canada have faced some degree of financial strain from enrolling their children in extracurricular activities (Ipsos, 2017). Further, as many as 27% of Canadian families incur debt when they place their children in these activities (Ipsos, 2017). However, according to the Canadian 24-Hour Movement Guidelines (Exhibit 1), only one third of children meet the daily recommendations of 60 minutes of moderate-to-vigorous physical activity (MVPA) (Statistics Canada, 2017). Additionally, only 50% of Canadian children adhere to the recommended limit of two sedentary hours per day (Statistics Canada, 2017). It appears that in order for many families to ensure that their children are physically active they are facing some financial constraints.

BACKGROUND

As the Director of Education, Amelia is responsible for helping students succeed and ensuring that they have proper access to learning opportunities, programs, and other resources. Amelia is responsible for the implementation of board decisions. Prior to beginning her career in education, Amelia worked as a health promoter, encouraging communities to get active and live healthier lifestyles. Initially, Amelia sought a career in childhood education because she felt that the best time to build healthy habits is during childhood, and she wanted to be a part of the decision-making process within the education system.

After Amelia's phone call with principal Myles, she was reminded of the very reason that she went into education. She realized that she wanted to help students become more active. The Director of Education is an elected position and Amelia was approaching the last three months of her term. Amelia decided that the upcoming Board and Standing Committee meeting would be a good time to make a lasting impression.

CONCEPTS OF INTEREST

Sedentary Behaviour

Sedentary behaviour is associated with an increased risk of: type II diabetes, cardiovascular disease, and mortality; all-cause mortality (independent of physical activity); and certain cancers (e.g., colon, endometrial, and lung cancer). Canadian adults are sedentary for most of their waking hours, and evidence demonstrates that children and youth spend a large proportion of their time in sedentary pursuits (Ministry of Health and Long-Term Care, 2018).

Sedentary behaviour is often described as “low energy expenditures and a sitting or reclining posture” for a prolonged period of time (ParticipACTION, 2018). Physical inactivity is described as “failing to achieve the recommended guideline of 150 minutes of MVPA per week” (The Conference Board of Canada, 2014). Although both terms have different meanings, both behaviours are related and can have joint effects on health and well-being. For example, between sitting in a classroom and engaging in screen time, children and youth (defined by ParticipACTION as five to 17 years old) spend too much time being sedentary (ParticipACTION, 2016). In fact, in 2018, ParticipACTION released a report card on physical fitness in which Canadian children and youth received a “D” rating because of the low levels of activity for their respective age groups (ParticipACTION, 2018). Sedentary behaviour has been linked to an increased risk of aggression, weak academic performance, and the development of diabetes, cancers, all-cause mortality, and cardiovascular issues (Wilmot et al., 2012). Sedentary behaviour is associated with hypertension, and vitamin D deficiencies as a result of lack of sunlight exposure, which may lead to various organ malfunctions and bone diseases (Inyang & Okey-Orji, 2015). Low levels of physical inactivity and sedentary behaviour in children puts them at risk for developing chronic disease later in life (Wilmot et al., 2012). Recently, research has also found a link between screen time and mental health conditions such as anxiety and depression (ParticipACTION, 2016). With the increased prevalence of technology, increased human dependence on technological platforms, and increased focus on convenience, one can expect that sedentary behaviour levels will only continue to rise. Although sedentary behaviour is a major public health issue, it is also a modifiable risk factor.

Health is highly influenced by social and economic factors, individual behaviours and conditions, and the physical environment; therefore, to mitigate sedentary behaviour in children and youth, policies and supportive environments are needed (Diaz & Lock, 2016). Childhood is an ideal time to learn new skills and habits because children are particularly impressionable and develop many behaviours and attitudes that remain with them throughout their lives (Whitebread & Bingham, 2013).

In 2005, the Ontario Ministry of Education created Policy/Program Memorandum No.138, which was updated in 2017 to Policy/Program Memorandum No. 138: Daily Physical Activity in Elementary Schools, Grades 1-8 (Ministry of Education, 2017). This policy was introduced to ensure that elementary school students participated in a minimum of 20 minutes of MVPA each day (Public Health Ontario, 2017). However, there is evidence that indicates an inconsistent implementation of the daily physical activity policy (Public Health Ontario, 2017). A supplemental approach encourages secondary school students to become more physically active; however, an alternative strategy or additional program is needed to help ensure that children and youth meet the daily requirement of 60 minutes of physical activity.

The School Environment: Active Schools

The first 10 years of a child’s life are the most critical for teaching them to have a healthy attitude towards physical activity (Whitehead, MacCallum & Talbot, 2015). If you can get a child to be active from a young age, it is likely that they will continue this behaviour into adulthood,

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which then makes them more likely to be active and playful with children of their own (Whitehead, MacCallum & Talbot, 2015).

The ways in which Active Schools operate vary among school jurisdictions. Most Active Schools aim to promote a culture of inclusive physical activity, providing high-quality physical education and encouraging students to partake in 60 minutes or more of moderate-to-vigorous physical activity each day (Whitehead, MacCallum & Talbot, 2015). As an example, British Columbia has engaged in efforts to promote physical activity within schools by revamping its previous education curriculum. The new curriculum includes mental well-being and a more holistic view of health (Healthy Schools BC, 2016). The newly introduced curriculum provides schools with more support through a network of resources and regional staff who offer follow-up support to create and implement action plans, local community connections, workshops, and mentorship opportunities (Healthy Schools BC, 2016). Specifically, teachers learn how to add activities such as aerobics to an arithmetic lesson or incorporate stretching exercises into their science curriculum (Canadian Institutes of Health Research, 2017).

The National Center for Chronic Disease Prevention and Health Promotion created a model called Whole School, Whole Community, Whole Child (WSCC), which encompasses both physical education and physical activity in order to provide students with opportunities to become physically active through their school and community (Centers for Disease Control [CDC], 2017). To ensure that all aspects of the WSCC framework are addressed, the model refers to a more specific and targeted approach called the Comprehensive School Physical Activity Program Framework (CDC, 2013). This framework is used by schools to provide students with an abundance of school-based activities to empower them to stay active and obtain the recommended 60 minutes or more of physical activity per day (CDC, 2013). The framework is made up of five components—physical education, physical activity during school, physical activity before and after school, staff involvement, and family and community engagement (CDC, 2013).

There are many short-term and long-term benefits associated with students attending Active Schools, including higher grades, happiness, improved health outcomes, better sleep, active parenting styles, and lower health care costs (Whitehead, MacCallum & Talbot, 2015). A position statement prepared by the Heart and Stroke Foundation regarding schools and physical activity outlined various recommendations directed at provincial/territorial governments and school boards. The aim was to engage and encourage these organizations to improve physical activity and decrease sedentary behaviour in school-aged children (Heart and Stroke Foundation, 2013). Some suggestions include:

1. Ensure adequate financial support for schools to help implement a strong health and physical education curriculum that emphasizes lifelong physical activity enjoyment skills.
2. Ensure Quality Daily Physical Education programs are in place for all students from kindergarten to grade 12.
3. Assist all students from kindergarten to grade 12 in accumulating 60 minutes of daily physical activity through a variety of activities and programs. For example:
 - Integrate physical activity into lesson plans for subjects other than physical education (e.g., math, science, languages, etc.)
 - Encourage unstructured physical activity and active play during lunch hours and recess
 - Provide intramural opportunities for physical activity at lunch hour and before or after school
4. Include accountability measures within provincial/territorial policies governing school physical activity and physical education in order to ensure that implementation occurs.

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5. Where possible, increase the availability of physical education specialists in elementary schools.
6. Emphasize the importance of physical activity for all and take into account the requirements of different age/sex groups, ethnic backgrounds, and previous experience with physical activity.
7. Establish guidelines that place schools in locations that make it easier for children to walk and bike to school. A travelling distance of 1 km or less has been shown to be exceptionally favourable to active transportation. Where this is not possible (e.g., rural areas), implement creative solutions that help children to walk or bike at least some portion of their commute. For example, arrange for buses to drop students off at locations from which they can safely walk or bike the rest of the way.
8. Promote the development of active and safe routes to school. Conduct accompanying promotional and educational activities that address safety and the benefits of active transportation.
9. Establish healthy school environments including the provision of bike racks and crossing guards, as well as safe and appealing playgrounds designed to promote physical activity. Where possible, train playground supervisors to facilitate a wide variety of games that emphasize physical activity.
10. Through the establishment of cooperative agreements between schools and communities, arrange for schools to be open before and after school for physical activity and other programs for children and their families.

School Stakeholders

Amelia received an e-mail notifying her of the various stakeholders invited to the upcoming Board and Standing Committee meeting: eight members from the Board of Trustees, who ensure that the Director of Education carries out his/her responsibility for implementing board policies; five student trustees, who represent the voice of the students; the Board Chair and Vice Chair, who help to manage and provide leadership throughout the meeting; three teacher representatives; four parent representatives; and, two union representatives. Although all stakeholders will be able to speak and participate in this meeting, only the Board of Trustees will have voting power. In order to pass the motion regarding Active Schools, Amelia will require more than 50% of these trustees to vote in favour of implementing the Active School model (Toronto Catholic District School Board (TCDSB), 2018). At this upcoming meeting, Amelia realizes the importance of informing stakeholders about the costs and benefits associated with active schools (i.e., funding, academic outcomes, burden on teachers, and health outcomes).

PLANNING MEASURES

Given the success of Active Schools programs in other Canadian provinces and around the world, Amelia felt that implementing this program was the change needed to help encourage children and youth within the MLDSB to get active and get moving. Transforming traditional classrooms into spaces conducive to physical activity will require extensive support and resources. Specifically, this will require financial investment, construction within schools, and convincing various stakeholders such as parents/guardians, educators, students, the school board, and the union to embrace the program.

The focus of the upcoming Board and Standing Committee meeting is to develop a five-year plan to shape and guide the school board's priorities. Amelia decides to present her proposal on Active Schools, hoping to receive funding and support for the program. This will allow her to run a year-long campaign that improves physical education classes, emphasizes physical activity outside of schools, and ensures that teachers add physical activity and movement to various areas of student learning.

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At the upcoming meeting, Amelia will be sharing evidence-based findings on the positive impact of Active Schools, and a vote will take place after Amelia presents her proposal. Depending on the outcome of the vote, the school board Chair will be able to declare a motion moving the board forward with acquiring training for teachers to add elements such as nature exploration and active movement into their teachings. The approval of this motion will also create funding opportunities for building new infrastructure that assists with active learning. With enough support, Amelia hopes that she can eventually move this idea up to the Ministry of Education as a provincial strategy for decreasing sedentary behaviour and encouraging more young people to become physically active.

Amelia knows some people may push back and find issues with her suggestion to support the transition to an Active Schools model. The creation of an Active Schools program in the MLDSB will call for an extensive amount of work and upfront costs (approximately \$30 million) just to implement and sustain the program over the next seven years. MLDSB can afford this program if it is budgeted correctly. Additionally, Amelia knows if this Active School idea is accepted by stakeholders, she would most likely be re-elected as the Director of Education. Amelia realizes she may not receive the support she needs, but since she is serving the last three months of her term as Director of Education, she is willing to take that chance.

What would be the best way of communicating this message at the meeting? Amelia decides to use Public Health Ontario's six-step guide (Exhibit 2) to help her create a blueprint for the Active Schools model. This six-step guide provides systematic guidance for planning a health promotion program and will help her coordinate, manage, and effectively use resources to design a communication and implementation plan for the schools within her board.

Amelia considers the following:

1. What should the long-term goals and objectives of the Active Schools model be?
2. How would she develop the six-step health promotion planning model? (Exhibit 2)
3. Perform an audience analysis for the stakeholders (Board of Trustees). What would be put for the following descriptors: demographics, behavioural, and psychographics? (The Health Communication Unit, 2007)
4. How would she go about conducting an analysis to prioritize all stakeholders? (Exhibit 3)
5. What key messages should be included in Amelia's communication at the board meeting?

CONCLUSION

The meeting is fast approaching and Amelia has exactly two weeks to prepare. Given the diversity of stakeholders at the meeting, Amelia realizes that whatever she communicates must be both targeted and generalizable to apply to all groups—this will be a challenge.

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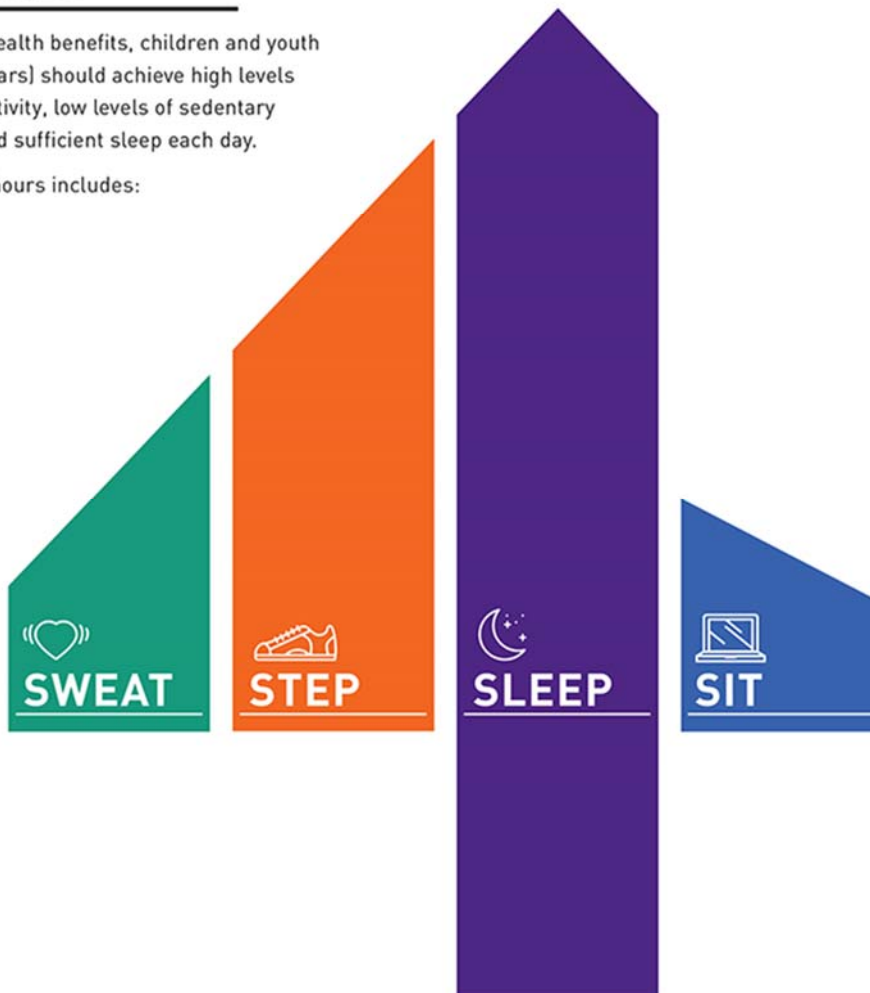
EXHIBIT 1

Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep

GUIDELINES

For optimal health benefits, children and youth (aged 5–17 years) should achieve high levels of physical activity, low levels of sedentary behaviour, and sufficient sleep each day.

A healthy 24 hours includes:



Preserving sufficient sleep, trading indoor time for outdoor time, and replacing sedentary behaviours and light physical activity with additional moderate to vigorous physical activity can provide greater health benefits.

SWEAT

MODERATE TO VIGOROUS PHYSICAL ACTIVITY

An accumulation of at least 60 minutes per day of moderate to vigorous physical activity involving a variety of aerobic activities. Vigorous physical activities, and muscle and bone strengthening activities should each be incorporated at least 3 days per week;

STEP

LIGHT PHYSICAL ACTIVITY

Several hours of a variety of structured and unstructured light physical activities;

SLEEP

SLEEP

Uninterrupted 9 to 11 hours of sleep per night for those aged 5–13 years and 8 to 10 hours per night for those aged 14–17 years, with consistent bed and wake-up times;

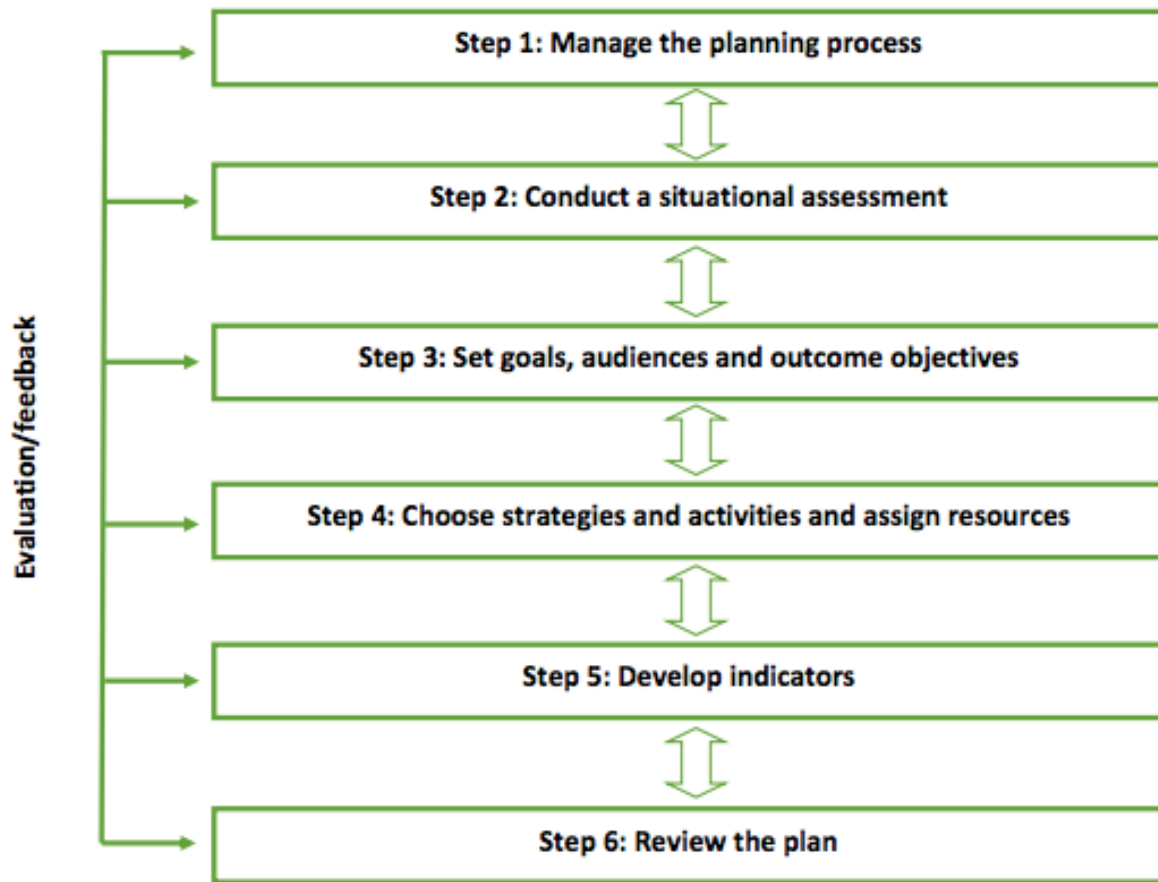
SIT

SEDENTARY BEHAVIOUR

No more than 2 hours per day of recreational screen time;
Limited sitting for extended periods.

Source: Tremblay, et al., 2016.

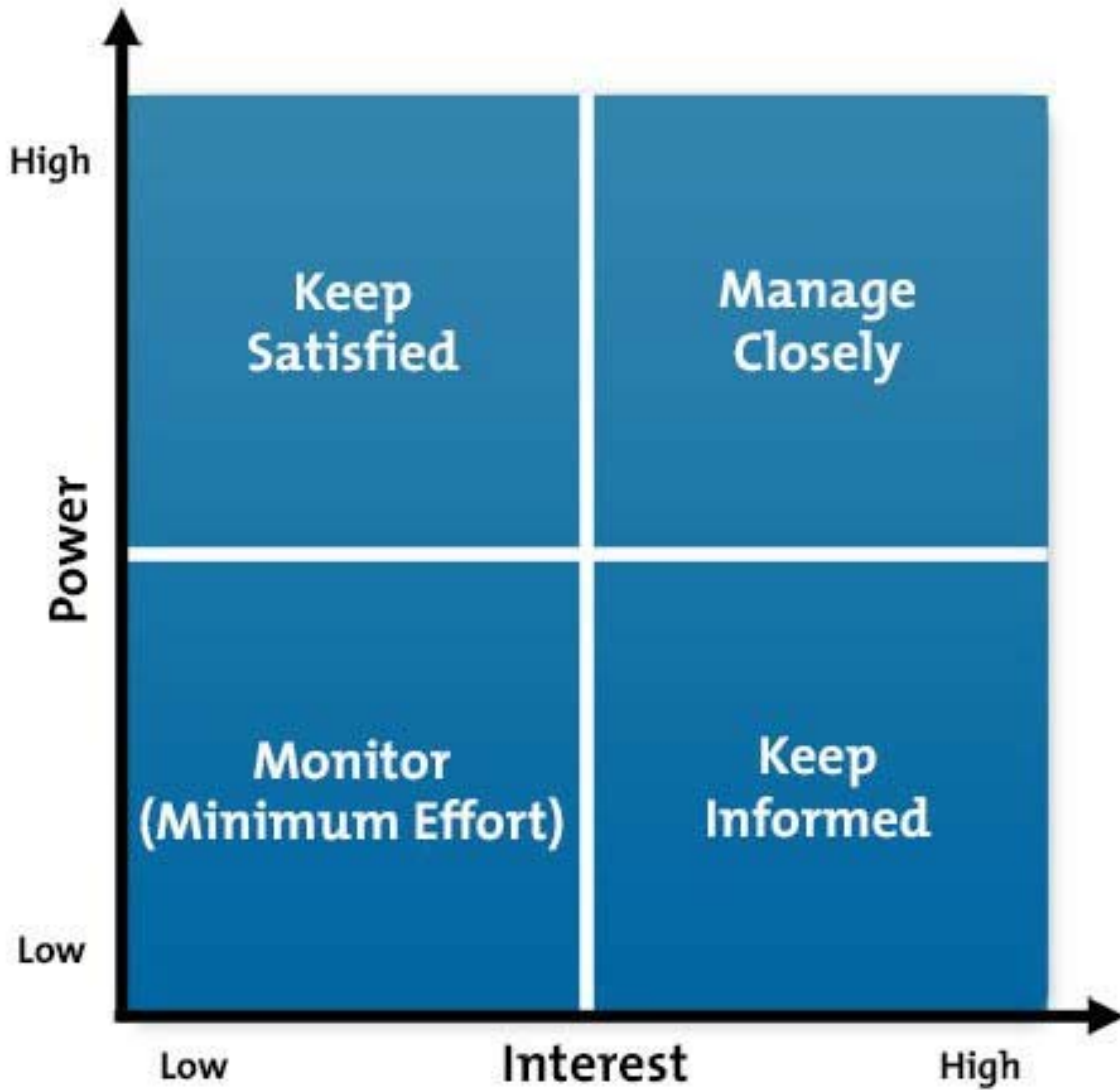
EXHIBIT 2
Six-Step Planning Model



Source: Public Health Ontario, 2015.

EXHIBIT 3

Stakeholder/Power Interest Matrix: To Prioritize all Stakeholders



Source: Stakeholder analysis: Winning support for your projects (MindTools, 2016).

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INSTRUCTOR GUIDANCE

Active Schools: A Method to Combat Sedentary Behaviour?

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BACKGROUND

After a phone call from Jessica Myles, a concerned principal, Amelia Brooks, the Director of Education with Maple Leaf District School Board, decided she needed to reduce sedentary behaviour among many students in her district. As she approached the end of her term as Director of Education, Amelia realized that if she wanted to take action and combat sedentary behaviour, the time was now. As a trained health promoter, Amelia knows the benefits and evidence around Active Schools, not just in improving physical activity, but also in supporting a culture of inclusive physical activity. Most Active Schools aim to promote a culture of inclusive physical activity, providing high-quality physical education and encouraging students to partake in 60 minutes or more of moderate-to-vigorous physical activity (MVPA) each day (Whitehead & Talbot, 2015). Active Schools programs support high quality physical education and encourage students to partake in 60 minutes or more of physical activity each day (Whitehead, MacCallum & Talbot, 2015). The Active School model also has the potential to decrease the levels of sedentary behaviour and physical inactivity in elementary students. Amelia needs to prepare a proposal for an upcoming board meeting that will be attended by key stakeholders. She needs to balance stakeholder interest while keeping the goal of active children central. In order to pass the motion to incorporate Active Schools activities into Maple Leaf District School Board programs, Amelia requires more than 50% of supportive votes from the Board of Trustees. Given the diversity of stakeholders and their range of perspectives and priorities (Board of Trustees, student trustees, and parent and teacher representatives) Amelia realizes the importance of her task.

OBJECTIVES

1. Identify key considerations for Amelia in preparing her proposal for the upcoming board meeting.
2. Create a health promotion planning model proposal to be presented at the upcoming board meeting that can be used as a key tool for the implementation of guidelines for Active Schools.
3. Develop a context-specific communication plan to be presented at the upcoming board meeting.
4. Discuss the different values, roles, and responsibilities of stakeholders and determine how their interests can be best prioritized and balanced.

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DISCUSSION QUESTIONS

1. What are the goals and objectives of an Active Schools model?
2. If the board does not embrace the Active Schools proposal, what could be suggested as a temporary or less resource-intensive alternative?
3. What are the roles and perspectives of the various stakeholders? How might they be aligned or different?
4. How might the Active Schools model be used as a form of primary (averting an onset) and secondary (early detection) prevention?

KEYWORDS

Active Schools; children and youth; communication stakeholder analysis; health promotion planning; physical activity; sedentary behavior