

CASE 16

Don't Miss the Bus

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“Avoid basing decisions on untested but strongly held beliefs, what you have done in the past, or on uncritical ‘benchmarking’ of what winners do.”

–Jeffrey Pfeffer, Thomas D. Dee II Professor
of Organizational Behavior, Stanford University

BACKGROUND

The Canadian Health Measures Survey (CHMS) calculates body mass index based on the height and weight of survey participants. The 2004 CHMS revealed that 22% of Canadian children and youth are overweight and 12.7% are obese. The prevalence of high weight and obesity increased from 17% and 6.3%, respectively, between 1978/1979 and 2004 (Roberts et al., 2012). In 2012, the federal, provincial, and territorial governments of Canada identified reducing childhood obesity as an important area of action for health, stating health ministers “will champion this issue and encourage shared leadership and joint and/or complementary action from government departments and other sectors of Canadian society” (Public Health Agency of Canada, 2012). The province of Ontario accounts for one-third of the approximately 35 million people in Canada. King Region Public Health is one of 36 public health units in Ontario. The Region of King has 1,384,000 residents. It is located northeast of the City of Toronto in the Greater Toronto Area.

THE BUS

Philip Singe, the Chief Medical Officer of Health at King Region Public Health (KRPH), was a believer in evidence-based medicine. The belief was inculcated during his days as a medical student and enhanced by his experiences as a public health official. Public health received far fewer resources than medical care. As a public health official, he could not afford to waste time or money on ineffective practices. Philip stopped Vincent Randall, director of the Health Promotion portfolio, in the hall of the KRPH office. “Vince, a friend of mine just sent me a link to the Ottawa Student Transportation Authority website. Ottawa schools are offering a walking school bus program. It looks like they’re in the third year of the program. Twelve schools are operating this September. Ottawa Public Health is a partner” (Ontario Safety Council, 2018).

When hiring for the lead health promotion position last year, Philip had selected Vincent, because he felt Vincent understood the value of considering evidence when formulating health promotion initiatives. Vincent’s resume outlined training in evidence-based public health, and he demonstrated the skills required to identify and appraise evidence. “I’m familiar with the active transport concept, but I don’t have first-hand experience,” Vincent replied. “We have a meeting next week with King Region School Board. Do you want to propose something on active commuting?”

“Maybe.” Philip was intrigued, but his approach to the early phases of any program was to remain equivocal. “Would you be able to take a few days to prepare a briefing document on

active commuting? Focus on elementary school-aged children. Find out what's out there. What are the options? What works?" Philip paused, "I like the idea. I wouldn't be able to convince my teenaged son to walk to school, but maybe we can get to the young ones." He smiled.

"I like the idea too," Vincent responded. "I'll look into it. Would you be able to send me the Ottawa link?"

Vincent began with a search for systematic reviews. Given the short time frame, he wanted to get a handle on the quality and scope of the literature.

REFERENCES

1. Ottawa Safety Council. (2018). Walking School Bus. Retrieved from <https://ottawasafetycouncil.ca/wsb/>
2. Public Health Agency of Canada. (2012). Curbing Childhood Obesity: A Federal, Provincial and Territorial Framework for Action to Promote Healthy Weights. Public Health Agency of Canada. Retrieved from <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/frameworkcadre/index-eng.php>
3. Roberts, K.C., Shields, M., de Groh, M., Aziz, A., & Gilbert, J.A. (2012). Overweight and obesity in children and adolescents: Results from the 2009 to 2011 Canadian Health Measures Survey. *Health Reports*, 23(3), 37-41.
4. Smith, L., Norgate, S.H., Cherrett, T., Davies, N., Winstanley, & C., Harding, M. (2015). Walking School Buses as a Form of Active Transportation for Children—A Review of the Evidence. *Journal of School Health*, Vol. 85, No. 3, 197-210.

INSTRUCTOR GUIDANCE

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BACKGROUND

Dr. Philip Singe is the Chief Medical Officer of Health in the fictional Region of King in Ontario, Canada. Upon learning that Ottawa Public Health is offering a walking school bus program, Dr. Singe asks Vincent Randall to investigate the evidence. In charge of the health promotion portfolio at King Region Public Health (KRPB), Vincent Randall has been asked to apply the principles of evidence-based public health to identify and appraise the evidence on walking school buses. KRPB may suggest a similar initiative to the King Region School Board during an upcoming meeting. Given the short timeframe of one week, Vincent is likely to begin his search by identifying systematic reviews of the literature that are pertinent to the walking school bus program.

The scenario depicted in the case is a common occurrence in public health organizations. In the process of developing new programs, the practices of other organizations and the opinions of leaders in the field can be influential. The case provides students with the opportunity to apply evidence-based practices to program and policy development in order to critically assess program options.

OBJECTIVES

1. Understand the importance of using evidence to inform health policy and program development.
2. Distinguish systematic reviews from other types of research and recognize the benefits and challenges of using this type of evidence.
3. Specify best practices in the conduct of systematic reviews and critically appraise the quality of a systematic review.
4. Search for systematic reviews in repositories and journal citation databases.
5. Using information from systematic reviews as a starting point, conduct searches for primary studies to inform public health practices.

DISCUSSION QUESTIONS

1. Using the epidemiological framework of population, intervention/exposure, comparison, outcome, and setting, develop a research question pertinent to the walking school bus program.
2. Read the review by Smith and colleagues (Smith, 2015¹) and appraise the quality according to the criteria found in the Assessing the Methodological Quality of Systematic Reviews (AMSTAR) checklist (http://amstar.ca/Amstar_Checklist.php).
3. Use the following systematic review repositories to identify additional evidence pertinent to the walking school bus program:
 - a. McMaster University, Health Evidence (<http://www.health-evidence.org/>)

¹ See references on previous page.

- b. National Collaborating Centre for Methods and Tools
(http://www.nccmt.ca/public_health_plus/all/1/list-eng.html)
 - c. Cochrane Database of Systematic Reviews (<http://www.cochrane.org>)
 - d. Cochrane Public Health Group (<http://ph.cochrane.org/>) – The Public Health Group is one of approximately 50 Cochrane Review Groups
 - e. Campbell Collaboration (<http://www.campbellcollaboration.org>)
 - f. Agency for Healthcare Research and Quality
(<http://effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/>)
 - g. International prospective register of systematic reviews (PROSPERO)
(<http://www.crd.york.ac.uk/PROSPERO/>)
4. Develop a search strategy and apply the strategy to search for additional evidence from journal citation indices, including:
 - a. PubMed (<http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed>)
 - b. Embase (<http://www.embase.com>)
 - c. PsycINFO (<http://www.apa.org/psycinfo>)
 - d. Cumulative Index of Nursing and Allied Health Literature (CINAHL)
(<http://www.ebscohost.com/cinahl>)
 5. Specify an approach to systematically searching for evidence in the grey literature, including reports and guidelines from other public health units and national and international organizations.
 6. What are the appropriate next steps to applying evidence to decision-making? How should Vincent Randall prepare for a meeting with the King Region School Board?

KEYWORDS

Evidence-based public health; systematic reviews; critical appraisal; health promotion; systematic review repositories; searching for evidence.