## The future of primary cancer prevention in Canada: Reaching for every ounce of prevention means reaching for equity

Lindsay Kobayashi

Queen's University

Cancer in Canada is becoming frighteningly common. In 2010, cancer was the leading cause of premature mortality<sup>1</sup> in our country. If current rates of increase in cancer incidence and mortality in Canada remain constant, approximately 66,000 more people will be diagnosed with cancer (a 37% increase) and 20,500 more people will die from the disease (a 27% increase) by  $2030^1$ . Because our demographics are shifting toward a more aged population (age is the main risk factor for cancer<sup>1</sup>), these numbers will likely be even higher in reality. Primary prevention is the only way to reduce cancer incidence. As the saying goes, an ounce of prevention is worth a pound of cure – and we must improve our current prevention system to address the rising cancer incidence in Canada.

Our current nationwide cancer control program is the relatively new Canadian Partnership Against Cancer, a federally funded non-profit organization established in 2006. In March 2011, the Partnership's mandate to implement Canada's national cancer control strategy was renewed for 2012-2017 with \$250 million in federal funding. The Partnership is currently revising their 2012-2017 strategy, and one of their themes is "achieve[ment] of risk reduction in the Canadian population."<sup>2</sup> In addressing this theme the Partnership should target groups most vulnerable to cancer risk factors, which are namely Canadian First Nations, Inuit and low socioeconomic status groups. Ensuring an equitable primary prevention program by targeting these groups must be a priority for the Partnership in order to uphold their value of being "integrative and inclusive to ensure...a pan-Canadian approach."3

The Partnership faces great challenges in this regard over the next five years. After age is accounted for, tobacco, diet, overweight/obesity, and physical inactivity combine to account for causing approximately 60% of all cancer deaths<sup>4</sup>. In 2004, smoking prevalence among Canadian Inuit and First Nations living on reserve was 70% and 60%, respectively<sup>5</sup> (compared to 19% in the general Canadian population in 2006)<sup>6</sup>. Socioeconomic-based inequalities in smoking, physical activity, and diet are prevalent in Canada<sup>7,8</sup>, paralleling socioeconomic-based inequalities in the incidence of several cancers<sup>9,10</sup>. The social determinants of health including income inequality, social integration, and childhood education contribute to these kinds of inequities<sup>11,12</sup> and represent gaps in primary prevention that the Partnership should develop strategies to cover. For instance, targeting smoking among Canadian Inuit and First Nations will require inclusive, community-based and culturally appropriate programming that can be modeled after strategies outlined in the WHO's Framework Convention on Tobacco Control treaty, of which Canada is a member<sup>13</sup>.

While the Partnership has not been in existence long enough to demonstrate impact on cancer rates or exposure to risk factors, they are making progress regarding the above factors and others. The Partnership's CLASP program consists of seven primary prevention coalitions targeting areas such as childhood obesity, community-based health education for First Nations populations, and healthy neighbourhood design. Their CAREX Canada program monitors population environmental occupational and exposure to The Partnership also surveys policy carcinogens. concerning primary prevention to identify areas for improvement.

In continuing with these programs over the next five years, the Partnership should set targets for risk reduction. Ten years ago, a group of Swedish researchers estimated that, in the developed world, we have the ability to reduce cancer mortality rates by approximately 50% through primary prevention alone<sup>14</sup>. They stated this figure will be difficult to attain, as even with optimal primary prevention there will still remain vulnerable groups, such as those previously described, who are likely to remain "refractory to the principles of good preventative practices"<sup>14</sup>. The Partnership should consider adopting a long-term (extending far beyond 2017) target of a 50% reduction in the overall cancer mortality rate in Canada. Meeting this target would show their prevention program is effective and equitable.

Unfortunately, five years is very short-term when it comes to cancer control. Preventing cancer to any significant degree across the entire Canadian population will require great change in our behaviours and environment, possibly taking generations to achieve. The Partnership has an opportunity to continue laying groundwork for this change over the next five years. In addition to a target for mortality reduction, targets for healthy behaviours should be considered, such as those set for Ontarians by Cancer Care Ontario in their "Cancer 2020" plan<sup>15</sup>. A framework targeting social determinants of health to reduce inequity in exposures and cancer rates among Canadian First Nations, Inuit and low socioeconomic status groups must be established. Informing policy, providing community support and education, supporting research, and giving a voice to these groups can be included in this framework. The road will be long, but in following it the Partnership will become closer to attaining every "ounce" of cancer prevention possible for the Canadian population.

## Acknowledgments

I would like to thank Dr. Kristan Aronson and Emma Bedoukian for their valuable advice and feedback during the writing of this manuscript.

## References

- Canadian Cancer Society's Steering Committee. Canadian Cancer Statistics 2010. Toronto: Canadian Cancer Society, 2010. April 2010, ISSN 0835-2976.
- Canadian Partnership Against Cancer. The Future of Cancer Control in Canada: A discussion paper on pan-Canadian cancer control priorities for 2012-2017. Toronto: Canadian Partnership Against Cancer; 2011 Feb. 37 p.
- 3. Canadian Partnership Against Cancer. Vision/Values [Internet]. 2010 [cited 2011 Feb 23]. Available from: http://www.partnershipagainstcancer.ca/about/who-we-are/visionvalues/
- 4. Harvard Report on Cancer Prevention. Volume 1: causes of human cancer. Cancer Causes Control 1997; 7(S1):S3-59.

- Health Canada. First Nations, Inuit and Aboriginal Health: Statistical Profile on the Health of First Nations in Canada [Internet]. 2005 [2005 Dec 6; cited 2011 Feb 23]. Available from: http://www.hc-sc.gc.ca/fniahspnia/pubs/aborig-autoch/stats\_profil-eng.php
- 6. Health Canada. Federal Tobacco Control Strategy [Internet]. 2009 [updated 2009 Jul 10; cited 2011 Feb 23]. Available from: http://hc-sc.gc.ca/hc-ps/tobac-tabac/aboutapropos/role/federal/strateg-eng.php
- Pomerleau J, Pederson LL, Ostbye T, Speechley M, Speechley KN. Health behaviours and socio-economic status in Ontario, Canada. Eur J Epidemiol 1997;13:613-22.
- 8. Li FX, Robson PJ, Chen Y, Qiu Z, Lo Siou G, Bryant HE. Prevalence, trend, and sociodemographic association of five modifiable lifestyle risk factors for cancer in Alberta and Canada. Cancer Causes Contrl 2008;20(3):395-407.
- 9. Mao Y, Hu J, Ugnat A-M, Semenciw R, Fincham S and the Canadian Cancer Registries Epidemiology Research Group. Socioeconomic status and lung cancer risk in Canada. Int J Epidemiol 2001;30(4):809-17.
- 10. Goy J, Rosenberg MW, King WD. Health Risk Behaviours: Examining social inequalities in bladder and colorectal cancers. Ann Epidemiol 2008;18:156-62.
- 11. Berkman LF, Kawachi I, editors. Social Epidemiology. New York: Oxford University Press; 2000.
- 12. Marmot MG, Wilkinson RG, editors. Social Determinants of Health: The Solid Facts. 2<sup>nd</sup> ed. Denmark: World Health Organization; 2003.
- WHO. WHO Framework Convention on Tobacco Control. Geneva: WHO Document Production Services; 2003 updated reprint 2004, 2005. 42 p. ISBN 9789241591010.
- 14. Adami H-O, Day NE, Trichopoulos D, Willett WC. Primary and secondary prevention in the reduction of cancer morbidity and mortality. Eur J Cancer 2001;37:S118-27.
- Cancer 2020 Steering Committee. Targeting Cancer: An Action Plan for Cancer Prevention and Detection. Cancer 2020 Summary Report. Toronto, ON: Canadian Cancer Society (Ontario Division) and Cancer Care Ontario, 2003.



## **Author Profile**

Lindsay Kobayashi is currently an MSc candidate in the Department of Community Health and Epidemiology and the Queen's Cancer Research Institute at Queen's University. Her thesis research is on physical activity across the life course and breast cancer risk. Her research interests include cancer etiology and prevention, the health effects of physical activity and sedentary

behaviour, the translation of social factors to biologic health effects, and the social determinants of health.