

## Position Statement:

### Environmental Carcinogens and Health

Recognizing the adverse impact of exposure to environmental carcinogens on health, the Registered Nurses' Association of Ontario (RNAO) believes those exposures should be minimized.

#### **Environment and Health: A National and International Issue for RNs**

From Florence Nightingale onward, nurses and nursing organizations have been at the forefront of recognizing and promoting the importance of healthy environments for clients and their families. Nurses uphold a holistic view of health, and insist that not only should we focus on the treatment and cure of cancer, but also on its prevention. Nurses understand that prevention encompasses not only a matter of individual lifestyle choice, but also of taking collective action to reduce our daily exposure to avoidable carcinogens.

Therefore, RNAO supports an encompassing program to minimize exposure to carcinogens. It supports the principles of environmental protection as enshrined in Canadian law, including the precautionary principle,<sup>1</sup> pollution prevention, virtual elimination of the most persistent and bioaccumulative<sup>2</sup> toxic substances, and the "polluter-pays" principle.<sup>3 4</sup> RNAO has actively advocated for bans on the nonessential use of pesticides; for clean air and the closure of polluting coal-fired generating plants; for community right-to-know legislation about toxic substances in the environment and in consumer products; and for Canada and Ontario to meet

their greenhouse gas reduction obligations under the Kyoto accord.

At the national level, the Canadian Nurses Association (CNA) works with others in the health and social sectors to influence decisions affecting human health through the environment,<sup>5</sup> and supports environmentally responsible activity in the health sector.<sup>6 7</sup> RNAO supports this stance and works with CNA on environmental and health issues.

Internationally, the International Council of Nurses has long recognized the role of the environment in health:

The concern of nurses is for people's health – its promotion, its maintenance, its restoration. The healthy lives of people depend ultimately on the health of Planet Earth – its soil, its water, its oceans, its atmosphere, its biological diversity – all of the elements which constitute people's natural environment. By extension, therefore, nurses need to be concerned with the promotion, maintenance and restoration of health of the natural environment, particularly with the pollution, degradation and destruction of that environment being caused by human activities.<sup>8</sup>

The ICN also has position statements on reducing environmental and lifestyle-related health hazards<sup>9</sup> and on occupational health and safety for nurses.<sup>10</sup>

Our colleagues in the United States have advanced environmental health for nurses on many fronts.<sup>11</sup> For example, the American Nurses Association has adopted a precautionary approach with respect to occupational and environmental health,<sup>12</sup> and advocates: the reduction in the use of toxic chemicals; labeling and full disclosure mechanisms; sufficient information on the health effects of chemicals before their introduction; greater ease in removing chemicals from use; right-to-know about potentially hazardous chemicals; and the integration of environmental health principles into nursing education, practice, research, advocacy and policy development.<sup>13 14</sup>

At the same time, international nursing associations spell out very broad expectations on nurses regarding environmental health. For example, the Royal College of Nursing, Australia identifies the following responsibilities of nurses:<sup>15</sup>

- seek to preserve the natural environment as fundamental to the health of all communities and future generations;
- assist communities and governments to reverse environmental degradation and destruction of the life support systems of the planet;
- work to protect natural resources, safeguard non-renewable resources and find ecologically sustainable solutions to environmental issues; and
- utilize their expertise and provide leadership to assist communities to apply the principles of public health and occupational health and safety to preserve health.

Other nursing associations have very detailed recommendations for nurses in the areas of practice, education, research and advocacy.<sup>16</sup>

## The Right to a Healthy Environment

Ontario's *Environmental Bill of Rights* (1993)<sup>17</sup> asserts:

The people of Ontario recognize the inherent value of the natural environment.

The people of Ontario have a right to a healthful environment.

The people of Ontario have as a common goal the protection, conservation and restoration of the natural environment for the benefit of present and future generations.

While the government has the primary responsibility for achieving this goal, the people should have means to ensure that it is achieved in an effective, timely, open and fair manner.

The stated purposes include: "The prevention, reduction and elimination of the use, generation and release of pollutants that are an unreasonable threat to the integrity of the environment." The Bill of Rights has improved access to environmental decision-making, largely through the online Environmental Registry, which allows people to read about proposals (e.g., new laws, regulations, policies and programs) on environmental matters by government ministries covered by the EBR, and to file comments.<sup>18</sup> However, critics argue that much more could be done.<sup>19</sup>

International conventions such as the Rio Declaration reaffirm the right of everyone to a healthy and productive life in harmony with nature.<sup>20</sup>

## Background

The incidence of cancer in North America and in other parts of the industrialized world has escalated to

epidemic proportions over recent decades, and greater increases are projected.<sup>21</sup> In Canada, the cancer rate has risen to 1 in 3 today from 1 in 10 in 1930.<sup>22 23</sup> The incidence of cancer in Canada has risen from about 74,000 in 1978 to about 160,000 in 2007.<sup>24</sup> The bulk of the rise is due to aging and population growth,<sup>25</sup> but there has been a rise in the age-adjusted incidence rate as well (0.1 per cent annually for men and 0.3 per cent annually for women, over the 1994-2003 period).<sup>26</sup>

A substantial sum of money is spent on cancer services – about \$2 billion per year in Ontario alone.<sup>27</sup> However, as the Canadian Strategy for Cancer Control (CSCC) notes, “only a small fraction of resources allocated to cancer control is currently spent on prevention.”<sup>28</sup> Yet, the Provincial Cancer Prevention and Screening Council points out that about half of all cancers diagnosed by 2020 are either preventable or detectable before they become a serious problem.<sup>29</sup> Accordingly, Cancer Care Ontario and the Canadian Cancer Society, Ontario Division developed the *Cancer 2020 Action Plan* to reduce Ontario cancer incidence and mortality. This action plan sets targets for various risks, including occupational and environmental carcinogens.<sup>30</sup> Organizations such as the Canadian Cancer Society have taken significant steps to address environmental factors.<sup>31</sup> Despite these efforts, much work remains to secure a shift of resources to address the major dangers of involuntary exposures to a wide range of environmental carcinogens.

A positive step was the development of a broad-based Cancer and Environmental Stakeholders Group including RNAO, which identified numerous known or probable environmental carcinogens to which Ontarians are exposed.<sup>32 33</sup> Its 2007 report listed those carcinogens, identified key policy directions, and

called for the implementation of a cancer prevention strategy for Ontario.

The evidence supports an association between cancer and many types of exposures: air pollution, arsenic in drinking water, asbestos, water disinfection by-products, extremely low frequency magnetic fields, solar radiation, and radon.<sup>34</sup> Some pesticides<sup>35 36</sup> and the components of some plastics have also been linked to cancer.<sup>37</sup> Communities have taken actions to reduce their exposure to carcinogens and toxic substances, but are looking to governments and nongovernmental organizations for leadership and legislation.

### **Getting Carcinogens out of the Environment**

The Cancer and the Environment Stakeholder Group identified key directions for future policy development:

- Development of a comprehensive, integrated provincial regulatory strategy for environmental toxics use reduction. This would include a focus on goals and caps for carcinogen use reduction.
- Establishment and full funding of an arm's-length Ontario Carcinogen Use Reduction Institute, which would: research substitutes; assist industry in switching to less toxic or non-toxic chemicals (via training, knowledge transfer and direct assistance); track and report annually on carcinogen use; and follow up with industry.
- Tracking would include surveillance of environmentally-related cancer cases and deaths, residential and occupational history, biomonitoring,<sup>38</sup> and trends (regional and provincial) in environmental carcinogens.

- Greatly strengthened regulation that: obliges users, manufacturers, and importers of substances to prove no significant environmental or health risks; and requires inclusion on labeling of consumer products of the presence of any known or suspected carcinogens.
- Provision of tax incentives, professional assistance, and scientific assessment of alternatives to users and manufacturers of chemicals.<sup>39</sup>

RNAO endorses all of these measures as essential elements in a strategy whose ultimate goal is the virtual elimination of anthropogenic carcinogens from the environment.

This strategy must address outdoor and indoor exposures to carcinogens, including occupational exposures, which are often higher than non-occupational exposures.

RNAO will continue to advocate for strengthening the Canadian Environmental Protection Act (1999),<sup>40</sup> which governs toxic releases (including environmental carcinogens).<sup>41</sup>

RNAO will also continue to support provincial and municipal right-to-know initiatives.<sup>42 43</sup> Existing legislation only captures major polluters; for example, only three per cent of Toronto facilities

possibly using chemicals are obliged to report their use, and, as a result, less than 20 per cent of air pollution emissions are reported.<sup>44 45</sup> This fundamental right of access to information should be recognized in law, and would assist communities and individuals in protecting themselves from carcinogens and other toxic substances in their environment and in consumer products.

Finally, RNAO will continue to promote:

- a) the education and mobilization of nurses to address the environmental determinants of health;
- b) raising the awareness of clients and the public on the need for cancer prevention;
- c) advancing education, research, policy, advocacy and regulation regarding industrial carcinogens in our environment and in our food chain, as well as carcinogenic consumer products; and
- d) mobilizing nurses and others to lobby municipalities, the province and the federal government to advance healthy public policy on the environmental determinants of cancer and other health issues (to be done directly and in collaboration with the Canadian Nurses Association)

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<sup>1</sup> There are different formulations of the precautionary principle. For example, "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action." - [Wingspread Statement](http://www.sehn.org/wing.html) on the Precautionary Principle, Jan. 1998, retrieved April 2, 2008 from <http://www.sehn.org/wing.html>.

<sup>2</sup> Bioaccumulative means increasing in concentration in organisms or the food chain over time.

<sup>3</sup> According to Environment Canada, the polluter pays principle says that users and producers of pollutants should pay the costs they impose on society. Environment Canada. (April 2005).

*Glossary – Polluter Pays Principle*

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- <sup>4</sup> See in particular Canada Department of Justice. (1999). *Canadian Environmental Protection Act, 1993*. Retrieved March 31, 2008 from <http://laws.justice.gc.ca/en/C-15.31/text.html?noCookie>.
- <sup>5</sup> Canadian Nurses Association. (June 2000). *Position Statement: The Environment is a Determinant of Health*. Ottawa: author.
- <sup>6</sup> Canadian Nurses Association and Canadian Medical Association. (June 2005). *Joint CNA/CMA Position Statement on Environmentally Responsible Activity in the Health Sector*.
- <sup>7</sup> Canadian Nurses Association. (October 2005). *CNA Backgrounder: The Ecosystem, the Natural Environment, and Health and Nursing: A Summary of the Issues*. Ottawa: author.
- <sup>8</sup> International Council of Nurses (ICN). (1992). Position on nurses and the natural environment. Geneva: Author. Quoted from Guenther, R. and Gilmore Hall, A. (August 2007). "Healthy Buildings: Impact on Nurses and Nursing Practice". *Online Journal of Issues in Nursing*. American Nurses Association.
- <sup>9</sup> International Council of Nurses. (2007). *Reduce Environmental and Lifestyle Related Health Hazards*. Adopted in 1999. Revised and reaffirmed in 2007. Retrieved March 31, 2008 from <http://www.icn.ch/pshazards99.htm>.
- <sup>10</sup> International Council of Nurses. (2006). *Occupational Health and Safety for Nurses*. Adopted in 1987. Revised and updated in 2006. Retrieved March 31, 2008 from <http://www.icn.ch/pshealthsafety00.htm>.
- <sup>11</sup> See for example the landmark Pope, A.M., Snyder, M.A. and Mood, L.M., Eds. (1995). *Nursing, Health, and the Environment: Strengthening the Relationship to Improve the Public's Health* Institute of Medicine Committee on Enhancing Environmental Health Content in Nursing Practice.
- <sup>12</sup> American Nurses Association. (2003). *American Nurses Association Adopts Precautionary Approach*. Retrieved March 31, 2008 from <http://www.nursingworld.org/MainMenuCategories/OccupationalandEnvironmental/PrecautionaryApproach.aspx>.
- <sup>13</sup> American Nurses Association 2006 House of Delegates. (2006). *Resolution: Nursing practice, Chemical Exposure and Right-to-Know*.
- <sup>14</sup> For a detailed elaboration of environmental health principles for public health nursing, see American Public Health Association Public Health Nursing Section. (undated: 2006?). *Environmental health Principles & Recommendations for Public Health Nursing*. Retrieved March 31, 2008 from <http://www.astdn.org/downloadablefiles/Principles%20and%20Recommendations%20Document4-06.doc>.
- <sup>15</sup> Royal College of Nursing, Australia. (2000). *Position Statement: Nurses, Health and the Environment*. April. Retrieved March 31, 2008 from [http://www.rcna.org.au/UserFiles/nurses\\_health\\_and\\_the\\_environment.pdf](http://www.rcna.org.au/UserFiles/nurses_health_and_the_environment.pdf).
- <sup>16</sup> E.g., for recommendations on public health nursing, see American Public Health Association Public Health Nursing Section. (Op. cit.)
- <sup>17</sup> [http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_93e28\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_93e28_e.htm), retrieved March 31, 2008.
- <sup>18</sup> Government of Ontario. (undated). *Environmental Registry*, retrieved March 31, 2008 from <http://www.ebr.gov.on.ca/ERS-WEB-External/>.
- <sup>19</sup> E.g., see Canadian Environmental Law Association (undated). *Ontario's Environmental Bill of Rights*, retrieved March 31, 2008 from <http://www.cela.ca/coreprograms/detail.shtml?x=2544>.
- <sup>20</sup> United Nations General Assembly. (June 1992). *Report of the United Nations Conference on Environment and Development*. <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>, retrieved March 31, 2008.
- <sup>21</sup> Epstein, S., Ashford, N., Blackwelder, B., Castleman, B., Cohen, G., Goldsmith, E., Mazzocchi, A. and Young, Q. (2002). "The crisis in U.S. and international cancer policy," *International Journal of Health Services*, 32(4), 669-707.
- <sup>22</sup> Health Canada. (updated April 2007). *Hazard-Specific Issues - Substances Assessed for Carcinogenicity*, retrieved March 31, 2008 from [http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/carcinogenesis-carcinogenese\\_e.html](http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/carcinogenesis-carcinogenese_e.html).

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- <sup>23</sup> The Canadian Cancer Society estimates that 39% of women and 44% of men will develop the disease in their lifetimes, based on current incidence rates: Canadian Cancer Society/National Cancer Institute of Canada. (2007). *General Cancer Stats 2007*. Toronto, Canada, retrieved March 31, 2008 from [http://www.cancer.ca/ccs/internet/standard/0,2283,3172\\_14423\\_langId-en,00.html](http://www.cancer.ca/ccs/internet/standard/0,2283,3172_14423_langId-en,00.html).
- <sup>24</sup> Canadian Cancer Society, National Cancer Institute of Canada, Statistics Canada, Provincial/Territorial Cancer Registries, and Public Health Agency of Canada. (April 2007). *Canadian Cancer Statistics 2007*, 32, 33. Data read from graphs.
- <sup>25</sup> Ibid, 32, 33.
- <sup>26</sup> Ibid, 45.
- <sup>27</sup> The Provincial Cancer Prevention and Screening Council, Canadian Cancer Society and Cancer Care Ontario. (June 2006). *Report on Cancer 2020: A Call for Renewed Action on Cancer Prevention and Detection in Ontario*, 5.
- <sup>28</sup> Canadian Strategy for Cancer Control. (July 2006). *The Canadian Strategy for Cancer Control: A Cancer Plan for Canada*, 8.
- <sup>29</sup> The Provincial Cancer Prevention and Screening Council et al. (June 2006). Op. cit., 5.
- <sup>30</sup> Ibid, 30.
- <sup>31</sup> For example, see *Cancer and the Environment* at [http://www.cancer.ca/ccs/internet/standard/0,3182,3172\\_1434293210\\_langId-en,00.html](http://www.cancer.ca/ccs/internet/standard/0,3182,3172_1434293210_langId-en,00.html), retrieved March 31, 2008.
- <sup>32</sup> Cancer and the Environment Stakeholder Group. (July 2007). *Cancer and the Environment in Ontario: Gap Analysis on the Reduction of Environmental Carcinogens*, July 20, 2007 retrieved March 31, 2008 from [http://www.cancer.ca/vgn/images/portal/cit\\_86751114/28/5/100194442odie\\_fd\\_tsabc\\_pledge.pdf](http://www.cancer.ca/vgn/images/portal/cit_86751114/28/5/100194442odie_fd_tsabc_pledge.pdf).
- <sup>33</sup> Bodies like the US National Toxicology Program and the International Agency for Research on Cancer alone have identified hundreds of agents and groups of agents as known or probable carcinogens. See for example American Cancer Society. (2006). *Known and Probable Carcinogens*, retrieved March 31, 2008 from [http://www.cancer.org/docroot/PED/content/PED\\_1\\_3x\\_Known\\_and\\_Probable\\_Carcinogens.asp](http://www.cancer.org/docroot/PED/content/PED_1_3x_Known_and_Probable_Carcinogens.asp).
- <sup>34</sup> Canadian Cancer Society and Cancer Care Ontario. (June 2005). *Insight on Cancer: environmental exposures and cancer*, 26.
- <sup>35</sup> Sanborn, Margaret, Donald Cole, Kathleen Kerr, Cathy Vakil, Luz Helena Sanin, Kate Bassil (April 2004). *Pesticides Literature Review*, Ontario College of Family Physicians.
- <sup>36</sup> US Environmental Protection Agency, Office of Pesticide Programs. (September 2007). *Chemicals Evaluated for Carcinogenic Potential*.
- <sup>37</sup> E.g., vinyl chloride, which is used to make PVC plastic. US Environmental Protection Agency. (November 2007). *Vinyl Chloride*. Retrieved March 31, 2008 from <http://www.epa.gov/ttn/atw/hlthef/vinylchl.html#ref8>.
- <sup>38</sup> Biomonitoring is directly testing human tissue samples to assess exposure to chemicals.
- <sup>39</sup> Cancer and the Environment Stakeholder Group, op. cit, 7-8.
- <sup>40</sup> See Canadian Lung Association, Canadian Cancer Society and RAO. (August 2006). *Submission to the Parliamentary Committee for the Five-year Review of the Canadian Environmental Protection Act 1999*. Retrieved March 31, 2008 from [http://www.cenrce.org/eng/cepa/phase2/docs/CEPA%20CLA%20submission%20Parliament%20%20revised%200Aug%202006%20\\_2\\_.pdf](http://www.cenrce.org/eng/cepa/phase2/docs/CEPA%20CLA%20submission%20Parliament%20%20revised%200Aug%202006%20_2_.pdf).
- <sup>41</sup> For full text of CEPA, see <http://laws.justice.gc.ca/en/C-15.31/text.html/?noCookie>, retrieved March 31, 2008.
- <sup>42</sup> For example, see RAO's 2007 submission on Ontario's Bill 164: *Recognizing a Fundamental Right: the Community Right to Know Act 2006*, retrieved March 31, 2008 from [http://www.rnao.org/Storage/29/2352\\_RNAO\\_Bill164\\_CRTK.pdf](http://www.rnao.org/Storage/29/2352_RNAO_Bill164_CRTK.pdf).
- <sup>43</sup> Toronto will consider a draft reporting bylaw in 2008. Toronto Public Health. (2007) *Healthy People Health Environment: Access to Environmental Information*, retrieved March 31, 2008 from [http://www.toronto.ca/health/hphe/enviro\\_info.htm](http://www.toronto.ca/health/hphe/enviro_info.htm). RAO has registered its support for a strong reporting bylaw for Toronto.
- <sup>44</sup> Vincent, D. (2007). "Bylaw sought for nitty gritty on smog", *Toronto Star*, July 10, retrieved March 31, 2008 from <http://www.thestar.com/News/GTA/article/234169>.

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<sup>45</sup> Toronto Public Health. Op. cit.