

# Canadian Medical Education Journal

---

*Letter to the Editor*

## **An Environmental Approach to Medicine: The Medical Footprint**

*Anne Rowan-Legg*

University of Ottawa, Canada

Published: 30 September 2011

CMEJ 2011, 2(2):e94-e95 Available at <http://www.cmej.ca>

© 2011 Rowan-Legg; licensee Synergies Partners

This is an Open Journal Systems article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Given the technology and resources available to us in today's health care, we are at significant risk of over-investigating and medicalizing patients causing vastly under-appreciated patient angst and anxiety. A seemingly insignificant blood test, a "just-in-case" CT scan, or another consultation may have real impact on a patient. As physicians, we may sleep better at night satisfied that we've ruled everything out, but our patients may not. I'm just beginning to appreciate the repercussions my investigative decisions have on the patients and families that I treat. Rather than providing reassurance of our thoroughness, overzealous diagnostic testing may communicate a message of uncertainty and concern.

Every medical student is taught *First Do No Harm* in recognition that well-intentioned human acts may have unwanted consequences. The environmental movement has a similar edict. There is a concept in environmental circles called the ecological footprint, which is used as an indicator of ecosystem impact. In any wilderness travel or development, one tries to keep the smallest ecological footprint possible. I propose a similar concept in medicine – the medical footprint - defined as what we leave with our

patients at the end of an encounter, or more specifically, her perception (or misperception) of her state of illness or health.

Environmentalists and conservationists are deliberate and thoughtful about their choices, and have a sound appreciation of consequence. In the practice of medicine, we are exposed to, and tempted by, a multitude of investigative options and consultation opportunities. We often live in blissful ignorance of the effects this battery of tests can have on a patient. In medicine, as in wilderness development, short sighted gain can often lead to longer lasting, unforeseen, and more deleterious effects. We have a responsibility to be judicious in investigating and labelling, and to recognize the high impact of our decisions.

The size of both ecological and medical footprints are difficult to measure by conventional methods. The environmental footprint can be measured in pollution of waterways, logged acres, and fossil fuel consumption. The medical footprint could be measured in units of anxiety and lost sleep, child overprotection, requests for second opinions (from the internet or other), and finally, in the dreaded

sequence of investigations resulting from initially uncalled-for tests. At a societal level, the medical footprint could equally be measured in the emerging belief that everybody's got an illness if we just look hard enough.

I appreciate that patients themselves sometimes demand investigations and expect a firm diagnosis from their physician. But in the interests of reducing the medical footprint, we need to improve our explanations and the degree of confidence with which we deliver those messages. Things are not always clear in medicine – the unexpected and the unexplained are the veritable challenges of this discipline – but in my early learning and experience, close follow-up, rather than an initial raft of investigations, has proven the most valuable antidote to uncertainty.

The concept of the medical footprint deals primarily, and most importantly, with the impact of our investigative decisions on our patients, but must also include a more global dimension of sustainability. Our healthcare system is stretched, costs are soaring, and much like in our natural world, resources are limited. Physicians are the wardens of resource use, and with this privilege comes the responsibility of careful resource appropriation and utilization.

We've resorted to fear-motivated and protocol-driven investigation ordering (and as any Kyoto-savvy environmentalist knows, protocols don't work). We need a shift in our thinking and education, a green movement of sorts in our hospitals, clinics and classrooms. Non-intervention and watchful waiting – the conservationist's approach to medicine – have to be taught as a legitimate and effective approach. Our patients will thank us.

---

Correspondence: Dr. Anne Rowan-Legg, University of Ottawa, Division of Pediatric Medicine, Children's Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, Ontario, K1H 8L1, Canada; Tel: (613) 737-7600, ext. 2571; Fax: (613) 738-4878; E-mail: [arowanlegg@cheo.on.ca](mailto:arowanlegg@cheo.on.ca)