

## PULSE

## Canada's slow adoption of new technologies adds burden to health care system

It is interesting to compare how developed countries adopt new technologies. In terms of novel minimally invasive treatments, these are often within the domain of interventional radiology.

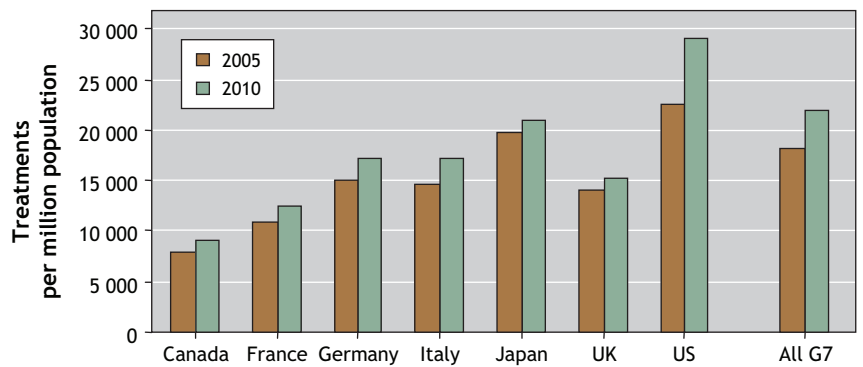
The Canadian Association of Radiologists (CAR) and the Canadian Interventional Radiology Association (CIRA) recently commissioned the Millennium Research Group Inc. (a medical devices market research company) to produce a report on the status and outlook of interventional radiology in Canada.<sup>1</sup>

That March 2006 report estimates a number of striking comparisons among the G7 nations (Fig. 1). These estimates suggest that Canada performed the fewest number of interventional radiology procedures per million population and the US the most. If current trends continue, the forecasted number of procedures will be 3.2 times greater in the US than in Canada.

Extrapolating from these estimates, the report suggests potential savings if existing surgical procedures for 8 diseases were replaced with interventional radiology procedures, in appropriate circumstances (Table 1). The result could be an estimated 402 Canadian lives and \$180.3 million in direct health care costs saved annually. Although rigorous scientific methods were not used in generating these data, the table nonetheless provides much food for thought.

The commissioned report's recommendations included:

- Improve awareness of interventional radiology and its benefits among referring physicians, hospital administrators, residents and fellows, medical students and the public.
- Establish a Health Canada task force to address the challenges of interventional radiology in Canada.
- Hire more interventional radiologists to accommodate the increasing workload.



**Fig. 1:** Estimated numbers of interventional radiology treatments per million population in G7 nations in 2005 and predicted numbers for 2010.

**Table 1:** Potential annual savings if existing surgical procedures for 8 diseases were replaced with interventional radiology procedures, in appropriate circumstances

Disease	Treatment savings, \$ millions	Societal savings, \$ millions	No. of hospital bed-days saved	No. of patient lives saved
Peripheral arterial disease (iliac)	21.0	1.1	6 497	34
Peripheral arterial disease (lower extremity)	26.6	2.5	14 691	54
Abdominal aortic aneurysm	-5.0	8.5	6 559	43
Ischemic stroke	-1.1	0.4	2 439	23
Cerebral aneurysm	15.2	0.8	4 834	67
Uterine fibroids	38.5	78.3	58 768	34
Vertebral fracture (vertebroplasty)	59.7	ND	ND	0
Liver cancer	25.4	0.7	4 222	147
<b>Total</b>	<b>180.3</b>	<b>&gt; 92.3*</b>	<b>98 010</b>	<b>402</b>

Note: ND = not determined.

\*For most treatments, the societal savings of a potentially quicker recovery were not accounted for. Source: MRG report.<sup>1</sup>

- Increase funding for interventional radiology for training, equipment and remuneration, to support increasing clinical duties and equalize remuneration to diagnostic and interventional radiologists.
- Help interventional radiologists to move toward becoming clinical specialists (e.g., by consulting, diagnosing and conducting postadmission follow-up). The Canadian government, hospital administrators, CAR and CIRA should support this move by instituting suitable consulting fees, creating designated consult rooms and beds, and providing other support necessary to conduct a successful interventional radiology practice.

This report is indeed food for thought and suggests the need for third-party, objective research into the myriad possible reasons for Canada's low usage rates, with the eventual goal of formulating public policy. The ultimate aim is to ensure that the right person gets the right intervention. — Mark O. Baerlocher, Toronto

**Acknowledgement:** I thank Ken McLaren from Millennium Research Group (MRG) for his help with providing these data. Mr. McLaren is the primary author of the MRG report on interventional radiology in Canada.

### REFERENCE

1. Millennium Research Group (MRG) Inc. *Non-invasive image-guided diagnosis and therapy for Canadians*. Toronto: MRG; 2006.