# Whither the Medical Equipment Fund?

***Background Paper and Technical Notes***

July 2002

ASSOCIATION MÉDICALE CANADIENNE

CANADIAN MEDICAL ASSOCIATION

*A healthy population…a vibrant medical profession*
*Une population en santé…une profession médicale dynamique*

The Canadian Medical Association (CMA) is the national voice of Canadian physicians. Founded in 1867, CMA's mission is to serve and unite the physicians of Canada and be the national advocate, in partnership with the people of Canada, for the highest standards of health and health care.

On behalf of its 52,000 members and the Canadian public, CMA performs a wide variety of functions, such as advocating health promotion and disease/accident prevention policies and strategies, advocating for access to quality health care, facilitating change within the medical profession, and providing leadership and guidance to physicians to help them influence, manage and adapt to changes in health care delivery.

The CMA is a voluntary professional organization representing the majority of Canada's physicians and comprising 12 provincial and territorial divisions and 43 affiliated medical organizations.

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# WHITHER THE MEDICAL EQUIPMENT FUND?

## Introduction

Technology is greatly impacting every aspect of our lives – how we communicate; how we do business, even how we learn. The health care sector is no exception – medical technology has contributed much to the high standard of health care enjoyed by Canadians. It is being used in ways that only a few years ago seemed difficult to imagine. In many cases, it is replacing the need for invasive surgeries. In others, detection of disease can be done at an earlier stage when there are greater treatment options thereby saving lives.

Because of its significant and growing importance in the health care sector, timely access to medical technologies has become a key area of concern for Canadians. As physicians, on the front-line of Canadian health care delivery, we hear on-going concerns from our patients who are worried they won't be able to access the technology they need, should they need it. This sentiment was reinforced recently by Statistics Canada's finding that one in five of those forced to wait for specialised services indicated that their lives were being affected because of worry, stress and anxiety; the pain; or the diminished health status they were experiencing.[1] As physicians, we are committed to putting our patients first to ensure Canadians have access to the medical care and health technology they need and, as such, we find this situation unacceptable.

In September 2000, the federal government announced a series of new investments to support agreements by First Ministers on Health Renewal and Early Childhood Development. One of these investments was a two-year $1 billion fund for the provinces and territories, the Medical Equipment Fund (MEF), to purchase new health technologies and diagnostic equipment.

Prior to the fund being announced, the Canadian Medical Association had called for an infusion of $1.74 billion for health technologies. And while we were pleased that the federal government created this fund, we expressed concern with the lack of transparency and lack of a national accountability mechanism to inform Canadians on how this fund was being spent.[2] Two years later, and after the expiration of the fund in March 2002, it seems timely to look back and evaluate how well the MEF met its intention to improve Canadians' access to health technologies and diagnostic equipment.

[1] Statistics Canada. (Claudia Sanmartin, Christian Houle, Jean-Marie Berthelot and Kathleen White). *Access to Health Care Services in Canada, 2001*. Ottawa: July 2002. Catalogue no. 82-575-X1E.
[2] Canadian Medical Association. Letter to Mr. Ian Green, Deputy Minister, Health Canada, May 3, 2001.

In particular, the CMA, in consultation with the Canadian Radiologists Association (CAR), has undertaken this analysis to provide insight into three specific questions:

1. Did MEF funding reach its intended destination?
2. Has the MEF increased availability of health technology in Canada?; and
3. To what extent (if any) does there remain an unmet need in terms of patient access to health technologies?

**Box 1 – Study Questions**

1. **Did MEF funding reach its intended destination?**
2. **Has the MEF increased availability of health technology in Canada?; and**
3. **To what extent (if any) does there remain an unmet need in terms of patient access to health technologies?**

## A Chronology

In early September 1999, the Canadian Medical Association (CMA) submitted a brief to the House of Commons Standing Committee on Finance for their 2000 pre-budget consultation process.[3] In that proposal the CMA/CAR recommended several technology initiatives including the establishment of a "National Health Technology Fund" of $1.74 billion to be transferred to the provinces and territories. The purpose of such a fund was to address ongoing concerns about the lack of availability of current health technologies in Canada and the speed with which the distribution of new technologies was taking place.

The breakdown of the proposed amount was $1 billion for capital spending and $.74 billion for operating costs over 3 years ($.25 billion per year for 3 years). The 3 years of operating costs were included in the recommendation to ensure that there would be no financial impediment to the immediate acquisition and installation of new diagnostic and treatment equipment. This did not include the need to address the aging state of Canada's existing medical technologies.

On September 7, 2000, prior to the upcoming First Ministers' Meeting, the CMA announced a 10 Point Recovery Plan for the health care system that it conveyed to then Minister of Health Allan Rock. Among the many initiatives proposed was a "National Health Technology Fund", which again called for a $1.74 billion commitment over three years by the federal government.[4]

The announcement of the Medical Equipment Fund on September 11, 2000 was somewhat less than what had been envisioned by the CMA. At $1 billion, although significant, the amount fell short of what had been assessed as necessary to bring Canada up to international standards in terms of access to technology. As well, the eligibility criteria for the fund were broad and unspecific.

[3] Canadian Medical Association. "*Towards a Sustainable Health Care System in the New Millennium*". Submitted to the House of Commons Standing Committee on Finance. Ottawa: September 10, 1999.
[4] Canadian Medical Association. "*10 Point Recovery Action Plan to First Ministers*". September 7, 2000.

The federal government's press release indicated that provinces and territories could use the funds to acquire and install necessary diagnostic and treatment equipment with actual priorities left to the determination of individual jurisdictions.[5]

With respect to accountability for the fund, provincial and territorial governments were required to report to Canadians on how the funds were spent. However, there was no accountability mechanism for provinces and territories to report directly to the federal government as the originator of the funds. (This approach is consistent with the spirit of the Social Union Framework Agreement (SUFA) of February 4, 1999.

## Did MEF Funding Reach its Intended Destination?

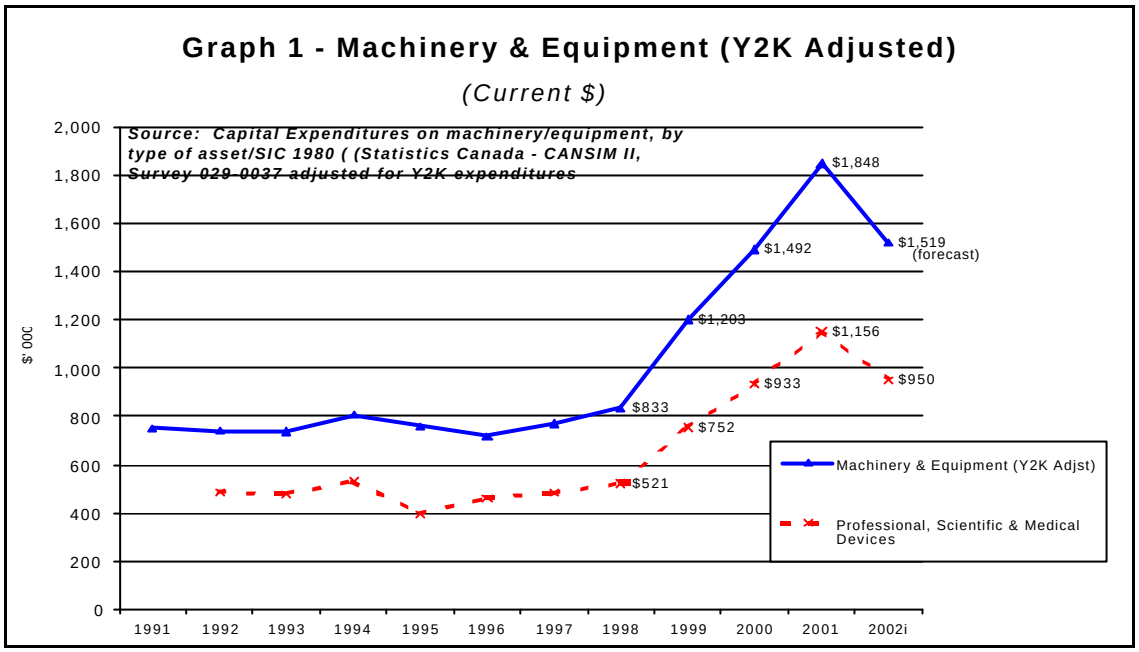
A review by the CMA of various public records (e.g., press releases, communiqués, departmental documents etc.) suggests that most of the funds (up to 90%) were allocated, on a nominal basis, by the provinces and territories. However, because of the lack of a transparent accountability mechanism, in most cases the public accounting does not provide a clear picture of where and how the money was spent. For example, whereas some provinces released itemized lists of the technology that was purchased, others simply stated that the total allocation had been used with no detail in terms of actual expenditure items. In other cases, the documents were not easily accessible.

Because of the variation in reporting mechanisms, it is difficult to determine by looking at the public releases whether the funding reached its intended destination. Harder still is how to answer whether, from an incremental perspective, the MEF resulted in an overall increase in funding for medical technology. Or, put another way, did the MEF result in additional expenditures on health technology equal to $1 billion or did it (in whole or in part) replace what provinces would have spent using their own funds?

In order to get at this question, the CMA has conducted an analysis comparing hospital expenditures on medical equipment over the two-year period of the fund against earlier expenditure patterns.

Using information from Statistics Canada's CANSIM II database, the amount spent by hospitals on a national basis for machinery and equipment between 1991-2001 was determined, adjusting for increases in expenditure in 1999 due to Y2K (see graph 1). Expenditures in 2000 and 2001 were then compared to 1999 as the base year. What this work found is that there were significant increases in hospital expenditures on machinery and equipment over the two-year period of the Medical Equipment Fund totaling an additional $934 million.

[5] Press Release issued on September 11, 2000 as part of the First Minister's Meeting, *Backgrounder: $1 Billion for Medical Equipment*. Available on PCO – Intergovernmental Affairs website: www.pco-bcp.gc.ca




However, the machinery and equipment database is broad, incorporating expenditures on everything from medical equipment to trucks. In order to further refine the analysis, the average expenditure on the narrower definition of professional, scientific and medical devices – a somewhat closer proxy to what might be considered "medical equipment" – was calculated. What this found was that between 1992-1997 (the last year for which data is currently available), expenditure on professional, scientific and medical devices averaged 62.5% of the larger machinery and equipment amount. Assuming that the proportion of expenditure on health technologies would remain the same, 62.5% of the 1999/2000 total of $934 million suggests an incremental increase of $584 million for medical equipment over two years (see Table 1).

**Table 1: Incremental Expenditure on Health Technologies**

| Year | Expenditures on Machinery and Equipment[1] | Incremental Funding Above 1999 Baseline | |
|---|---|---|---|
| | *Current Dollars ($' 000,000)* | | |
| 1999 | $ 1,203.2 | | **Base Year** |
| 2000 | 1,492.3 | | $ 289.1 |
| 2001 | 1,848.3 | | 645.1 |
| | | *Subtotal* | 934.2 |
| | @62.5%[2] | | **$ 584** |

[1] Statistics Canada, Capital Expenditures on machinery/equipment, by type of asset/SIC 1980 (CANSIM II 029-0037) adjusted for Y2K expenditures

[2] Average expenditure for professional, scientific and medical devices 1992-1997 based on Statistics Canada, (CANSIM II 029-0037 v147159), *terminated.*

In turn, this suggests that of the $1 billion allocated through the Medical Equipment Fund, approximately 60% was used to pay for new (incremental) expenditures on medical equipment. It appears that the remaining 40% replaced what provinces and territories would have already spent in this area from their own funding sources.

### Study Limitations

There are several limitations of the incremental study presented in this report. First, the study assumes that increased spending on Y2K expenditures represented 3.4% of hospital expenditures on machinery and equipment for the years 1998 and 1999. This assumption is premised on the basis that this is roughly equal to the proportion of spending on Y2K that was assumed by the federal government. (In June 1999, the Honourable Marcel Massé, then President of the Treasury Board indicated that the government expected to spend some $2.1 billion for Y2K readiness largely over the years 1998 and 1999. Government operating and capital expenditures over the same two years was $61.3 of which $2.1 billion represents 3.4% of expenditures.) Because this assumption affects the comparison base year, it could increase or decrease the proportion of total MEF funding that was allocated on an incremental basis.

Second, the study assumes, based on historical averages, that professional, scientific and medical devices, which is used as the proxy for medical equipment, represents 62.5% of the broader machinery and equipment indicator. The reason for having to make this assumption is that the more specific professional, scientific and medical devices dataset is no longer being collected by Statistics Canada. *(Note: Statistics Canada has indicated that a new similar dataset should be available in the future.)* However, if this proportion grew (or contracted) there would be a subsequent impact on the proportion of total MEF funding that was allocated on an incremental basis.

Finally, the study assumes that medical technology expenditures are subsumed under the hospital sector. However, while the hospital sector likely captures the majority of medical technologies it may not be all-inclusive, thus underestimating expenditures on medical technologies.

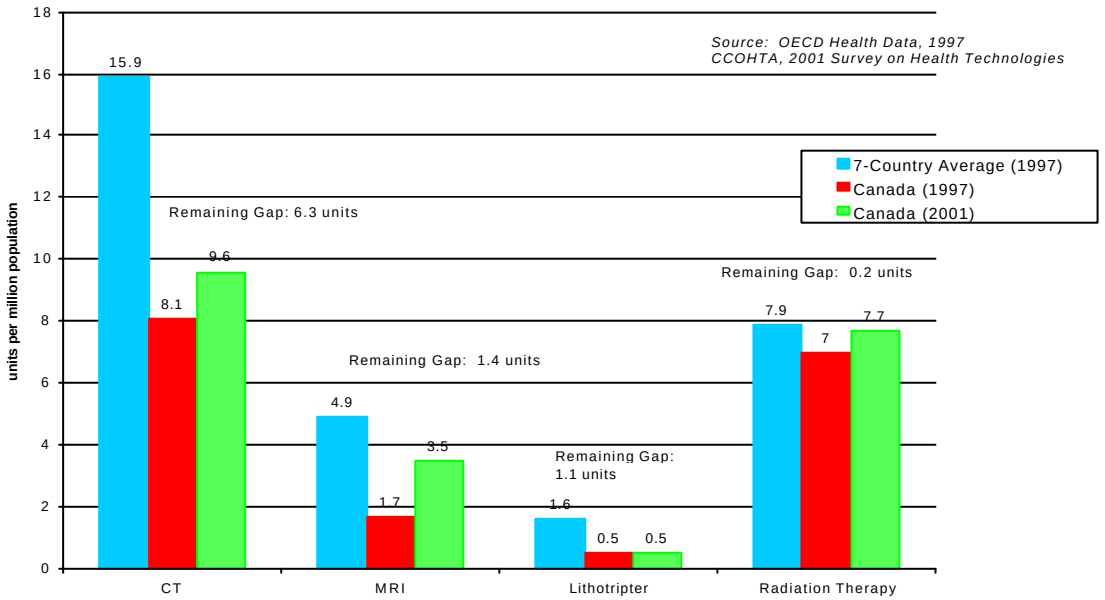
## Has the MEF increased availability of health technology in Canada?

This part of the analysis took a supply perspective, looking at the availability in Canada of four health technologies: computed tomography scanners (CT scan); magnetic resonance imaging units (MRIs); radiation therapy equipment; and lithotripters. For each of these technologies, the Organization for Economic Cooperation and Development (OECD) collects statistics on the number of units per million population for member countries. The most recent information collected is for 1997.

Using this data, the study looked at how Canada compares in terms of availability of medical equipment against seven comparator countries with a GDP per capita of greater than $20,000 on a purchasing power parity basis.[6] To try to capture possible increases in availability of technology in Canada since 1997, the OECD data was updated with information provided by the Canadian Coordinating Office on Health Technology Assessment (CCOHTA) and Siemens Canada Ltd. (for information on radiation therapy equipment).

Taken together, this analysis indicates a modest to significant improvement in the availability of equipment in Canada in some areas of technology with markedly less progress in others (Graph 2). For example, there has been considerable investment since the introduction of the MEF in the areas of MRIs and radiation equipment. In 1997 Canada had only 35% of the average number of MRIs available in the comparator countries. By 2001 this gap had been reduced to 71% - a significant increase, albeit still not at par with other countries. With respect to radiation therapy the gap was closer still with Canada nearly having the same number of units (7.7 units per million population) as the comparator average (7.9 units per million population).

**Graph 2: Availability of Select Health Technology Equipment**




The story for CT scans and lithotriptors is less positive with a remaining gap of approximately 45% for CT scans (down slightly from almost 50%) and no apparent gain in the number of lithotriptors over the study period with a constant 0.5 units per million population.

[6] The countries are: Austria, Luxembourg, Germany, Iceland, Italy, Finland, and France.

Parallel analysis of the number of PET scans in Canada, using information provided by the Canadian Association of Radiologists (CAR), suggests that in this area Canada still requires an additional 10 units.[7]

Taking this analysis further, cost estimates of filling-in the gap between currently available technology in Canada and the OECD comparator countries were calculated. Based upon approximate costs associated with the acquisition of new technology (see Box 2), the CMA estimated that an investment of some $1.15 billion in health technology is still needed to bring Canada up to the level of the 7-country average. Of that amount $650 million is required for capital expenditures and $500 million is required to provide the provinces/territories with 3 years of operating funds. This latter amount is critical to ensure that the capital funds can in fact be used by all provinces/territories otherwise the investments may not be made due to the lack of fiscal capacity of some provinces/territories.

**Box 2 – Acquisition Costs**

Equipment acquisition cost estimates, excluding infrastructure (siting) costs, are based on average estimated costs. Depending upon the sophistication of the equipment the ranges are:

| | |
|---|---|
| CT scans: | $0.50m - $1.50m |
| MRIs: | $1.25m - $2.50m |
| Lithotripters: | $1.25m - $1.50m |
| Linear accelerators: | $1.50m - $1.80m |

(radiation therapy equipment)

It is important to note that a $1.15 billion investment is a conservative estimate in so much as it would bring Canada only to the *1997* level of the comparator countries and does not take into account any replacement of health technology that may be required. This cost also only includes selective technologies. But the issue of health technology is one that transcends just the need for radiological equipment such as CT scanners and MRIs. The need for re-investment in health technologies cuts across all medical specialities.

## To what extent (if any) does there remain an unmet need in terms of patient access to health technologies?

The final question that our analysis raises is whether, from the perspective of Canadians, the investment in medical technologies improved their access to health technologies. The recent Statistics Canada report, "*Access to Health Care Services in Canada, 2001*" helps to shed some light on this question.

This work found that 1.7 million (6.7%) Canadians accessed diagnostic tests over the previous 12-month period. Of these, approximately 18% reported that they had faced difficulties in accessing care, of which the primary cause cited was waiting. The study also found that while the majority of people (54.7%) waited less than one month, on the other end, the 5% of people who waited the longest had a wait of 26 weeks before being able to access diagnostic tests.

[7] PET data were provided by the Canadian Association of Radiologists (CAR) who stated there were 200 PETs in the world in 1998. Europe and the USA each had a 40% share with Canada having a 3% share used mostly for research. CAR estimates that accounting for population size and growth, and that PETs in Canada are mostly used for research, an additional 10 units are required.

The impact of waiting on patients' well-being is also of importance. This survey found that of those who said that they were affected by waiting for care, almost 7 in 10 (68%) indicated that it had caused them additional worry, anxiety or stress and almost 40% indicated that it had caused them pain.

Overall, the study seems to indicate that while the majority of people are able to access the diagnostic equipment they need, there continues to be some who face unacceptable waiting times. This is consistent with a forthcoming report by the Canadian Medical Association that also looks at people's satisfaction in terms of access to diagnostic equipment.

## Conclusion

These findings support what Canadian Medical Association (CMA) members are experiencing as they work on the front-line of Canadian health care delivery. We are alarmed by Statistics Canada's report that the 1.7 million Canadians forced to wait for diagnostic services indicate that their lives are being affected because of the worry, the stress and anxiety, the pain or the diminished health status they are experiencing. As physicians, we are committed to putting our patients first to ensure Canadians have access to the medical care and health technology they need.

The purpose of this work was to answer questions on three levels: did MEF funding get to destination; how does Canada compare with respect to the availability of health technologies and whether there remains an unmet need requiring additional targeted funds.

The conclusions are mixed. On the one hand, governments largely did account to their constituents on how the MEF funding was allocated, albeit on a disparate basis. Also, there is evidence to suggest that the fund did result in some increased funding for medical technologies – although our estimates suggest that approximately 40% did not go towards incremental funding, but rather was used to offset planned expenditures.

Indeed, all indicators suggest that there continues to be a significant gap in terms of Canadians having access to a wide-range of technologies on the same basis as other countries of comparable means.

These findings support recommendations made by the Canadian Medical Association (supported by many of its divisions and affiliates) in its final submission to the Commission on the Future on Health Care in Canada (the Romanow Commission) entitled, "*A Prescription for Sustainability*" namely:

1. **There remains unfinished business.** The Canadian Medical Association has called upon the federal government to create special-purpose, one-time funds totalling $2.5 billion over five years. One of the areas highlighted as requiring additional targeted funding was capital infrastructure **(recommendation # 4)**.

This analysis suggests that an additional minimum investment of $1.15 billion over three years is needed to rectify Canada's technology gap.

2. **All governments have the responsibility to be transparent and accountable to taxpayers for health care spending.** The conditions of the Medical Equipment Fund did not live up to this responsibility. Provinces and territories provided widely variable and often incomplete information that is largely inaccessible to the public, and at the very least difficult to trace. To this end, the CMA has recommended the creation of a Canadian Health Commission **(recommendation #2)**. One of the responsibilities that is envisioned for the Commission would be to report on the health of health care in Canada and keep Canadians informed as to how their taxpayer dollars are being spent.