

# Reimbursing Physicians for Telehealth Practice: Issues and Policy Options

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## **Introduction**

Telehealth,<sup>1</sup> broadly defined, is the use of telecommunications and information technologies to overcome geographic distances between health care practitioners or between practitioners and patients for the purpose of diagnosis, treatment, consultation, education and health information transfer. The vastness of Canada has made the delivery of health services to its widely dispersed population difficult at the best of times. The adoption of innovative approaches or technologies is often a necessity. The growing interest in telehealth in Canada is a case in point. Canada was one of the first countries in the world to adopt telehealth.

Telehealth is increasingly seen as an important tool for enhancing health care delivery, particularly in rural and remote areas where health care resources and expertise are often scarce or even non-existent. Services and expertise from major centres and health care facilities can be brought to such communities with the help of telecommunications and information technologies. Over the last few years, there has been a rapid increase in telehealth activities. A recent nation-wide survey conducted by Industry Canada has identified scores of telehealth projects.<sup>2</sup> The founding of the Canadian Telehealth Society and the Telehealth Association of Ontario in 1998 reflects the widespread interest in telehealth-related activities in this country.

Until recently, most telehealth pilot projects and studies have focused on overcoming technological challenges and demonstrating clinical efficacy, but more and more people are beginning to ask questions about the policy and economic aspects of telehealth. They are interested in finding out how telehealth can be integrated into the health care system, how certain policies may facilitate or hinder the application of telehealth and how cost effective telehealth is.

One of the major concerns is reimbursement, especially in relation to whether and how practitioners are compensated for their involvement in telehealth. Potential problems relating to reimbursement have received considerable attention and discussion, but progress has been slow in many jurisdictions.

Although telehealth can be used for many purposes, such as in home care, triage, emergency alert, health information “hot line”, continuing medical education and patient education, the present paper focuses on the diagnosis and treatment of diseases and physician consultations.<sup>3</sup> Also, while many categories of health care practitioners are involved in telehealth activities, much of the discussion in this paper centres on physicians because the debate on reimbursement focuses on medical practitioners at this stage of telehealth development. However, many of the issues and policy options discussed are equally pertinent to other practitioners.

Telehealth technologies and activities are changing by leaps and bounds. The discussion that follows mostly reflects the situation in early 1999 when the research was initially conducted, though efforts were made to incorporate more recent developments in the paper. This paper is divided into several major sections. Following the introduction, the research methodology is outlined in the second section. This is followed by a discussion of the policy issues and their significance. The major findings and analysis are presented in two sections. The first discusses the current status of physician reimbursement as it relates to telehealth. It also describes how Canada and selected foreign countries deal with this problem. This is followed by a discussion of a number of policy options for addressing the reimbursement issue. Each option is examined in terms of its pros and cons. The second last section identifies several related issues. The paper ends with a discussion of telehealth reimbursement issues from a broader policy perspective.

## ***Nature of the Issue***

The absence of policies regarding physician reimbursement for engaging in telehealth activities could stifle the development of telehealth. At present, most provincial health care insurance plans require that the patient be seen in person by a physician in order for a bill to be submitted by the physician. Because most of the current telehealth initiatives are pilot projects or clinical trials located at universities or hospitals, the absence of rules on physician reimbursement has not been a major concern since most physicians involved treat their participation as a research activity or because they are in alternative payment schemes (like salary or capitation). However, unless the reimbursement issue is appropriately addressed, it is unlikely that telehealth will be implemented on a broad basis. Physicians are unlikely to provide telehealth services on an on-going basis if they are not compensated, in one way or another, for their time and effort.

This problem is not unique to Canada. There are similar situations in most countries where physicians are predominantly paid on a fee-for-service basis. Most of the telehealth experts surveyed in relation to the present study and most of the studies reviewed regard the current lack of payment for telehealth practitioners to be a major barrier. In the United States, according to the Association of Telemedicine Service Providers, economic uncertainties, including concerns over reimbursement for services, represent the biggest barrier to the sustained viability of telehealth.<sup>4</sup> Similarly, a survey conducted by the Secretariat of the Advisory Council on Health Info-structure, Health Canada,<sup>5</sup> reveals that reimbursement was seen as crucial to the development of telehealth services in Canada. Respondents to that survey believed that there was a policy void and that there was no coordinated approach across the country in relation to telehealth reimbursement.

## ***Research Methodology***

The core of the present analysis is an examination of several policy options and some factors that may complicate the reimbursement issue. The policy analysis is informed by an extensive review of the literature and information provided by many knowledgeable individuals in Canada and other countries who were surveyed in relation to this study.

Although telehealth is developing at a breakneck pace, the amount of literature available on reimbursement issues in conventional print format is very limited because there are very few books and only a handful of journals devoted to telehealth issues. For this reason, our research team adopted a more encompassing approach in the literature search. In

addition to searches in academic and professional publications, the research team has expanded the scope to include other sources such as World Wide Web sites and unpublished reports and documents from various government agencies and telehealth projects.<sup>6</sup>

Information was also obtained from telehealth experts. A list of the individuals who were to be surveyed was drawn up by the research team and a number of knowledgeable people in the field. This purposive sample included federal/provincial government officials, members of the Advisory Council on Health Info-structure of Health Canada, individuals knowledgeable in telehealth, representatives of professional associations and licencing authorities and telehealth experts in other countries. Foreign experts contacted were mostly from Australia, selected European nations and the United States.<sup>7</sup> Additional interviews were conducted in late 1999 and early 2000 in order to find out more recent developments in some of the provinces.

## ***Current Status***

Before presenting and discussing the policy options, it is useful to review various reimbursement arrangements in relation to telehealth. The current status in Canada and several foreign countries is highlighted as follows.

### ***(a) Canada***

At the present time, with the exception of several provinces, there are no official telehealth fee schedules or policies regarding reimbursement for telehealth practice in Canada. In what follows, the situation in selected provinces is briefly described.

**British Columbia:** In British Columbia, telemetry (defined as the electronic transmission of data such as X-ray images) can be billed to the Medical Services Plan, the provincial health insurance plan, under certain conditions.<sup>8</sup>

**Alberta:** In Alberta, the issue of reimbursement was studied by the Telehealth Co-ordinating Committee. Consultations between Alberta Health and Wellness and the Alberta Medical Association resulted in amendments to the Schedule of Medical Benefits with respect to telehealth medical services, effective April 15, 1999. In effect, physicians are compensated for providing many medical services via telehealth. “‘Telehealth service’ is defined as a physician delivered health service provided to a patient at a designated RHA (Regional Health Authority) telehealth site, through the use of videotechnology, including store and forward. The patient must be in attendance at the sending site at the



time of the video capture. Telehealth services do not include teleradiology and telepsychiatry".<sup>9</sup>

**Saskatchewan:** Physicians in Saskatchewan can now be paid for services provided through telehealth. Following successful negotiations between the Medical Services Branch and the Saskatchewan Medical Association, the province has put in place a fee-for-service schedule for telehealth services provided in approved facilities. Specialists in pediatrics, internal medicine, psychiatrics, medical genetics, cardiology, neurology, psychiatry, dermatology, neurosurgery, general surgery, orthopedic surgery, plastic surgery, obstetrics and gynecology, urological surgery, ophthalmology and otolaryngology can bill the Medical Services Branch for telehealth services with direct interactive video links with patients. Family physicians and general practitioners can also bill if they are required at the referring end to assist with essential physical assessment without which the specialist service would not be effective.

**Manitoba:** As of November 1, 1999, physicians in Manitoba are reimbursed for providing telehealth services. The fee schedule for telehealth services is similar to that used in Nova Scotia (see below).

**Ontario:** While there are a number of major telehealth pilot projects in Ontario, including the University of Ottawa Heart Institute telehealth project, the Northern Ontario Remote Telecommunications Health Network Demonstration Project (NORTH Network) and the Hospital for Sick Children project, there is no telehealth reimbursement policy in Ontario. In the Hospital for Sick Children project, participating physicians are not reimbursed separately as they are on an alternative payment scheme (i.e., non-fee-for-service). In the University of Ottawa Heart Institute project, physicians participated in a research capacity and were not separately reimbursed. In the NORTH Network project, physicians were compensated by the project for their involvement.

However, the Ontario government is under increasing pressure to pay physicians for providing telehealth services. In his report to the Minister of Health and Long-Term Care, Dr. R. McKendry, Fact Finder on Physician Resources, has recommended that in order to support the provision of telehealth services,

the Ministry of Health and Long-Term Care should consider a number of options for appropriately compensating physicians for services delivered, including working with the

OMA (Ontario Medical Association) to amend the current fee schedule.<sup>10</sup>

**Quebec:** In Quebec, only radiologists using teleradiology are reimbursed as a regular service. The provincial government has no official policy on telehealth or telehealth reimbursement, but is examining the issues.

**New Brunswick:** At present, there is no provision in New Brunswick's Medicare to reimburse telehealth services provided by physicians, but the province is looking at ways to incorporate telehealth services in the Schedule of Fees. For example, it is working on definitions from a payment perspective, assessment rules to be applied, ways to identify telehealth services in the Medicare database and requirements for new fee codes. It hopes to start negotiations soon with the New Brunswick Medical Society to have the items and definitions added to the Schedule of Fees. In addition, the Physician Issues Workgroup of the Provincial Telemedicine/Telehealth Coordinating Committee (PTTCC) has prepared a background paper on reimbursing physicians for telehealth practice. The province pays physicians for some telehealth services. Teleradiology, for instance, is reimbursed using existing fee codes. Most teleconsultations that are reimbursed occur on an interprovincial basis.<sup>11</sup>

**Nova Scotia:** To date, the boldest and most comprehensive approach in relation to physician payments for telehealth services has been introduced in Nova Scotia. The Nova Scotia Medical Services Insurance made an announcement on January 29, 1998:

The Medical Society and government are in the early stages of negotiations for permanent telemedicine fees. In the short term we will honor interim fees for this modality of communication and consultation between physicians and patients.... Specialists will be paid the regular major or minor consultation fee (as if the patient were physically present with the specialist). Consult letters to follow in each instance. Family practitioners, when their attendance is required to facilitate the consultation, may charge the equivalent of an office visit or 10.5 units.... In a circumstance where an inordinate amount of time is required of any physician in the management of a clinical problem utilizing telemedicine modality, that physician may claim at the rate of one (1) unit per minute.<sup>12</sup>

This telehealth payment arrangement is to be in effect for three years. An extension of this arrangement beyond the 3-year period or a decision to make it permanent will, presumably, depend on the success of the program. As well, Nova Scotia has planned to change existing legislation that requires face-to-face consultation between physician and patient in order for physicians to be reimbursed.

**Newfoundland:** In Newfoundland, tele-EEG and teleradiology are covered by the provincial health insurance plan. Payments for such services are at the same rate as services performed in the conventional manner. As of 1999, physicians providing child telepsychiatry services are reimbursed by the Newfoundland Medical Care Commission. For example, the rate for a child psychiatry consultation is \$117.75. Other personnel involved in telehealth may receive compensation through a negotiated contract or as part of their academic or clinical salary<sup>13</sup>. Offshore telehealth services (e.g., Hibernia) are funded by private corporations.

### **(b) Australia**

The Australian Medicare system pays a physician for providing services to a patient in a face-to-face situation. Medicare does not currently reimburse physicians for telehealth services. At this time, the major use of telehealth is by psychiatrists who tend to be funded on a salary or sessional basis or by radiologists on private contract. Physician reimbursement is likely to become an issue as more private-practice physicians become involved in telehealth.<sup>14</sup>

### **(c) Europe**

In Norway, specialists are paid a salary for duties performed at hospitals. General practitioners, on the other hand, are either salaried or paid on a population basis. Fewer than two percent of physicians charge their patients directly. In August 1996, a national telehealth fee schedule was implemented, making telehealth services officially reimbursable. The government pays the provider hospital for patient consultations using telehealth. A routine telehealth consultation is reimbursed at the rate of 400 Nkr and a radiological examination at 150 Nkr.<sup>15</sup>

Physicians involved in telehealth in Ireland are not reimbursed. Telehealth is not a chargeable service. It is seen as a mechanism for performing existing tasks in a more efficient manner.

In the United Kingdom, health care is mostly provided through the National Health Services (NHS) which is tax-funded. Most physicians working within the NHS are salaried. So, when physicians deliver care via telehealth, they would not be separately paid by NHS. Telehealth reimbursement has not yet emerged as a policy issue.

### **(d) The United States**

At this time, telehealth services are generally not reimbursed. Most third-party payers have taken a wait-and-see approach toward telehealth payments. But there have been some significant developments, particularly in the Medicaid and Medicare areas.

On the federal government side, Medicaid and Medicare have varying policies on telehealth. Medicaid coverage for telemedicine varies from state to state. As of August 1998, Medicaid reimbursement for services provided via telehealth was available in Arkansas, California, Georgia, Illinois, Iowa, Kansas, Montana, North Dakota, South Dakota, Virginia and West Virginia. In many of these states, payment is on a fee-for-service basis, which is the same as the reimbursement for covered services furnished in the conventional face-to-face manner. Reimbursement is made at both ends (i.e., hub and spoke sites). In general, states have wide latitude in defining telemedicine services that can be reimbursed.<sup>16</sup>

Currently, under Medicare, if standard medical practice does not require face-to-face contact between the patient and the practitioner, then it will cover the service, as in the case of teleradiology and physician interpretations of EKG and EEG readings that are transmitted electronically. Medicare does not cover consultations and other physician services delivered through telecommunications.<sup>17</sup>

The *Balanced Budget Act* of 1997 (Public Law 105-33) included a telehealth provision (Section 4206). The U.S. Congress required that, not later than January 1, 1999, Medicare Part B reimburse physicians for medical consultations via telecommunications systems in certain rural areas which are deemed "healthcare professional shortage areas." The consultation must be "real time" where the consultant can examine the patient. The payment will not exceed the current fee schedule of the consulting physician. It will not pay for telephone line charges or facility fees and the beneficiary may not be billed for such charges. While the benefits are limited and the payment rules are quite restrictive, it is seen by some as "a foot in the door" for telehealth reimbursement.<sup>18</sup>



On the private-sector side, most private third-party payers have been reluctant to pay for telehealth services. In 1997, only one private insurer, Blue Cross/Blue Shield of Kansas, had a formal policy to pay for certain telehealth services furnished by physicians licenced to practice in that state.<sup>19</sup>

While the managed care sector has been slow to deploy telehealth, a growing number of managed care plans, such as Allina Health Systems of Minneapolis and Methodist Hospital of Indianapolis, have successfully included telehealth applications. In addition, some important legislative changes have recently been introduced which may encourage greater use of telehealth in managed care. Louisiana has passed a law dealing with telehealth reimbursement which prohibits insurance carriers from discriminating against telehealth as a medium for delivering health care services. Similarly, California has passed California State Bill 1665 (1996) requiring private managed care plans to cover telehealth services.<sup>20</sup>

## ***Policy Options***

The examination of policy options is made more complex and difficult by the fact that what needs to be considered is not just whether or not physicians engaging in telehealth should be reimbursed. Nobody has ever suggested that physicians should not be paid for providing medical care with the help of telecommunications and information technologies, if telehealth services are proven effective and are part of the service delivery system. What is being debated or under consideration are the methods of reimbursement and the timeframe for implementing reimbursement policies. As there are many possible permutations of these factors, only the most salient options are presented for discussion. In order to facilitate deliberation and decision-making, each of the policy options is examined in terms of its strengths and weaknesses from a policy-implementation perspective.

### ***(a) The Status Quo***

The status quo option means that physicians providing telehealth services will not receive fee-for-service reimbursement or other forms of payment, with the possible exception of teleradiology and telepathology, areas of clinical practice which typically do not require face-to-face interaction between physician and patient. Physicians may take part in telehealth work as research activities or as part of an institution's or a program's routine operation. This approach is what most provinces, as well as many foreign countries, are following at this time either by design or by default. While not ruling out full-scale or partial

reimbursement for telehealth practice in the future, this approach opts for a wait-and-see strategy.

### **Pros**

Telehealth is still largely developmental in nature, with many unknowns. There are still many technological, clinical, legal and economic issues waiting to be addressed. A wait-and-see strategy allows governments to carefully assess the situation and respond appropriately.

### **Cons**

The status-quo option will considerably slow down further developments of telehealth in Canada. If practitioners are not reimbursed for their work, there is little incentive for their active involvement. As a result, Canada may be left behind.

The development, application and diffusion of telehealth technologies are likely to continue apace in other countries, particularly the U.S. Because telecommunications respect no geopolitical boundaries, Canada cannot effectively close its borders to telehealth "intrusions" from outside. By not positioning itself strategically, Canada may be forced to respond passively to external challenges and may lose a competitive edge in the developing field of telecommunications technology and its application to health care.

### ***(b) Selective Reimbursement of Telehealth Activities***

This is a middle-of-the-road position between the status quo and full-scale telehealth reimbursement. If this approach is adopted, a provincial government would fund certain telehealth activities or programs, and participating physicians would be reimbursed by fee-for-service or other means. It should be noted that this approach is not the same as telehealth pilot or demonstration projects which are mostly experimental in nature, short term in duration and limited in scale. As will be discussed in the final section of this paper, such pilot or demonstration projects, while useful and necessary, are typically unable to show the real impact of telehealth on the practice of medicine, health services delivery and the health care system. Telehealth needs to be tried out in real-life settings and on a much broader scale. The Medicare payment scheme for telehealth, as mandated under the U.S. *Balanced Budget Act* of 1997 (see above), is an example of a selective reimbursement approach since telehealth services are reimbursed only for Medicare beneficiaries living in designated rural areas.

### **Pros**

This “gradualist” approach avoids both extremes, i.e., putting a brake to telehealth development or making a total commitment to a new health care delivery modality before all the evidence is in.

This represents the second phase in telehealth development, a significant step beyond pilot and demonstration projects that have been proliferating in many parts of the country. The outcomes of the second-phase programs and activities and their direct and indirect effects on the health care system could further inform decision-making in relation to telehealth reimbursement and other policies.

A “gradualist” approach may allow health care planners an opportunity to decide how best to integrate telehealth into the health care system.

#### **Cons**

This may delay funding telehealth practice on a broad basis. The uncertainty and the “mixed messages” may hamper telehealth development.

#### ***(c) Reimbursement under Alternative Payment Plans***

Under this approach, physicians providing telehealth services will be reimbursed, but only if they are in alternative payment plans (i.e., non-fee-for-service). This approach approximates the situations in Norway and the NHS in the United Kingdom where most physicians are salaried or paid on a capitation basis. As will be explained in greater detail in the final section of this paper, one of the major concerns of policy-makers is the unknown but potentially costly financial implications of combining fee-for-service payment with a new service delivery modality that could greatly increase access and utilization.

#### **Pros**

Putting telehealth physicians on salary, capitation or contract could provide some predictability in the costs of providing telehealth services since it avoids the open-ended nature of fee-for-service payment.

It also avoids having to make changes to statutes or regulations governing physician reimbursement. Like opening the Pandora’s box, attempts to change one aspect of the legislation could trigger demands for other changes that politicians may not be eager to entertain.

Many provinces are exploring payment mechanisms other than the fee-for-service model. A growing number of health care policy experts, as well as physicians, are urging the adoption of alternative payment plans. The number of physicians on salary, capitation or sessional payment is expected to increase. This would make it easier to avoid

paying for telehealth services using an open-ended fee-for-service approach.

#### **Cons**

The number of physicians, especially specialists, on alternative payment plans is still relatively small in this country. In British Columbia, Manitoba, Quebec and Nova Scotia, over a quarter of the physicians practise under alternative payment systems. But in Ontario, about 94% of the practising physicians derive the bulk of their earnings by billing the Ontario Health Insurance Program on a fee-for-service basis.<sup>21</sup> Besides, most of the non-fee-for-service physicians are primary care physicians who are less likely to provide teleconsultations. If only non-fee-for-service physicians are funded for providing telehealth services, it would severely limit the number of participants, at least in the foreseeable future.

Physicians who are on existing alternative payments plans may not see telehealth services as part of their responsibilities. For instance, current alternative payment plans in Ontario do not typically specify the provision of telehealth services in the contracts. Some physicians may view telehealth consultations as additional responsibilities that need to be compensated separately.

#### ***(d) Full-scale Reimbursement***

If the full-scale reimbursement approach is adopted, all physicians who provide telehealth services will be reimbursed through fee-for-service and/or under alternative payment plans. The existing fee schedule may be used for telehealth reimbursement or a special fee schedule for telehealth may be negotiated. As well, there may be some exceptions or there may be conditions attached to this reimbursement model. The telehealth reimbursement policies of Nova Scotia and Norway are examples of this approach, with some qualifications.

#### **Pros**

This would ensure the fullest participation of physicians in telehealth.

There will be improved access to specialty medical care, particularly by rural residents.

#### **Cons**

The cost implications are uncertain.

There could be a rush into adopting telehealth without first determining how it should be integrated with other aspects of the health care delivery system and what impact it might have on the health care system as a whole.



## Related Issues

Practitioner reimbursement is just one aspect of telehealth funding. There are a number of related issues mostly concerning what should be funded, how and by whom. However, because an in-depth examination of such issues is beyond the scope of the present study, the following discussion is cursory in nature. The issues are raised primarily to encourage further discussion and to point out that the economics of telehealth are considerably broader than physician reimbursement.

1. Assuming that telehealth consultations are reimbursable, as most teleconsultations involve a specialist and a referring physician, do both physicians bill for the teleconsultation or just the specialist? Must the referring physician be present at the teleconsultation session? As noted earlier, the U.S. Balanced Budget Act of 1997 has mandated Medicare payment for telehealth consultations in certain rural areas. The referring and consulting physicians will share the Medicare professional payment. The U.S. Health Care Financing Administration requires that 75% of the fee go to the consultant and the remaining to the referring physician.<sup>22</sup> The Nova Scotia telehealth payment plan stipulates that if the referring family physician is required to be present at the session to facilitate the consultation, he/she may bill for the equivalent of an office visit.
2. Telehealth services involve other expenses, such as hardware, software and transmission costs, which are not traditionally billed to third-party payers. Will third-party payers be expected to cover such infrastructure-related costs? The U.S. Balanced Budget Act of 1997 has mandated Medicare payment for professional consultations via telecommunications systems in certain rural areas. However, the Act specifies that such payments will *not* include reimbursement for telephone line charges or facility fees.

While radiologists and pathologists in Canada can bill for a professional component, it is not clear if similar billing arrangements could be made for telehealth. It is also not clear which telehealth site would bill for the technical component. Hospitals or other facilities may not wish to take part in telehealth activities if they are not reimbursed for their investment in the technology and related overhead costs.

3. Who besides physicians should be reimbursed for their participation in telehealth activities? For instance, should a nurse be paid and how should she/he be paid

if she/he presents the patient to the consultant and assists at the teleconsultation session? Is this a relevant issue when most nurses are salaried employees in hospitals? In the U.S., Perednia,<sup>23</sup> on behalf of the Association of Telemedicine Providers, has argued that supporting practitioners such as audiologists, speech therapists, dieticians should be reimbursed if they are involved in teleconsultations. Similar views have been expressed by the Centre for Telemedicine Law.<sup>24</sup>

## Discussion

Whether or not to reimburse physicians for providing telehealth services is a relatively new issue since it is only recently that advances in telecommunications and information technologies have made the delivery of a broad range of clinically sound medical care at a distance a reality. There are different views and positions on this issue in Canada and other countries. For instance, Nova Scotia has taken a bold step by introducing a fairly comprehensive telehealth reimbursement scheme. Several other provinces such as Alberta and Saskatchewan appear to be moving in the same direction. Most provinces, however, are much more cautious. In most cases, they have funded some pilot or demonstration projects and have struck committees to look into the matter, but have not made major changes to physician reimbursement policies or legislation.

The problem may not be reimbursement per se. As pointed out earlier, nobody has ever said that physicians should not be paid for doing telehealth work, if it is clinically sound and appropriately integrated in the health services delivery system. The problem may not even be the often-blamed impediment – the need to see a patient face-to-face before billing can be submitted by physicians for fee-for-service payment. According to a senior government official in one of the provinces, the requirement of face-to-face contact between patient and physician can be altered quite easily by making some minor amendments to the existing regulation. No major changes to the health insurance legislation are needed. What, then, explains the reluctance on the part of many ministries of health to make the necessary regulatory or legislative changes in order to make telehealth practice compensable? It has been suggested that uncertainty surrounding the impact of telehealth is a major reason. Otherwise put, provincial governments, as well as third-party payers in other countries, are not sure about the financial implications of paying for telehealth consultations on demand. The medical community may be just as uneasy because many physicians are unsure about the implications of telehealth for them.

From the government's perspective, one of its major concerns is uncontrolled or uncontrollable utilization which could drive up health care spending. Commenting on payment for telehealth services in Australia, John Mitchell & Associates<sup>25</sup> asserts that "the issue of fee payment is complex, involving control over the extent of utilization and level of health care expenditure". In its report to the U.S. Congress, the Department of Commerce<sup>26</sup> has issued a similar warning about the risk of excessive use. It maintains that regardless of any cost saving that may be gained from telehealth, greater access to medical care, particularly specialty care, could very likely generate greater expenditures for payers. The New Brunswick PTTCC<sup>27</sup> has also cautioned policy-makers to consider not only the potential for unit cost reductions generated by the use of telehealth, but also the potential for cost increases generated by improved access to services. On the other hand, it could be argued that an increase in utilization may not be bad if some people, such as those in rural or remote areas, are underserved due to inadequate access to needed medical care.

Many telehealth advocates have proffered the argument that telehealth could help save money by delivering health services more efficiently and economically. To date, there is insufficient empirical evidence to support such claims. As the Secretary of Commerce has pointed out in his report to the U.S. Congress, "Although many individuals believe strongly in the potential of telemedicine for providing cost-effective services, not much 'hard data' is available to support that belief. Decision-makers want to know the value-added of telemedicine."<sup>28</sup> There is much stronger evidence that telehealth saves time and travel costs for patients, particularly those living in rural or remote communities. But such savings typically accrue to individuals, rather than to the health care system. There is another aspect that should not be overlooked. Unlike other sectors in the economy, in health care, capital investment or the introduction of new technologies tends not to reduce labour or production costs. A new technology or program often represents an add-on, instead of a displacement of existing or superfluous services. Thus, it is not surprising that health care policy-makers are still reluctant to fully commit the resources needed to support telehealth.

Some physicians are equally concerned about the potential impact of telehealth on their practice and financial well-being. This is because telehealth could affect referral patterns and/or clienteles that have taken years to establish. For example, in the U.S., pathological specimens are now routinely shipped to out-of-state reference laboratories for processing and interpretation by pathologists. X-rays are electronically transmitted to radiologists in other locations

for interpretation. Managed care organizations may use teleradiology to establish networks that could by-pass local doctors. Similarly, a hospital may replace its local radiologists by using a system connected with an out-of-state radiology group. Changes in referral patterns or loss of patients could, in turn, impinge on the professional incomes of some physicians. Such concerns, justified or not, have led to attempts to erect barriers such as the closing of "consultation exceptions". Kansas was the first state in the U.S. to directly apply its licencing statute to telehealth, introduced in response to concerns expressed by the Kansas Medical Society about teleradiology.<sup>29</sup>

Although these are American examples, there is no reason to believe that similar problems will not happen in Canada. The New Brunswick PTTCC<sup>30</sup> has warned against the reduction of local direct services in favour of specialized services provided at a distance by means of telehealth. Already, there are reports that some physicians are concerned that telehealth may cut into their practice.<sup>31</sup> Anticipating these problems, the World Organization of Family Doctors<sup>32</sup> has recommended that telehealth policies and decisions should not adversely affect the local delivery of health care in rural communities. Unless there is evidence that telehealth will not lead to health care cost escalation, unless measures can be found to ensure proper utilization and unless physicians can be assured that telehealth will not pit one group of doctors against another, most third-party payers and medical associations are in no hurry to decide on reimbursement issues.

Ironically, at this important juncture in the development of telehealth, we face a Catch-22 situation. Because of uncertainties and concerns about the impact on telehealth, many third-party payers, including provincial ministries of health, are reluctant to change reimbursement policies to fund telehealth services. But unless telehealth is practised in real-life settings and on a much broader scale, we will not be able to assess its real impact and implications. Telehealth pilot projects are needed and may be able to demonstrate technological soundness, clinical efficacy, and patient/provider acceptance, but they tend to be too small, too localized, too short in duration and/or too contrived (e.g., physicians volunteering their time and services) to affect service utilization, patient referral patterns and physician market shares in a substantial way.

In a more positive vein, telehealth may offer an opportunity to reconfigure the health care system in such a way that fosters genuine collaboration between primary care physicians, specialists and other practitioners and brings service consumers and service providers closer to one another, particularly in rural settings. Telehealth may be





offered as a program of integrated medical care rather than a set of discrete services, contact episodes and payments. Thus, it is not surprising that the Health Services Restructuring Commission<sup>33</sup> sees a 24-hours-a-day, 7-days-a-week telephone triage service as an intrinsic part of its primary health care reform strategy for Ontario. The significance of this recommended strategy is that teletriage, a rudimentary form of telehealth, is seen as an integral part of a health services system and not just another disjointed program. Major technological changes often have intended and unintended consequences that permeate the entire system. How telehealth will affect the health care system and how the system must change in order to accommodate telehealth are questions to which we still do not have complete answers.

It is in this context that the telehealth initiatives in Nova Scotia, Alberta, Norway and the U.S. Medicare system are expected to play pioneering roles. These large-scale, real-life “experiments” will be monitored with great interest by telehealth technology developers, the medical community, policy-makers and researchers alike. Their performance, particularly their impact on health care utilization and spending, and their ability to become an integral part of the health care system will have a decisive influence on the future development of telehealth in this country and the world.

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