Health Canada Santé Canada

CANARIE INC.

Tele-Homecare

Consultation Workshop

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Canada

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maintain and improve their health.

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Office of Health and the Information Highway
Postal Locator 3002A2
11 Holland Avenue - Tower A - Second Floor
Ottawa ON
K1A 0K9
telephone: (613) 954-9165
fax: (613) 952-3226
website address: http://www.hc-sc.gc.ca/ohih-bsi

Questions and comments should be addressed to Sandra_Lowenstein@hc-sc.gc.ca.

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PREFACE

This report is part of a series of reports issued by CANARIE Inc. regarding aspects of telehealth in Canada[1]. It is based on a workshop held in Toronto, Ontario, in August 1998 entitled *Tele-homecare consultation workshop*.

Tele-homecare may be defined as the application of information and communication technologies to the management and delivery of home health care services.

Internationally, Canada ranks as a leader in telecommunications technologies and in the development of the information highway and telehealth. There is growing interest in the emerging tele-homecare sector. New initiatives have been undertaken and a number of Canadian companies focussing on tele-homecare services and products have emerged in

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[1] In September 1996, the first of the CANARIE reports, *Towards a Canadian Health IWAY: Vision, Opportunities and Future Steps*, set out a vision of a Canadian Health Informatin Network, which it called the "Canadian Health IWAY," and recommended several follow-up actions. The recommendations of that report were echoed in reports of other groups considering similar technology and application issues. Collectively these reports helped to create a broader awareness of the strategic importance of telehealth in Canada.

The second report, released in July 1997, was entitled *Telehealth in Canada: Clinical Networking, Eliminating Distances*, and was based on a CANARIE workshop held in Quebec City in March of that year. The focus of that workshop was on new application areas for telehealth, including the latest developments by governments and the private sector, and the challenges on the road ahead.

The third report, released in December 1997, was entitled *Ensuring Privacy and Confidentiality on Canada's Health IWAY*, and focused on identifying policy, legal, regulatory and technological issues, solutions and clinical protocols relating to privacy, confidentiality and security in telehealth. It was based on contributions from many participants, attending a workshop held in October 1997 in St. John's, Newfoundland.

The fourth report, released in August 1998, entitled *Bridging the Pacific: Education and Health for All Through Distance Learning* brought together stakeholders from the health and education communities around the Pacific Rim, including representatives of governments and the private sector. The focus of the workshop was on identifying opportunities and challenges for using distributed learning techniques and technologies in support of education and health for all members of the global community. Held in concert with the annual Asia Pacific Economic Cooperation Conference, this workshop looked beyond Canada's borders and explored some of the global issues important not just to telehealth, but to the broader use of distributed learning in support of both educational development and health improvement.

The fifth and six reports will be released before the end of December 1998. The workshop entitled *Telehealth and the Regionalization of Health Care* was held in Winnipeg, Manitoba on May 7-8, 1998 and the other entitled *Canadian and G-7 SP4 FORUM on Interoperability in Telemedicine and Telehealth* was held in Montreal on May 28-30, 1998.

the last few years. Tremendous opportunities exist to improve the health of Canadians and to enhance the integration and efficiency of the health system.

To this end, Health Canada is developing a proposal for a national tele-homecare strategy and is consulting with major stakeholder groups. In the context of an MOU between CANARIE Inc. and Health Canada, the Office of Health and the Information Highway[2] requested CANARIE Inc.[3] to organize a one day consultation workshop on tele-homecare. Fifty people participated in the consultation workshop, including representatives from industry, government, health care provider and academic organizations and institutions.

Views on issues, challenges, and opportunities for advancing tele-homecare were solicited through small group discussion and plenary sessions. The topics addressed were:

- Current status of tele-homecare projects, activities and initiatives
- Obstacles, barriers and opportunities for development
- Trends and future directions
- Potential federal initiatives

The workshop concluded with recommendations for immediate federal government consideration.

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[2] The Office of Health and the Information Highway (OHIH) was created in 1997 in recognition of the growing importance of information and communication technologies in health. The Office assists the Minister of Health and Health Canada to address emerging issues and to develop a long term strategy regarding Canada's Health Infostructure. OHIH is responsible for co-ordinating information highway-related activities both within Health Canada and with external stakeholders. Further information on OHIH's mandate and initiatives is available at **http://www.hc-sc.gc.ca/ohih-bsi**

[3] CANARIE Inc. is a not-for-profit Canadian corporation that is mandated to deliver a Government of Canada programme on the development, deployment and use of advanced computer-based digital networks and associated applications, products and underlying technologies. Through this public-private partnership, CANARIE funds, endorses and promotes information highway developments in Canada. Details on CANARIE can be found at **www.canarie.ca**

EXECUTIVE SUMMARY

A one-day consultation workshop on tele-homecare was organized by CANARIE Inc, on behalf of Health Canada's Office of Health and the Information Highway. Fifty representatives from industry, government, health services, organizations and academia offered their views on: the current status of tele-homecare projects, activities, and initiatives; obstacles, barriers and opportunities for development; trends and future directions; potential federal initiatives.

Participants supported a broad definition of tele-homecare that incorporated the full range of care and support services to patients, homebound caregivers, providers and the community. There was strong endorsement for a truly national home care programme that was networked, integrated, flexible and client-centred. Technology was seen as advancing the quality, efficiency and accessibility to home care across Canada.

Many of the barriers and obstacles that were identified underscored the need for national policies and standards on confidentiality, technological interoperability, funding, remuneration and professional credentialling. Industry representatives stressed the need for federal-provincial harmonization of regulations and policies to eliminate conditions that are currently increasing cost, lengthening time to market and discouraging economies of scale.

Participants felt that both health service and business models will need to be developed to determine appropriate cost, efficiency and quality outcome measures. Funding through re-allocation of resources or new investments will need to be debated. The group supported new investment for tele-homecare but with clear expectations for evaluation and dissemination of information on best practices. Systemic incentives to ensure tele-homecare programme sustainability must be created.

Many trends point to the readiness of Canadian society for tele-homecare. Technology is more diffuse, patients are becoming more self-sufficient (whether through necessity or choice) and the ageing population will create greater demands on the health care system and home care in particular. However, participants called for examination of our assumptions about home care and underscored the need to identify cultural, regional and gender issues that would impact on acceptance, need and accessibility.

There was strong consensus that the federal government should play a leadership role in facilitating consultation with other levels of government and stakeholders, fund world class demonstration projects, increase research funding, consult on intellectual property issues, and sponsor conferences for dissemination of information. Participants recommended establishing a national information clearinghouse and supporting a National Centre of Excellence on Telehealth. But first and foremost, a national vision of home care

in which tele-homecare plays a significant role must be developed. From there public health policy must follow. Success requires collective and immediate action on the part of all stakeholders.

OPENING REMARKS

Andrew Siman, Director General of the Office of Health and Information Highway, welcomed participants with an invitation to advise the federal government on how to advance tele-homecare in Canada. He highlighted the fact that health is the number one issue among Canadians and that homecare has been identified by the federal government as a priority. Mr Siman outlined three areas for the group to consider in formulating recommendations to the federal government to strategically move the tele-homecare agenda forward.

- What processes are needed?
- Are new organizational structures required?
- What level of funding is needed, for what and paid by whom, provincial or federal governments?

He concluded by recommending “Think big, start small and deliver quickly.”

Dr. Mo Watanabe, Chairman of the Workshop and Professor Emeritus of Medicine, University of Calgary, then set the stage for the day’s work by addressing the definition and scope of tele-homecare. He proposed expanding the basic definition of tele-homecare to that of telecare.

> “Telecare involves the use of information and communications technologies in primary and community care and particularly, care at home.”

He identified the significant features:

- It focuses on primary care
- It is client-centred
- Its client base is broad and includes the patient, the homebound caregiver and the community
- It has a broad service orientation that includes primary care, monitoring, triage, decision support, and information and knowledge sharing

Figure 1 was presented to reflect the scope of tele-homecare. Three primary functions suggested by Health Canada were identified:

- Clinical Applications
- Administrative/Management Applications
- Patient-Caregiver Information/Education

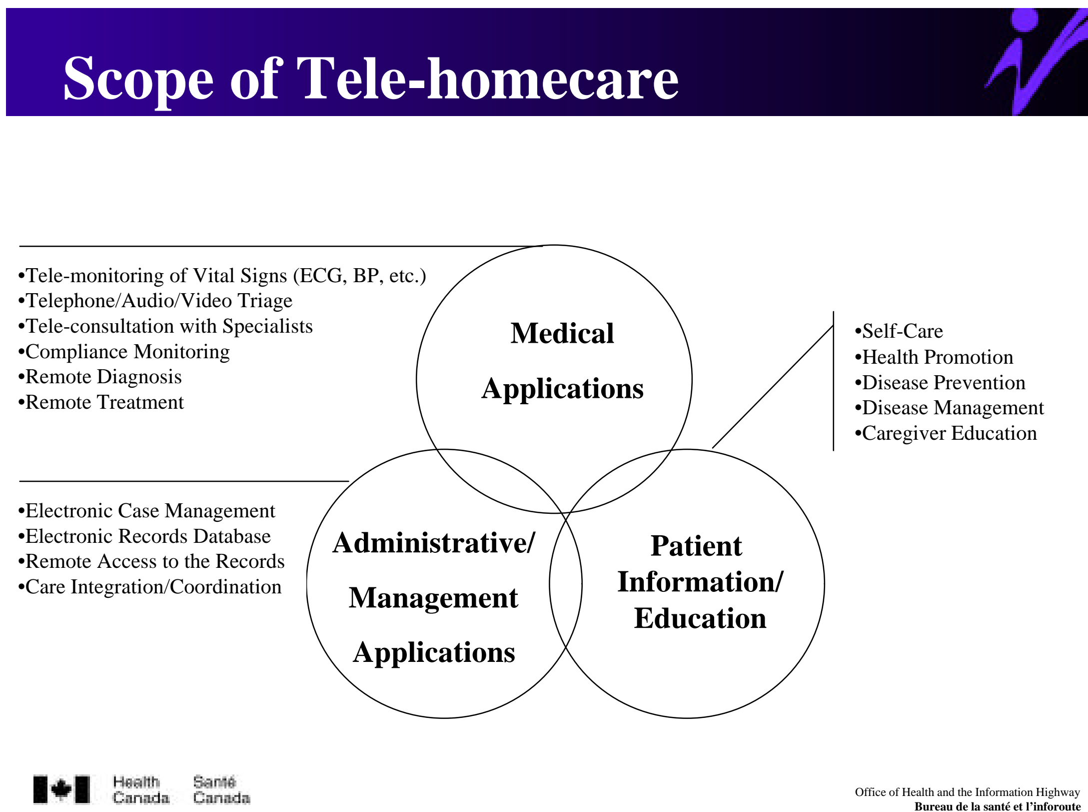

Figure 1

CURRENT STATUS OF TELE-HOMECARE PROJECTS, ACTIVITIES, AND INITIATIVES

After workshop participants introduced themselves and identified their respective health and telehealth interests, discussion turned to the definition and scope of tele-homecare, major issues confronting tele-homecare and identification of stakeholders whose input was still needed.

There was consensus on supporting a broad definition of tele-homecare to ensure that significant opportunities were not overlooked. Participants felt that a major opportunity existed for now revisiting the health care system and potentially creating a new system of health care.

Participants cautioned that we must be aware of our assumptions underlying the notion of "home". We need to identify and understand cultural, regional and gender differences that could impact on client needs, accessibility, and acceptance of tele-homecare. For example, how might tele-homecare services be provided to the "homeless"? Does our technology infrastructure permit equal access to tele-homecare services across regions, urban and rural? Are there differences between groups concerning acceptance of technology-based care?

Tele-triage service providers illustrated the importance of a broad conceptualization of tele-homecare, by noting that clients regularly access their services from work and school, rather than from home. While supporting a broad definition of tele-homecare at this stage of development and planning, participants also stressed the need to limit scope and clearly define services and outcomes for purposes of evaluation.

In considering a preferred perspective on tele-homecare, participants felt that tele-homecare should not be an adjunct to current services, but a new opportunity that effectively incorporates "continuum of care". While stressing the importance of having people, not technology, drive services, new opportunities do arise from asking, "What can we deliver as a result of technology that we couldn't before?" Participants felt strongly that a major opportunity now exists for technology to support a truly national and "networked" home care system.

The need for a national perspective arose within many contexts and was reiterated throughout the day. Industry strongly endorsed the need for national standards across many domains, for example, technology standards, reimbursement schemes, licensure, to name a few. Such harmonization was deemed essential to establishing a viable telehealth industry. Given that Canada is a small market to begin with, products and services that must conform to different provincial standards, regulations and policies only further

discourage entrepreneurship by increasing costs, increasing time to market for new products and services and reducing the potential for economies of scale.

Integration was also a very strong theme with respect to recommendations to eliminate and further avoid a "stovepipe" approach to service. To this end, community planners, social service providers and those responsible for provincial restructuring must be involved in tele-homecare consultation. Clients have multiple needs. Behavioral determinants of health are critical to primary prevention and long term health. It is well known that groups at risk are the major users of both health and social services. In the words of one participant, tele-homecare consultation and planning is an opportunity to "reweave the fabric of care".

Other stakeholder groups were also identified as important to the consultation process. It was strongly felt that the views of the public at large and home care clients specifically have not been adequately represented. Future consultations should also include volunteer organizations who produce health service and information resource directories and who may be interested in converting to an electronic medium, professionals involved in disease surveillance, third party payers, developers of life support technology and representatives from other industries such as banking who are also moving to home-based services.

Finally, models to assist in setting priorities and evaluating outcome are desperately required. We need to understand the motivators and drivers of tele-homecare so that we ensure the greatest return for our efforts. The traditional distinctions between home care and home health care need to be revisited. Traditionally, home health care has involved person-to-person contact and has been considered only one of many services covered under the umbrella of home care. The call now is to truly integrate the various components of home care and to realize that tele-homecare broadens the capability for patient care beyond direct person-to-person contact.

OBSTACLES, BARRIERS AND OPPORTUNITIES FOR DEVELOPMENT

Participants were asked to consider the obstacles and barriers to and opportunities for achieving the goals of improved quality, efficiency and access to health care through tele-homecare. As participants identified obstacles and barriers, they translated these limitations into actionable requirements for policy makers and tele-homecare stakeholders.

The most all encompassing barrier was seen as the lack of a public policy for home care that applies to all Canadians. Reimbursement policies and criteria vary across provinces. Regionalization and provincial restructuring mean that if current models endure, tele-homecare funding will also vary regionally. The restrictiveness of the *Canada Health Act* regarding insurable services that apply to home care is perceived as a tremendous barrier. Recipients of home care carry major financial responsibilities for services received and this varies across the nation. Participants were particularly concerned that a polarization within society will result in tele-homecare have's and have not's depending upon one's financial status and/or access to third party insurance. Many at risk clients will be penalized if current policies are not modified.

Following from this discussion, the participants strongly felt that a significant opportunity exists for policy makers to take a leadership role to address inequities in the home care sector through active health care reform, a revisiting of the limits of the *Canada Health Act* and the creation of new mechanisms for federal-provincial co-operation to offset the limitations imposed by the *Canada Health Act*.

The lack of national policies and standards around privacy and confidentiality of electronic patient information, cross province reimbursement of providers, and national credentialling of professionals was identified as a significant barrier.

Participants noted that little reform in primary care has taken place. Traditional models whereby patients access physicians first still dominate. It is likely that tele-homecare will challenge traditional models, raising the need to consider human resource planning and reimbursement as well as the changing roles of health care providers, and physicians in particular.

Participants highlighted the systemic nature of health care. It was felt that there are no adequate models to assist us in understanding the impact that tele-homecare will have on the health care system as a whole. Participants reiterated throughout the day that there is a great need to develop a framework that incorporates health care benchmarks for individual health sector and cross sector evaluative purposes. Current services are seen as fragmented and, without benchmarks, it is difficult to determine where improvements can or should be made. There was a strong call for federal-provincial and interprovincial collaboration to develop an umbrella of services and ensure that a **network** of applications

is implemented. Isolated services in discrete regions should be avoided. Herein lies a major opportunity to develop planning tools and to establish criteria for success.

Some participants noted that the motivators for tele-homecare are diverse and there is little consensus regarding which drivers, namely, quality, efficiency or access, are most important. Business models describing economic incentives are notably absent. Moreover, there has been little evidence, to date, of the benefits of tele-homecare, but this may be an unrealistic expectation at this stage. Some participants fear that the cost savings expectations for tele-homecare may not be realized but that tele-homecare may provide value-added efficiencies through timeliness of service delivery and easier and greater access to home health care.

While some participants felt that tele-homecare may increase demand and costs through expansion of current services, others cautioned against becoming preoccupied with cost efficiencies. They felt that it was important to forge ahead and argued that tele-homecare is so new, we cannot now envision its full potential. Consequently, we should not overly constrain its development and growth by overfocusing on cost issues.

Participants raised the important issue: How should tele-homecare be funded? Different funding models were debated. Should tele-homecare be supported through a reallocation of current health funds or be treated as a new investment? One hybrid solution offered was to "invest" in tele-homecare through demonstration projects. With positive outcomes, public acceptance and demand, the justification for re-allocation of resources could then more readily be argued and implemented.

Technological obstacles were also identified. Disparities between urban and rural technology infrastructure need to be addressed and possible differences in acceptance assessed and understood. National technology standards will be needed. Services and products must be user friendly and the human element must be foremost in the development of services and products. Tele-homecare must be client rather than technology driven. Furthermore, the assumption that high tech is better than low tech must be critically examined. Reliance on high tech solutions may inadvertently discriminate against certain regions and segments of the population.

Participants also saw that the general lack of awareness of tele-homecare across sectors constituted another obstacle at the present. Basic market research is required and sorely lacking. Market research conducted in the private sector is often proprietary and unavailable to policy makers and planners. Potential resistance on the part of risk averse health consumers and providers has not been adequately examined precluding the development of strategies to address concerns and fears.

Finally, participants felt that the social impact of tele-homecare must be examined. We need to identify the motivators for home care and tele-homecare and test our assumptions. The majority of home care providers are female and gender issues that might affect tele-homecare must be understood and addressed. The assumption has been that "home is better", but we do not really know the implications of transforming home care.

In conclusion, the major opportunity was envisioned as creating a new national system of home health care in which tele-homecare was a significant component. The strong wish was that tele-homecare facilitate an integrated, patient-centred, flexible system with equal access for all Canadians. This will require extensive collaboration among governments, regions, industry, providers and clients.

TRENDS AND FUTURE DIRECTIONS

Participants were asked to identify trends relevant to tele-homecare and to envision a “preferred” future when considering directions.

Participants noted the rapid advances in technology and technology diffusion . A cultural mind shift of greater acceptance was occurring with each passing generation. They felt that technology was clearly finding its place within health care. Visions of the future included ubiquitous health technology whereby technologically–based services and products would become “just the way we do things”. Technology would play an increasingly important role in operational management. Networked environments would increase health service efficiency and effectiveness.

A significant trend towards consumerism in health care was noted. Participants described health care recipients as more demanding, and some even felt that many Canadians feel a sense of entitlement to health services. Society is becoming increasingly knowledgeable through Internet facilitated up-to-the-minute information. Consequently, the roles of health provider and patient are changing. Health professionals will act more as guides and expert interpreters of information than information providers. There will be a great need for user-friendly information clearinghouses and quality information to guide citizens through the information explosion.

As health care costs are downloaded from institutions there is greater reliance on community supports and volunteers. Patients are becoming more self-sufficient and there is a trend towards more self-care. For some this translates positively into empowerment with citizens calling for greater accountability on the part of government. For others, there is confusion about who is responsible for patient care and health. With specific reference to tele-homecare, one participant wondered if patients and their caretakers will experience significant anxiety as they take on greater responsibility for care in the home. Patient education will be especially important to ensure patient confidence with new health delivery systems like tele-homecare.

Participants noted a trend towards increased partnerships between private and public health care and greater importation of health services and products. Different views on privatization were presented. Some saw competition between private and public services as very healthy in that it offered options to patients and opportunities to the private sector. Industry representatives stressed the need to treat our health care system and expertise as assets. Other participants expressed serious concern that increasing privatization will create a two tier system of health care that will polarize society.

Participants noted a trend for the media to play a bigger role in generating public debate on health issues and thereby influencing public health policy. As public awareness increases there is a call for greater accountability of health care resources. A trend towards viewing health funding as an investment is leading to demands for measures of return on investment (ROI).

A paradigmatic shift from illness to wellness models and management was identified. Participants felt that information technology will enhance this change. Evidence-based best practices through health information networks should be a key feature of the health care system of the future.

Changing demographics must also be considered in health care planning. Seniors are comprising a greater proportion of the Canadian population and more women are in the work force. These factors will have a significant impact on home care needs and service delivery.

Participants envisioned a more integrated approach to patient care and management. Multi-functional technology may be required to treat the range of problems of home care patients. If patients use technology for some of their problems, but still access their physicians for others, then the cost benefits and convenience of tele-homecare may be seriously undermined. A major challenge will be to determine the total needs of patients and how they can be efficiently and effectively met. Integration of services will be crucial to minimizing the invasiveness and inefficiency of multiple visiting health professionals. The personal health planner may emerge as the newest health professional for complex care management.

POTENTIAL FEDERAL INITIATIVES

There was strong consensus that the federal government provide continued leadership through consulting, enabling, reforming and investing. Participants stressed the need for immediate action to maintain momentum. Participants expressed their appreciation to the government for sponsoring the workshop and supporting the consultation process. They added, however, that future success will depend on the collective efforts of **all** stakeholders and that each group must actively take responsibility for moving the tele-homecare agenda forward.

In response to Mr. Siman's request for explicit and actionable recommendations to be brought forward, the participants recommended that the federal government:

A National Vision

Assume leadership in developing a national vision of home care of which tele-homecare plays a significant role.

- Create an advisory task force on tele-homecare/telehealth

National Policy and Standards

- Develop policies and mechanisms to support a national home health care system for all Canadians
- Eliminate/offset home care access inequities created by the *Canada Health Act*
- Establish incentives for tele-homecare at the provincial level to ensure that money allocated provincially supports home care
- Develop mechanisms and standards for interprovincial professional remuneration for tele-homecare, including remuneration for tele-consultation
- Develop national standards or cross-border reciprocity agreements for professional credentialling
- Establish national standards and regulations for confidentiality of electronic patient information

- Develop national technology standards and/or guidelines to ensure interoperability.

Funding

- Fund several large-scale, world class trials with clear obligations for evaluation and dissemination of findings
- Fund a National Centre of Excellence on Telehealth aimed at evidence-based results
- Provide funds for networked health initiatives like Schoolnet
- Fund more research and development at the universities

Information and Awareness

- Create a national database and clearinghouse on best practices
- Facilitate and/or establish a national information network
- Establish policy and guidelines for IT (information technology) spending
- Increase awareness at the provincial level about health IT
- Give an organization such as CIHI (Canadian Institute for Health Information) a mandate to develop reporting requirements for home health care data

Industry and Business Development

- Reform policies to enable our health care system and expertise to be exploited positively as an asset
- Market and sell Canadian services and expertise. The Canadian health care system has a very positive international reputation.
- Outsource to Canadian firms as a means of creating a healthy Canadian telehealth industry capable of exporting
- Consult with industry on how to effectively enable business partnerships

Consultation and Collaboration

- Organize the next Infostructure Conference on Tele-homecare as soon as possible to maintain momentum
- Consult with public and private sector researchers and developers to resolve intellectual property issues
- Continue to sponsor conferences for dissemination of information
- Organize a consulting group to examine the systemic requirements for sustaining trials after their completion
- Develop and support continued collaboration among critical government and non-governmental organizations such as Health Canada, Industry Canada, Department of Foreign Affairs and International Trade Affairs, CANARIE
- Maintain a leadership role in federal-provincial consultation and collaboration

Participants encouraged the federal government to take bold steps to counteract prevailing conservatism within the health care field. They echoed Mr. Siman's early advice:

" Think big, start small and deliver quickly"

CLOSING REMARKS

Mr. Siman closed the workshop by thanking participants for their open and frank discussion and by noting again, the eagerness to get moving. He highlighted several themes that had emerged during the day. Tele-homecare is a complex area and must not be looked at in isolation. Many issues need to be addressed and we do not yet have the answers. For example, we must develop means for better understanding client needs and attitudes. Public confidence must be regained. Technology must serve patient needs not vice versa.

It was concluded that:

"Leadership in this field is a team effort."

WORKSHOP PARTICIPANTS

Chairman

Dr. Mamoru (Mo) Watanabe
Professor Emeritus of Medicine
University of Calgary

Break-out Group Chairs

Paul Dick, Hospital for Sick Children (Toronto)
Penny Stratas, Industry Canada
Dr. Watanabe, University of Calgary

Note Takers

Sandra Lowenstein, Office of Health and the Information Highway, Health Canada
Constantine Tikhonov, Office of Health and the Information Highway, Health Canada
Charlotte Ward, Industry Canada

Proceedings Prepared by:

Susan Pisterman, PhD, MBA

Participants

Anne Marie Atkinson, Atlantic Health Corporation
Ed Biden, University of New Brunswick
Ruby Blois, TecKnowledge Health Care Systems Inc.
Michel Bourque, Medimed
Alexa Brewer, Medical Services Branch, Health Canada
Celeste Burnie, CANARIE Inc.
Merv Cavers, Manitoba Innovation Network
Tim Cheung, Ottawa Health Institute
Trevor Cradduck, The Keston Group
Stacey Daub, Community Care Access Centre Toronto
Sharon Dixon, St. Paul’s Hospital
Robert Filler, Hospital for Sick Children (Toronto)
Debra Gillis, Medical Services Branch, Health Canada
Martin Glynn, Peridata
Valerie Hagerman, New Brunswick Community Health Services

Calvin Hawley, Manitoba Health – Home Care
Martin Haynes, Blue Cross
Anne Heiser, VON Canada
Janet Helmer, VON Canada
Rafiq Khan, CANARIE Inc.
Margaret MacAdam, Home Care Development, Health Canada
Glen MacDonald, Canadian Development Corporation
Patrick McGowan, St. Paul's Hospital
Pat McKeever, Faculty of Nursing, University of Toronto
Steve Maislin, Telemedisys
Christine Martin, Elcombe Systems Ltd.
Yvonne Morgan, North-East Health District
Patricia Radin, University of Washington
Marc Raheja, MNI Systems
Suzanne Robichaud, Beausejour Hospital Corporation
Lois Scott, Clinidata
Shirlee Sharkey, St. Elizabeth Health Care
Marc Siauw, NBTel
Andrew Siman, Office of Health and the Information Highway, Health Canada
Dorothy Spence, TecKnowledge Health Care Systems Inc.
David Strong, Medical Services Branch, Health Canada
Liz Tondu, Good Samaritan Society
Jeff Vachon, Cifra Medical Inc.
Margaret Wood, Peridata
Nancy Young, Hospital for Sick Children (Toronto)