- JOHN SCHRAM -

Broadband-based Telehealth Proves its Power

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Talk of the financial strain on our health care system comes so regularly that most Canadians realize our health care system requires change. But obviously we need more than talk if we are to find savings that deliver more care for fewer dollars. An increasingly large part of the health care budget now goes toward home care; in this area, home telehealth is proving its value.

It has the potential to increase the productivity and efficiency of nurses or other homecare professionals by 200 per cent. That number may appear wildly optimistic but early results from a pilot study indicate that these gains can be made without sacrificing either the quality of care being delivered or the working conditions of the caregivers.

We Care, one of Canada's leading national home health care providers, recently concluded a six month home telehealth study with partners March Networks, Aliant Telecom and the Health Telematics Unit at the University of Calgary.

March Networks' solution for home telehealth relies on high-speed broadband IP networks to deliver a high quality, timely and converged voice, video, and data solution to providers and patients.

An ASP delivery model hosted and managed the application as well as provided the broadband network connection. The ASP model and partnership was important to We Care because it allowed us to fund home telehealth services from our operating versus capital budgets. With a web-based application, it also supports our long-term objective of remote information sharing and collaboration among homecare and other providers.

March Networks also provided a wireless, integrated and portable health monitoring kit, which was easy for patients to use without being obtrusive in the home environment. And, March added a unique and innovative patient interface. Patients were able to use their own television sets, which allowed them to adapt to the equipment with minimum challenge.

The program objectives were to evaluate the impact of this technology on the delivery of homecare and to assess the technical capability of the solution. Eighty patients from We Care offices in Halifax and Moncton participated. Half were in a control group receiving in-person homecare visits only, the other half were receiving in-person visits in addition to two remote visits a week.

The evaluation conducted by Dr. Richard Scott from the Health Telematics Unit at the University of Calgary measured the quality of care delivered to the study and control groups. It was looking for evidence of increased access as a result of using home telehealth by both patients and nurses, and for evidence of possible cost savings.

The strongest endorsement of the program came from nurses and patients who indicated that they felt a great deal of confidence using this technology for monitoring and consulting something that is obviously very important for clinicians. Our nurses felt they were able to obtain adequate and accurate clinical information. And they also enjoyed the patient interaction through the technology as much as they might have through an in house visit.

Ninety per cent of the patients involved in the study reported that they were satisfied with the remote monitoring and consultation sessions and were comfortable asking questions to the nurse with whom they dealt throughout the process.

The flavour of the qualitative results was consistently positive but even more promising was the quantitative data that was collected and assessed. Home visits conducted by a nurse traveling to a patient's home took on average 33.5 minutes, accounting for only one-way travel. The total home telehealth consultations took on average just 10.5 minutes to accomplish comparable monitoring and consultations.

Dr. Scott concluded that by using March Network's home telehealth technology with We Care's home consultation expertise, merely eliminating one-way travel time which on average accounted for just 10 minutes, saves 75 days of a nurse's time. Saving 75 days worth of time adds up to a 31 per cent efficiency improvement. These were the results of the very conservative pilot. With more experience, especially in more congested areas where travel time can be much longer than 10 minutes, there is no doubt that these efficiencies can be increased, resulting in greater access to health care.

If We Care nurses can conduct home consultations in 10.5 minutes as opposed to more than 33.5 minutes, it's possible our nurses could accomplish up to three times more patient consultations per day. This is an ambitious number but a more reasonable suggestion would be that a We Care nurse could conduct an average of 18 patient visits per day compared to the nine that are typically done with conventional home care.

Supporting the development of the technology to deliver home telehealth makes total sense. Our life expectancy is longer. People are living at least a decade more then we were in the 1960s.In addition the demographics are changing. We are an aging population and the fastest growing group is above 85 years of age. People 65 and older already make up 12.5 per cent of the population and they consume 45 per cent ($25billion) of our healthcare expenditures.

Even more significant is the evidence that the nursing field is already facing severe shortages and that this will only worsen in

coming years. The forecast indicates that in the next decade Canada faces a shortage of 59,000 to 113,000 nurses.

Home health care will become an increasingly more important component of the required care. If, as a country, we are going to deliver on our commitment to our aging population, we in the health care business must look to technology to help us produce the quantity and quality of care Canadians demand.

We Care recognized the urgency back in November, 2000, when we approached March Networks seeking an innovative home telehealth solution that would help us deliver high quality and effective homecare services. We were looking for a solution that would help us meet our daily business opportunities, enhancing nurse productivity and ensuring high patient satisfaction given our stressed economic environment.

We also wanted a technology partner that was credible, possessed extensive healthcare expertise and shared our vision of the future with respect to integrated and effective homecare management and delivery. The Healthcare Applications Group within March Networks had expertise working with and developing advanced technology solutions for our target population of seniors. They shared our vision of bringing high quality health services to individuals in their own homes and also demonstrated a commitment to helping us achieve these goals.

The pilot project has given us reason to believe there are innovative ways to ensure the equitable delivery of high quality care to Canadians, even as we face the nursing shortages and growing elderly populations. Not only does home telehealth technology offer homecare providers the potential to accommodate the needs of the growing population that requires some form of home care but it assures all Canadians, including those in remote communities, accessibility to qualified nursing professionals.

To proceed, we need additional partners, which is another way of saying we need more money invested in this solution. We require federal, provincial and regional health care officials to partner with us in additional pilots across the country.

For our part, We Care is committed to leveraging technology for patient benefits. As more projects of this nature are piloted in Canada and positive outcomes from both a cost and quality perspective are realized, we are confident that home telehealth and telehealth services in general will be integrated as an everyday tool, to better manage and deliver health care to all Canadians.