

Template #1: Strengths and Challenges within the Current System in Addressing Population Needs

PAG Name Geriatrics - Video conferencing	PAG Facilitator Dr. D. Cowan
Strengths	Challenges
<p>Can be used across multiple sites and for a variety of purposes; educational and clinical. Increased access to specialized geriatric services Cuts out need for transportation in some instances. Links well with screening and assessment by outreach teams to assess risk. People who cannot travel may be able to access a video conferencing site and with a nurse get access to a geriatrician via video link</p>	

Template #2: Factors Most Likely to Increase or Decrease the Future Demand for Health Care:

Videoconferencing	
<p>As of 2006, the HNHB LHIN was home to over 200,000 seniors aged 65 years and older; the largest number of seniors of all LHINs. In 2006, seniors 65 years of age and older represented 15.8% of the total HNHB LHIN population, compared to 13.6% for all of Ontario.</p> <ul style="list-style-type: none"> • Twenty-nine percent (29%) of seniors aged 65+ live alone in HNHB communities, higher than the provincial average of 27%. Within HNHB the highest proportions of seniors living alone are found in St. Catharines (33%) and Brantford (33%) and the lowest proportion in Wainfleet (19%). • Seniors living alone may be at greater risk of social isolation. The lack of social support among the elderly contributes to poor health status and the need for formal and institutional care. <p>Approximately 27.7% of seniors in the HNHB LHIN live alone (See Table 2). Seniors living alone may be at greater risk of social isolation. The lack of social support among the elderly contributes to poor health status and the need for formal and institutional care. ⁱ A recent Statistics Canada studyⁱⁱ demonstrated that the vast majority of seniors remain in the community as their health care needs increase. Between 1981-2001 the proportion of Canadians aged 65+ living in health care institutions remained at about 7%; in 2001, approximately one-third of Canadians age 85+ lived in an institutional care setting. Among seniors living in the broader community, the Ministry of Health and Long-Term Care estimates that relatives, friends and volunteers provide about 80% of support to seniors with needs.</p> <p>The majority of seniors that live in the HNHB LHIN live within Hamilton and Niagara (See Figure 1). In terms of absolute numbers, Hamilton and Niagara are each home to over 74,000 seniors 65 years of age and older, and together represent 72% of the total HNHB LHIN population over 65 years of age.</p> <p>Population aging presents significant challenges to the health care system in Ontario. Not the least of these is the fact that 82% of seniors have one or more chronic health condition and 43% have three or more chronic conditions. This latter group is at risk of becoming frail. Frailty, characterized by complex bio-psycho-social and functional problems, is associated with increased health system usage and puts seniors at risk of loss of the capacity for independent living and lowered quality of life (Wolff et al, 2002). Within the aging demographic, frailty may be the fastest growing issue across the province and particularly in northern regions and outside high-density urban areas (Manuel & Schultz, 2001).</p>	<p>Significant impact on future demand for health care</p>

<p>Videoconferencing</p>	
<p>The ageing of the Baby Boomers will be the main driver of the increased number of people who are 65 years and over. These numbers will increase by 50% over the next 10-15 years. Improved life expectancy will also see the numbers of people aged 80 years and over double during the next two decades. As we live longer we are likely to see an increasing proportion of people with age related medical disorders such as neurodegenerative disorders, depression and mental health problems (Hopkins & Hopkins, 2005).</p> <p>A key contributor to the increase in severe disability experienced by those over 80 is growth of neurological conditions, which result in disorders of memory, cognition, behaviour, motor and sensory functioning, mobility and balance. These neurodegenerative diseases are often slowly progressive and they have not, so far, been amenable to prevention or delayed onset, as have other disorders such as heart attacks and stroke. While there is no strong evidence that the incidence of these diseases is changing, their prevalence is rising rapidly as more people are living longer. We can expect the systemic disorders to be overtaken by neurodegenerative diseases as the major cause of death in older people during the coming decades and also the major cause of severe disability.</p> <p>People will come out of hospital with the capacity to get better and it will be important that the health system has a strong focus on <i>restorative and preventative measures</i>. The demand for rehabilitation and other services following these acute events will certainly increase. In response to these trends we may benefit from a hospital sector that plays a greater role in preventing acute admissions to hospitals and delivers more services in the community.</p>	<p>Significant impact on future demand for health care</p>
<p><i>The Dementia Epidemic:</i></p> <p>In Ontario, dementia is the leading cause of disability for those over 60 years of age causing more years lived with disability than stroke, cardiovascular disease and all forms of cancer (Alzheimer Society of Ontario, 2007). It is expected that by 2010, 175,000 Ontarians will be living with dementia; this will increase by almost 127% by 2020 (Hopkins & Hopkins, 2005). Table 1 presents the estimated incidence of dementia in the HNHB LHIN for 2006.</p> <p>Ageing demographics will have a significant <i>impact on human resource planning</i> and development in all professions working in many health care contexts across the circle of care (McKnight et al. 2003). Providing care to this expanding population of frail seniors requires both an increase in the numbers of care providers, capacity building across various health care sectors, and restructuring of how and where we deliver care. Our skill sets require expertise in three broad competencies - geriatrics, inter-professional practice and inter-organizational collaboration.</p>	<p>Significant impact on future demand for health care</p>

Videoconferencing

Table 1: Estimated Incidence of Dementia in the HNHB LHIN, by County and Age Group, 2006.

Geography	Age Group						Total (60+)
	60-64	65-69	70-74	75-79	80-84	85+	
Brant	31	50	93	173	291	533	1,171
Burlington	45	73	134	238	391	667	1,548
Haldimand-Norfolk	31	48	86	148	242	438	994
Hamilton	125	207	386	742	1,242	1,968	4,670
Niagara	121	204	378	704	1,201	1,997	4,605
HNHB LHIN	353	583	1,077	2,005	3,367	5,603	12,988
Ontario	2,984	4,872	8,578	15,146	24,486	42,003	98,069

Source: Statistics Canada, 2006 Census; Dementia Age Relative risk: 60 1%; 65 2%; 70 4%; 75 8%; 80 16%; 85+ 32%. Source:

Competence in geriatrics is required because the clinical presentations of frail seniors are unique and include the ‘geriatric giants’ of dementia, delirium, falls, continence and poly-pharmacy. These often co-exist in complex ways. Competence in inter-professional practice is required because the complexities of these clinical presentations are such that optimal care requires an interdisciplinary team. Inter-professional teamwork, as outlined in the recently published Health Force Ontario, Inter-professional Care: Blueprint for Action (Oandasan & Closson, 2007), is the care delivery method of choice in caring for frail seniors (Geriatrics Interdisciplinary Advisory Group, 2006). Finally, competence in inter-organizational collaboration is required because the management of frail seniors requires the sharing of care across many organizational boundaries from primary and community based care to emergency and hospital-based services.

Significant impact on future demand for health care

Advancement in technology and how we communicate with each other

Based on this aging population and HR challenges we need to develop e – health strategies such as video conferencing, maximize electronic record sharing such as clinical connect, standardize all documentation processes to facilitate data collection, evaluation and reduce redundant assessment practices that are a further burden on staff and patients and families. Common forms and tools will create more effective practice and help different teams start communicating AS ONE. Common documentation will facilitate rapid and improved transfer of information. Capacity building will be much easier and bench marking will be attainable.

Significant impact on future demand for health care

<p>Videoconferencing</p>	
<p>Patients/clients need to assume more responsibility for their care. Work has been done using patient passports and best practice needs to be implemented using principles from the chronic disease model, e.g., flag prevention measures, telephone follow up to reinforce messages etc.</p> <p>Video conferencing is now being tested by geriatricians and office space has been secured. Geriatricians will be among a very small group in the province of Ontario to actually use video conferencing for clinical purposes. We are just beginning to understand the full ramifications of this technology.</p>	<p>Significant impact on future demand for health care</p>
<p>How services are offered</p> <p>As frail seniors decondition rapidly in hospitals e.g., losing muscle mass, delirium, infections etc., it is imperative that services are designed that prevent admission and re-admission and help people live longer in their homes with a good quality of life. The specialty of geriatrics can not tackle this problem single handedly. Using a collaborative model, we propose developing a shared care model with family health teams and community health centres. Building expertise in geriatrics across the continuum with targeted specialist support will help multi-disciplinary groups identify seniors at risk. We need to equip primary care settings to be responsive to seniors at risk so they can provide time sensitive support to hospital discharges or seniors presenting in emergency who can return home with expedited clinical support. Having a flexible team that can provide outpatient and at home outreach services is critical. Many seniors in our LHIN live in isolated situations and are at risk.</p>	<p>Significant impact on future demand for health care</p>
<p>Best practice</p> <p>We know that targeted care to frail seniors makes a difference in health outcomes. Evidence indicates that interdisciplinary teams on an inpatient and outpatient basis is important. Comprehensive Geriatric Assessment targeted at frail seniors responds to immediate issues and prevents other medical conditions from worsening. Home visits will improve overall functioning and help seniors live more independently. Teaching seniors more about their health and how to manage their care more proactively is an integral part of the care process. Already, we have positive results in the Transitional Care program through Dr. G. Heckman that shows teaching frail seniors is effective and helps them stay out of hospital. Using communication strategies like providing patients a copy of their treatment plan, having them bring their patient passport to all health care appointments is an important health information tool. This will introduce evidence based practice for meeting the needs of aging population</p>	<p>Significant impact on future demand for health care</p>

Videoconferencing

What factors are expected to influence the demand for health care beyond 2013?

Practice of geriatric care is clustered in urban centres, primarily Hamilton

Rapidly growing older adult population with shortage of geriatric specialty trained health care professionals across all sectors of health care including primary care and community.

Movement of older adults to retirement communities, often smaller towns with poorly established geriatric health services and limited family and transportation

Finite number of Long Term Care beds

Template #3: Components of an Ideal Service Delivery Model

PAG Name		PAG facilitator: Dr. D. Cowan	
Videoconferencing Geriatric Consultation and Out-reach Service			
Component of service delivery model	Services associated with this component of the model	Clinical and non-clinical interdependencies (e.g., DI, lab, other programs/services, other PAGs)	Linkages to community services
Health Promotion/Disease Prevention	<p>Health promotion and disease prevention is an integral part of comprehensive geriatric consultation. We focus upon the person as a whole routinely assessing and screening or many preventable diseases/problems such as cognitive impairment, depression, polypharmacy/inappropriate prescribing, osteoporosis, falls and fragility fractures, deconditioning, and malnutrition, amongst others. These disease prevention interventions can now be provided to clients in outlying areas who would not receive such services. There is also an important “learning by seeing” function whereby general practitioners/allied healthcare workers adopt these practices and apply them to others in their practice.</p> <p>Videoconferencing can also serve as an important direct educational tool for rural health care teams which can take of case conferences surrounding their individual patients, or educational sessions with health care teams.</p>		<p>The major partner in this initiative is the Ontario Telemedicine Network whose mandate is to provide equitable and timely access to health care services, and medical education, to those in outlying areas using videoconferencing technology. Underutilized videoconferencing technology is already available to all hospitals in Ontario, as well as Family Health Teams. The Ontario telemedicine network has a goal to increase direct patient services using videoconferencing by 30% annually and is committed to partnering with geriatricians in LHIN's 4.</p> <p>Our service will be closely aligned with other community partners such as the Alzheimer's Society and the Community Care Access Centers. This will provide local support to the frail elderly as well as a means to follow up with specific recommendations and care plans for each patient.</p>

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			Other linkages would include Meals on Wheels, Lifeline, DVA, There is excellent evidence suggesting that community education and support prevents/delays institutionalization.
Primary Care	This is likely the most important aspect of telemedicine consultations services. While we are a consultation model, it is also blended with primary care in so far as a consultation process directly involves the primary care team as they will be with the patient during the clinical encounter. This serves the referring team will benefit from direct communication with the geriatrician, moreover, the patient can receive specialized services within their primary care setting which is a much more patient centered approach (i.e. preventing travel over long distances and allowing them to the setting and a setting which is more familiar and comfortable.) . This model also provides a more equitable distribution of services to rural communities, as well as increasing efficiencies in so far as physicians do not have to travel long distances to see patients. Wasted travel time can be directed toward seeing multiple patients in multiple communities on the same day.		As above.

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Pre-hospital Care	Comprehensive geriatric consultation has been shown to reduce hospitalizations. These benefits could now be extended to clients in rural areas who otherwise would not receive such services..		Linkages will be made with services that can help to prevent hospitalization such as respite care (benefiting overburdened caregivers), day programs, CCAC (providing nurse monitoring, OT,P) and the Alzheimer's Society.
Acute Hospital Care	Although it would be difficult to see patients directly in acute care hospitals, each hospital in Ontario is equipped with telemedicine services. Thus, geriatricians could act as an invaluable resource by case conferencing specific clients with the health care team in an effort to assist with the management of complex problems to help assure discharge into the community where ever possible. Education		
Non-acute Hospital Care	A backlog of ALC patients is one of the greatest challenges facing acute care hospitals. As in the case with Acute care Hospital, individual clients could be case conferenced to ensure care is optimized thereby increasing the probability patients can be discharged to the community. For patients who cannot reliably be discharged, this often neglected group with multiple co-morbidities will receive care that otherwise would not have.		

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Post-Hospital Care	Early follow-up following discharge has been shown to reduce hospitalizations in the elderly. It would not be practical to have these patients assessed by geriatricians were not in the immediate geographic area. Telemedicine services would provide a means for geriatric input following hospitalization in a timely manner to hopefully maintain patients in the community and prevent re-admission.		
Community-based Acute Care			
Community-based Non-Acute Care			

Diagram of Ideal Service Delivery Model:

+++++ Please refer to overall Specialized Geriatric Services Model diagram

Template #4. Assess and Describe the PAG service delivery model using the HNHB LHIN Criteria

PAG Name: Videoconferencing		PAG facilitator – Dr. D. Cowan
Domain	Criteria	Assessment Description
Strategic Fit	Alignment with LHIN priorities for health improvement	Geriatric consultation and outreach service via video teleconferencing supports many LHIN priorities including focusing on geriatric services, mental health and e-health. Successful geriatric interventions can reduce hospitalizations, reduce lengths of stay (for example HELP programmes),
	Alignment with trends in health care needs and system transformation	This intervention helps to address the impending crisis in health care involving the aging population. It is also an innovative model utilizing videoconferencing technology to provide these services in an efficient and equitable manner to patients and healthcare providers alike.
Population Health	Health status (clinical outcomes & QOL)	A videoconferencing model of geriatric consultation will provide a proven means of intervention to elderly populations who would not otherwise enjoy the benefits of these services. Outcomes that geriatric consultation have been shown to achieve include reduced hospitalizations, delay to institutionalization with compression of morbidity, prevention of outcomes such as falls, and reduced caregiver burden.
	Prevalence	Prevent measures employed in geriatric consultation have been shown to prevent many negative outcomes including falls, fractures, frailty and institutionalization, thus reducing the prevalence of these conditions in the community. Videoconferencing also provides an effective and efficient means of spreading best practices to primary care physicians and allied healthcare professionals.
	Health promotion & disease prevention	As above
System Values	Client-focus	Videoconferencing consultation services are extremely client focused in so far as they allow the individual to be seen closer to their home in a more familiar setting. Client satisfaction data collected by the Ontario Telemedicine Network indicates that individuals would rather receive teleconference services as opposed to traveling longer distances to meet with a specialist if they are given the choice.

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PAG Name: Videoconferencing		PAG facilitator – Dr. D. Cowan
Domain	Criteria	Assessment Description
	Partnerships	The application videoconferencing Geriatric Consultation takes advantage of a multimillion dollar infrastructure that is already in place via OTN. Thus there would be little additional cost to take advantage of this valuable resource. Moreover, OTN is a dedicated partner searching to promote clinical opportunities with an intention of delivering an additional 30% per year of direct patient services. Geriatricians already have close partnerships with existing services such as the Alzheimer Society.
	Community Engagement	Seek local sites to host technology
	Innovation	This is an innovative approach in so far as videoconferencing consultation is in its infancy and underutilized in this geographic area. There is only one other person in Ontario providing geriatric consultation by this means. There is tremendous potential for growth.
	Equity	The shortage of geriatricians in Ontario is a problem that is not going to be solved quickly. (There are only 45 geriatricians in all of Ontario compared to much larger specialty groups such as cardiology. In fact, demographic data suggests that the number of geriatricians may even decline given that new graduates are fewer than those nearing retirement. It is self evident that videoconferencing will greatly improve equity of access to the scarce resource, particulate particularly for patients in rural and urban under serviced areas.
	Efficiency (operational)	This PAG model is extremely efficient insofar as it utilizes existing resources that are being some optimally employed such as the OTN network and other community service providers such as the Alzheimer's Society, CCAC etc
System Performance	Access	Not only will this provide timely access and a more efficient use of geriatrician time by eliminating the need for travel, this will provide access to geriatric services for clients who would have had none at all.
	Quality	

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Domain	Criteria	Assessment Description
	Sustainability	This is a highly sustainable intervention. The MOHLTC and OTN both have a substantial commitment to providing videoconferencing consultation services. The infrastructure is in place already. The model is simple, and could be implemented within a matter of two or three months at any given site. We are presently piloting the feasibility at one community site already.
	Integration	Videoconferencing technology can be used to deliver geriatric services both in terms of education and patient care in primary care settings, acute care hospitals. The infrastructure is now available in all hospitals in Ontario and 70 Family Health Teams with the goal being to grow further In the primary care setting.

Template #5: Description of Pre-requisites, Enablers and Challenges to Implementation:

Category	Pre-requisites	Enablers	Challenges
Policy/legislation	Funding for geriatricians	Funding for geriatricians	
Resources (e.g., human, fiscal, capital, etc.)		Equipment	
Community readiness		Host sites	
Services			
Partnerships/linkages		Host sites	