

Central Hastings Family Health Team

Business and Operational Plan

Submitted to the
Ministry of Health and Long-Term Care

By

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Part A: Executive Summary

During 2005 and 2006, the Minister of Health & Long-Term Care, George Smitherman, announced three waves of opportunities to form 150 Family Health Teams across the province. The Central Hastings Family Health Team (CHFHT) is one of the Wave 3 teams. This document includes the CHFHT's **business plan** and **operational plan**.

The CHFHT is centred in two clinics, one in Marmora and one in Madoc. It has two family physicians who are based in the Madoc clinic. There are no physicians based in the Marmora clinic, which is staffed by two nurse practitioners. The aforementioned practitioners in both clinics are supported by additional health professionals and support staff. There is an acute shortage of family physicians in the area, and this limits the ability of the existing health practitioners to provide easy access to primary care services for the population in the CHFHT's catchment area. It also makes it extremely difficult and sometimes impossible to organize collaborative services with other health service providers in the general area. As a result, the population of the catchment area is both underserved and presents serious challenges to bringing them up to an acceptable health status through an accessible and appropriate range of health services.

Given sufficient resources, the CHFHT is committed to, and will deliver: patient-centred care delivered through a "circle of care" resourced by health professionals and support staff operating as an interdisciplinary team; to focus on health promotion, disease prevention, and the effective management of chronic disease conditions; to optimize the use of the services offered by other health care providers in the general area and to ensure that patient care is appropriately managed and monitored; to ensure that patient access and referral is as seamless as possible; and to create a teaching and learning environment for patients and health care providers.

The Vision of the Central Hastings Family Health Team is to enable its patients in its catchment area to enjoy healthier, happier, and longer lives.

The Mission of the Central Hastings Family Health Team is:

- to have open and secure access to primary health care services, including chronic disease management
- to use a multidisciplinary team approach to deliver patient-centred comprehensive care
- to foster wellness, disease prevention, health promotion and education
- to be a community-based collaborative team approach to the delivery of services.

The CHFHT currently has approximately 7,000 patients, of which some 4,500 are regular patients and the balance includes summer visitors and high school students. It is planned to double this number of patients during the next five years. Its catchment area includes the townships of Marmora and Lake, Centre Hastings, Madoc, and Tudor & Cashel. Its patients will include permanent residents of these rural communities, the approximately 1,000 students in the regional high school located in Madoc, and some 2,000 summer visitors. However, rostered patients will likely peak at about 9,500 (4 physicians

averaging 2,000 patients each, and 3 nurse practitioners averaging 500 patients each with medical support from the physicians.) unless additional physicians can be attracted to the communities.

In addition to comprehensive primary care services, the CHFHT will emphasize the provision of adequate mental health services for the elderly and youth, and the management of chronic diseases. This will start with a diabetes management program and other programs will be added at the appropriate time, as resources allow and experience is gained through the diabetes program. Other conditions will include such disorders as: cardiovascular illness, lung disease, including asthma, and COPD, including smoking cessation). The CHFHT will develop or adopt existing patient education programs, especially those aimed at health promotion, disease prevention and the management of chronic conditions. They will provide a formal teen clinic that deals with adolescent issues, such as contraception, depressions, drug and alcohol abuse, inter-personal relationship issues, and anger management.

The existing core group of health care providers will integrate into an inter-disciplinary team that, with the addition of a sufficient other health professionals and support staff, will be able to:

- plan, organize and deliver services throughout their catchment area
- co-ordinate their services with those available from other health service providers in the general area, thereby increasing and enhancing those services
- significantly improve access to services for patients that currently have to make use of hospital emergency/urgent care facilities located many kilometers away from where they live, and who have difficulty accessing other services
- bring services to the patients, when appropriate.

They will operate in a learning environment, will be results-oriented and will practice evidence-based medicine. They will make use of appropriate information technology to support the inter-disciplinary team's activities and to ensure that patient care is appropriately delivered and monitored.

The existing clinic facilities will be enhanced to provide an effective and attractive working environment. This, together with the provision of resources to hire the requested additional health professionals, is expected to attract additional physicians to practice within the CHFHT team.

A first 15-month budget of \$xxx is being requested, consisting of \$ (or xxx%) for salaries and benefits for xxx FTEs, and \$xxx (or xxx%) for overhead costs. The budget assumes that the Ministry will provide approvals in late December 2006/early January 2007. The 2006-2007 component of this budget is \$xxx.

In addition, CHFHT is requesting \$xxx in one-time, start-up costs.

A separate submission will be made shortly with respect to the physical facilities.

Part B: The FHT Business Plan

1.0 Governance and accountability structure

1.1 Type of governance structure/body (community, provider, mixed) and composition

Background

At present, there are two medical clinics providing primary care in the villages of Marmora and Madoc. Marmora Medical Centre (MMC) is operated under the administration of the Municipality of Marmora & Lake who also own the MMC facility. The Centre Hastings Medical Centre (CHMC) is currently a private physician practice with a supporting organization in Centre Hastings Medical Centre Inc., which was originally founded in 1972. That non-profit corporation also owns the CHMC facility and provides considerable financial support to the clinic. A third organization, the Central Hastings Sustainable Communities Association, has representatives from the Townships of Marmora and Lake, Centre Hastings, Madoc, and Tudor & Cashel. This organization is active in physician recruitment, the administration of two Nurse Practitioner programs and the pursuit of improved primary care and alternative primary health care models for the four municipalities. The proposed governance for the Central Hastings Family Health Team (CHFHT) will combine representatives from each of the four Municipalities with Physicians, allied health providers from each site, and a representative of a community health agency.

Accountability

Accountability is a critical element in the governance and day-to-day management of successful organizations. Without it there is no opportunity to ensure that an organization's short and long-term plans are being met. It is even more critical in matrix management¹ organizations, such as family health teams.

The Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative recognized the place of accountability as evidenced by the following principle in the Steering Committee's September 22, 2005 report outlining *The Principles and Framework for Interdisciplinary Collaboration in Primary Health Care*:

¹ Matrix management organizations do not have the direct (vertical) reporting relationships that exist in traditional organization structures. In the case of FHTs, all of the health professionals are expected to work as an interdisciplinary team, with the patient as the focus of their activities. FHT patients are rostered to a physician who has overall responsibility for their care, and who is not employed by the FHT. The other health professionals are employees of the FHT. However, the FHT's management plays an oversight role with its employees, relying on the health professionals to work together to determine, and then provide, the services required by each patient.

“Best Possible Care and Services

Health professionals from all disciplines involved in primary health care aspire to deliver the best care and services possible. Health professionals use the results of research as a basis for setting quality standards and making decisions about the treatment and management of health problems. Services are continuously evaluated to measure health outcomes, ensure accountability, track performance and assure quality. This focus on quality, along with consistent evaluation, is a key principle for interdisciplinary teams because it inspires a high standard of care and service delivery, and a commitment to continuous improvement.”

The governance structure for the CHFHT will reflect this emphasis on accountability. It will consist of a mixed health care provider/community board of directors, a community advisory committee, a lead physician and a FHT administrator. Collectively, they will ensure that the CHFHT remains focused on delivering high quality care to its patients.

Corporate Structure

The CHFHT will operate out of the health clinics in Madoc and Marmora, each of which has an existing corporate structure.

The CHFHT will be incorporated separately as a not-for-profit corporation.

Board of Directors

The board of directors will have between 9 and 15 members.

The following memberships are planned for the initial board at this time:

- 5 providers who are employees of, or associated with, the clinic (1 physician, 1 nurse practitioner, 3 others)
- 8 community representatives appointed by the municipal councils (2 from each of the 4 municipalities in the catchment area, of whom one would be an elected official and one would be appointed)
- 1 representing a community health agency with which the CHFHT has a service and/or planning relationship (the CCAC has indicated a willingness to have a representative on the CHFHT board)
- in addition, the FHT administrator would be an ex officio, non-voting, member of the board.

The board officers² will be a president, a vice-president, a board secretary and a treasurer. There will be a board finance committee, a program committee, and a committee that deals with matters that relate to the recruitment of physicians and FHT staff.

² Corporate legislation requires a president and a secretary.

The board officer roles are as follows:

- The board president will chair meetings of the board
- The vice-president will assume the president's responsibilities when the president is unable or unavailable to act, and will be the designated successor to the president
- The board secretary will be responsible for arranging board meetings, ensuring that minutes of meetings are taken, and that the by-laws and various statutory responsibilities placed on the corporation are complied with
- The treasurer will chair the board's finance committee, and the finance committee will be responsible for overseeing the CHFHT's finances and reporting thereon to the board at each of its regular meetings.

It is anticipated that, initially, the board and/or its committees will meet at least monthly, and more frequently if necessary. Board members will not be paid. However, there will be expenses related to their meetings for, evening meals, etc.

Community Advisory Committee

In order to ensure full accountability and to obtain valuable input from stakeholders representing patients and other health care agencies, an unpaid community advisory committee will also be established. Because it will be created through the FHT corporation's by-laws, the advisory committee will be a visible and important component of the FHT accountability process. Its membership will include at least one board member.

The advisory committee will meet quarterly.

The role of the advisory committee will be fixed once the first board has been appointed and could include the provision of advice on many matters, such as:

- Ongoing liaison with the lead physician and the FHT administrator to provide advice on matters that have been referred to the advisory committee, as well as matters affecting the operation of the FHT that are felt to be of significance by advisory committee members
- Feedback on patient satisfaction with the performance of FHT, e.g. other desired programs/services, what could be enhanced, what problems are perceived, how might things be done better or differently
- Feedback on patient/provider accountability
- Patient rights advisory role
- Public consultation
- Identification and discussion of unmet or partially met community needs
- Discussion of enhanced performance activities designed to improve the delivery and the outcomes of health services, e.g. reducing readmissions through proactive follow-up of patients discharged from hospital.

The advisory committee's membership will change from time to time. It will receive administrative support from the CHFHT.

Its membership will also be determined once the first board is appointed but may include representatives of some of the following:

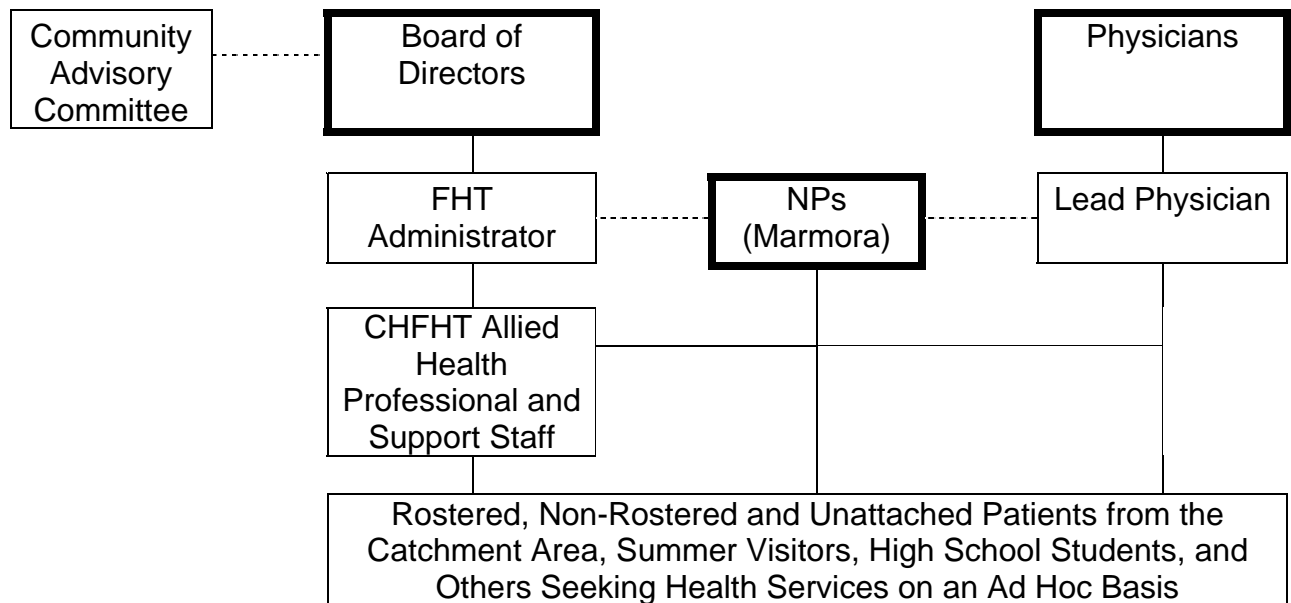
- 8 patients (2 community members from each of the 4 townships)
- An as yet to be determined number of representatives from other community health and social service agencies and providers, from all four municipalities in the CHFHT’s catchment area.

The CHFHT board will determine the size of the committee and the selection/appointment process. Some of the initial advisory committee members could be selected from applicants identified through advertising while others could be appointed.

Overview of **Governance** Organization Chart

By starting off with two physicians, the physicians associated with the CHFHT will be salaried and will receive their MOHLTC funding through the FHT. However, they will be independent contractors. As soon as there are three or more physicians associated with the FHT, the physicians can form a “billing group” that receives funding directly from the MOHLTC.

The 2 nurse practitioners in Marmora are currently funded under the Ministry’s Nurse Practitioner Demonstration Project. This funding pays for the nurse practitioners, support staff, and other overhead costs.



- Indicates primary responsibility for governance
- Represents a relationship that may or may not deal with governance matters
- Illustrates day-to-day working relationships

Planning Group

In order that planning could proceed as quickly as possible, a planning group was established to provide input to the development of the CHFHT. All those working at the two clinics were active participants in the planning group and in a larger forum. This included the nurses, the office managers and the receptionists.

A steering group was formed from among the health care providers at the Madoc and Marmora clinics and municipal representatives.

The steering group members are (listed alphabetically):

- Judy Backus, CHSCA³
- Susan Blakely, Nurse Practitioner - Madoc
- Eric Brick, CHSCA
- Terry Clemens, Reeve, Municipality of Marmora and Lake
- Wanda Donaldson, Reeve, Township of Tudor and Cashel
- Linda Merkley, CHSCA and Administrator, Caressant Care, Marmora
- Frank Mills, CHSCA and Clerk of the Council, Municipality of Marmora and Lake
- Nancy Moore, Nurse Practitioner - Marmora
- Sharon Ross, Nurse Practitioner - Marmora
- Dave Schulz, Counsellor, Municipality of Centre Hastings and Chair of the Centre Hastings Medical Centre Board
- Michael Sniderhan, Deputy Reeve, Township of Madoc
- Dr. Janet Webb, family physician
- Dr. Janet Yorston, family physician (Lead Physician)

- Judy Durbatch, recording secretary.

The steering group meetings were also attended by Bruce Heslip and Stephen Dreezer of Andrew Silman & Associates, the consulting firm that was retained to assist in the development of implementable business and operational plans that balanced the needs of the community with the available MOHLTC funding.

1.2 Legal arrangement (not-for-profit, partnership, etc.) and current status

The CHFHT will be a not-for-profit corporation. It has not yet been incorporated and the start-up budget includes funding for the incorporation process:

- government and related fees
- advice

³ the Central Hastings Sustainable Communities Association

- regarding incorporation
- to draft and execute various agreements
- to draft by-laws
- etc.

1.3 Family Health Team name and contact information

Name: Central Hastings Family Health Team

Contact Information: Dr. Janet Yorston
Lead Physician
PO Box 740
151 St. Lawrence St. East
Madoc ON K0K 2K0
Phone Number: (613) 473-4134
E-Mail: jeyorston9@cs.com

1.4 Name of entity or sponsoring organization that will receive and be accountable for funding

Central Hastings Family Health Team

1.5 Authorized signing officer

To be determined.

1.6 Bank account details for funds: name of bank, bank account number, branch address, account holder name

To be determined.

2.0 Vision, mission and strategic objectives

Vision, Mission, Values and Objectives

The Vision of the Central Hastings Family Health Team is to enable its patients in its catchment area to enjoy healthier, happier, and longer lives.

The Mission of the Central Hastings Family Health Team is:

- to have open and secure access to primary health care services, including chronic disease management
- to use a multidisciplinary team approach to deliver patient-centred comprehensive care
- to foster wellness, disease prevention, health promotion and education
- to be a community-based collaborative team approach to the delivery of services.

The Central Hastings Family Health Team has adopted the following Values:

- Sharing the responsibility for health care by everyone
- Mutual respect for each other and the contribution all can provide
- Striving to continually improve the quality of care
- Accountable for all our resources and efforts
- Integrity in all our dealings with others
- Respect for every ones dignity.

The Central Hastings Family Health Team's Objectives are:

- Recruitment of 2 additional physicians
- To expand capacity to serve up to 14,000 patients in this rural underserved area (approximately 9,500 rostered and 4,500 others, e.g. high school students, summer visitors and others requiring ad hoc care)
- To expand access to primary care for those who currently do not have primary health care providers and have to travel significant distances to access hospital emergency rooms/urgent care centres for their primary care needs
- To identify populations for preventive screening, testing, etc. and to follow them to establish outcome success rates
- To reduce hospital emergency/urgent care visits by CHFHTs catchment area population
- To increase available access for rostered patients through a combination of Madoc and Marmora clinic hours, and physician and nurse practitioner on-call coverage and telephone support - including THAS
- To improve access to teen services for people who have trouble accessing services because of travel difficulties and for teens who have many different reasons for not accessing care
- To reduce morbidity for specific chronic care problems (initially diabetes)
- As well as to provide primary physician care, as defined by the basket of services for primary care provision determined by the Provincial Co-ordinating Committee on Community and Academic Health Science Centre Relations (PCCCAR).

Short and medium-term actions

To support expansion of these objectives the CHFHT proposes to do the following:

- Actively recruit additional health professionals to provide a comprehensive range of primary care services required to:
 - meet the needs of its patients
 - attract additional physicians
- Renovate/expand/replace existing clinic space as necessary to ensure that there is the physical capacity and quality of space to accommodate the additional health care providers and patient volumes
- Enter into appropriate collaborative relationships with health care service providers in the region, and to make any necessary investment in additional human and other

resources, in order to bring health services into the community that otherwise would not exist or would have very limited availability

- Open a half-day per week clinic in Gilmour, that will initially be staffed by the nurse practitioner based in Madoc.

Future Plans

Future plans see the continued growth in the range and number of primary care services and providers available to the CHFHT's patients.

Over the long term, the CHFHT sees a significant proportion of its services being brought to patients where transportation is a barrier to receiving health services. This will be accomplished in part through CHFHT staff visiting patients.

Overall Strategy

The CHFHT's strategy is based on planning to meet, and then meeting, foreseeable demands. CHFHT will build on its initial range of programs and its plans will be fine-tuned and submitted to the Ministry of Health & Long-Term Care (MOHLTC) in greater detail within 12 months after CHFHT has become operational. It should be noted that this Business and Operational Plan has received full support from all community participants and will form the basis of the first year's operation.

As CHFHT plans for the future it will focus on the diverse population that it serves and ensure that the population is getting the proper primary care treatment for their demographics. Through communication with other health care providers, careful monitoring, and input from its advisory committee, CHFHT management will be able to establish where there are continuing gaps in the services available to its patients, as well as within the community as a whole. Plans to deal with issues will be developed as part of the annual business plan update and the annual operational plan.

The CHFHT will be using a patient-centred model, which is dependant on a robust Electronic Medical Record (EMR) that contains all the necessary information required for a health care professional to properly treat the patient.

In the patient-centred model, the patient is at the centre of all services and is monitored by a physician and the appropriate other health professionals along every step of his/her treatment. There is a common link to the appropriate components of the health record that could be accessed not only by FHT personnel but also by the hospital, the community care access centre, and other professionals including specialists that may become involved in the care of the patient.

Using this model also provides significant advantages in disease management as the sharing of the electronic health record allows for better control of the patient's physical condition and more complete information on changes to the population's health. It allows

identification of patients who need specific screening procedures, identifies services required and received by chronically ill patients, etc.

Within this approach, and inherent in the process, is the complete collaboration of the individuals involved in the circle of care for the patient. Since each member of the circle of care, including the local health facilities, will be linked by a very strong health record and guided by their own professional organizations' guidelines, the patients receive the best possible care.

3.0 The population that the FHT will be serving and its characteristics (population size, geographic boundaries, demographics, health conditions, etc.)

Population

The official catchment area for the Central Hastings Family Health Team consists of the municipalities of Centre Hastings, Madoc, Marmora & Lake, and Tudor & Cashel. The current combined population is estimated to be close to 12,000. However, there are an additional 2,000 seasonal population and 1,000 students at the regional high school in Madoc.

The clinics in Madoc and Marmora are at the centre of the area served, and the regions hospitals in Bancroft, Belleville, Campbellford and Peterborough are all 45 to 55kms away. In addition to serving the population of the four municipalities, the CHFHT sees a sizeable number of patients from surrounding areas. Many of the clinics' patients have moved out of area but still look to the clinics for care due to a shortage of services elsewhere.

The area's economy includes a significant presence of farming and logging, with many people living some distance from the two health centres. The lack of transportation and the inability to pay for transportation is a significant detriment to the population receiving both primary and tertiary health care.

The following is a schematic map of the four municipalities and the surrounding municipalities:

**Central Hastings Family Health Team
Communities included in the 2001 Census**

	Faraday (2001 popn: 1,581)	Bancroft (2001 popn: 4,089)	Carlow- Mayo (2001 popn: 833)	Addington Highlands (2001 popn: 2,402)
North Kawartha (2001 popn: 2,144)	Wollaston (2001 popn: 679)	Limerick (2001 popn: 362)	Tudor & Cashel (Cashel) (2001 popn: 665)	
Havelock- Belmont- Methuen (2001 popn: 4,479)	Marmora (2001 popn: 3,985)	Tudor & Cashel (Tudor)	Tweed (2001 popn: 5,612)	
		Madoc (2001 popn: 2,044)		
Campbellford-Seymour, Percy, Hastings (2001 popn: 12,568)	Stirling- Rawdon (2001 popn: 4,887)	Centre Hastings (2001 popn: 4,226)		

The following table provides a consolidated view of the four municipalities based on the 2001 Census data:

Characteristics	Centre Hastings FHT Catchment Area	Ontario
Population in 2001	10,920	11,410,046
Population in 1996	10,704	10,753,573
1996 to 2001 population change (%)	2%	6.1
Total private dwellings	5,686	4,556,240
Population density per square kilometre	8.9	12.6
Land area (square km)	1,459.4	907,655.5

Characteristics	Centre Hastings FHT Catchment Area			Ontario		
	Total	Male	Female	Total	Male	Female
Age Characteristics of the Population:						
Total – All persons	10,925	5,405	5,510	11,410,050	5,577,055	5,832,990
Age 0-4	605	295	310	671,250	343,340	327,905
Age 5-14	1,480	770	705	1,561,500	801,355	760,145
Age 15-19	730	395	340	769,420	394,915	374,500
Age 20-24	465	240	225	718,420	359,645	358,775
Age 25-44	2,760	1,375	1,400	3,518,010	1,724,535	1,793,480
Age 45-54	1,630	795	835	1,635,280	801,540	833,740
Age 55-64	1,375	680	695	1,064,000	520,565	543,430
Age 65-74	1,115	585	535	818,165	383,625	434,545
Age 75-84	555	220	330	503,930	202,265	301,665
Age 85+	200	70	125	150,075	45,260	104,810
Median age	33.9	33.0	34.7	37.2	36.4	38.0
% of population ages 15+	80.8	80.7	81.6	80.4	79.5	81.3
% of population ages 65+	17.1			12.9		
Common-Law status						
Total population 15+	8,845	4,345	4,495	9,177,300	4,432,360	4,744,935
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Not in a common-law relationship	8,050	3,950	4,100	8,592,795	4,138,645	4,454,140
	91.0%	90.9%	91.2%	93.6%	93.4%	93.9%
In a common- law relationship	795	395	390	584,505	293,715	290,790
	9.0%	9.1%	8.7%	6.4%	6.6%	6.1%

Characteristics	Centre Hastings FHT Catchment Area			Ontario		
	Total	Male	Female	Total	Male	Female
Legal Marital Status:						
Total population	8,835	4,355	4,490	9,177,300	4,432,365	4,744,935
15+	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Single	2,130	1,225	905	2,793,080	1,490,270	1,302,805
	24.1%	28.1%	20.2%	30.4%	33.6%	27.4%
Married	5,100	2,560	2,545	4,897,095	2,450,975	2,446,125
	57.7%	58.8%	56.7%	53.4%	55.3%	51.6%
Separated	275	145	140	311,380	136,075	175,305
	3.1%	3.3%	3.1%	3.4%	3.1%	3.7%
Divorced	630	290	330	597,595	249,825	347,770
	7.1%	6.7%	7.3%	6.5%	5.6%	7.3%
Widowed	705	145	570	578,145	105,215	472,935
	8.0%	3.3%	12.7%	6.3%	2.4%	10.0%

Source: Statistics Canada, 2001 Community Highlights, Population

In the 2001 census, approximately 1.6% of the overall population of identified itself as being Aboriginal, and 0.9% as belonging to a Visible Minority group.

The population has a significantly higher percentage of its population in the age group 65+ than does the province as a whole.

The population is somewhat mobile, with 88% of the population living at the same address as one year previous, and 66% of the population living at the same address as five years previous.

Of the population 15 to 19 years old, 540 (74%) were attending school full-time and 20 (3%) part-time. The following table provides a view of the population's educational status in 2001:

Highest Level of Schooling					
	<High School	HS & some post- secondary	Trades Certificate	College	University
Ages 20-34					
CHFHT	18.8%	38.6%	11.7%	24.4%	6.5%
Ontario	13.2%	33.7%	7.9%	19.5%	25.7%
Ages 35-44					
CHFHT	33.2%	26.4%	16.4%	14.9%	8.4%
Ontario	17.3%	25.6%	11.5%	21.2%	24.3%

Ages 45-64					
CHFHT	41.9%	23.2%	11.1%	15.2%	8.5%
Ontario	27.5%	22.9%	11.6%	16.6%	21.5%

Source: Statistics Canada, 2001 Community Highlights, Population

As can be seen, approximately 60% of the population between the ages of 35 and 64 had less than high school or high school and some post-secondary schooling. This is significantly higher than the provincial average. However, the percentage with a less-than-high school education has been reducing over the years, albeit slower than the province as a whole. Very few of the residents in CHFHT's catchment area had a university degree.

Both the average earnings and income data for the tax year 2000 show that the population in the CHFHT catchment area was significantly lower than the provincial average.

Earnings and Income	Centre Hastings FHT Catchment Area	Ontario
Earnings in 2000		
Average earnings (all persons with earnings)	\$23,296	\$35,185
Average earnings (worked full year, full time (\$))	\$30,950	\$47,299
Income in 2000		
median total income of persons 15 years and over (\$)	\$16,518	\$24,816
Composition of total income (100%)	100.0%	100.0%
• Earnings - % of income	65.0%	78.7%
• Government transfers - % of income	20.6%	9.8%
• Other money - % of income	14.4%	11.5%
Selected Family Characteristics		
Median family income 2000 - All census families	\$41,668	\$61,024
Median family income 2000 - Couple families	\$46,122	\$66,476
Median family income 2000 - Lone-parent families	\$21,324	\$33,724
Selected Household Characteristics		
Median household income 2000 - All households	\$36,944	\$53,626
Median household income 2000 - One-person households	\$15,981	\$25,253

Earnings and Income		
	Centre Hastings FHT Catchment Area	Ontario
Median household income 2000 - Two-or-more- persons households	\$43,718	\$64,201

Source: Statistics Canada, 2001 Community Highlights, Population

Health Status Indicators

Statistics Canada carries out periodic surveys that capture direct and indirect indicators of population health status. While data is not readily available on a disaggregated basis for the Central Hastings Family Health Team's catchment area, it is available on a public Health Unit basis and on a Local Health Integration Network (LHIN) basis. The Hastings & Prince Edward Counties Health Unit serves the County of Prince Edward, Hastings County, Quinte West, and Belleville. It has offices in Trenton, Picton, Madoc, Bancroft and Belleville. The South East LHIN covers a much broader area that includes several more counties and stretches from Brighton in the west to Cardinal to the east.

The following tables provide Statistics Canada data that relates to the Hastings & Prince Edward Counties Health Unit area, a population in 2001 of approximately 151,000, of which Hastings County accounted for 126,000 persons and Prince Edward County 25,000.

Statistics Canada asks its survey respondents self-rate their health. The data is tabulated by sex, for household populations aged 12 and over. The responses for the Health Unit area and Ontario are shown in the following table. As can be seen, a significantly smaller proportion of the population in the Health Unit area rate their general health as very good or excellent than do the Ontario population as a whole and significantly more rate their health as fair or poor.

While mental health self-ratings are equivalent to the Ontario population, it should be noted that this result would not represent the reality for a rural community. There is a difference between urban communities with easy access to a wide range of mental health programs, and rural communities where there are not. This has led to a historical general acceptance of "different" behaviour in rural areas and the expectation that these matters will be dealt with within the family/community.

Self-rated health status, 2005					
	Population aged 12+	Very good or excellent	Good	Fair or poor	Not stated
General health status:					
Health Unit area	137,440	55.4%	29.8%	14.8%	F

Ontario	10,570,076	60.8%	28.1%	11.0%	0.1%
Mental health status:					
Health Unit area	137,440	73.5%	20.0%	4.9%	1.5%
Ontario	10,570,076	72.8%	19.9%	4.9%	2.3%

The rationale for these responses appears to be, in part, shown in the following tables.

Life expectancy has been shorter and death rates are higher in the Health Unit area than for the Ontario population as a whole.

Life Expectancy				
	Male		Female	
	Health Unit area	Ontario	Health Unit area	Ontario
2001				
At birth	75.4	77.4	80.4	82.0
At age 65	15.9	17.2	19.3	20.4
1996				
At birth, disability adjusted ⁴	70.1	72.4	75.5	76.6
At birth, disability free ⁵	63.1	66.6	67.9	69.4
At age 65, disability adjusted	13.3	14.0	16.3	16.6
At age 65, disability free	9.8	10.6	11.5	11.9

Source: Statistics Canada, Health Indicators

⁴ Disability-adjusted life expectancy (DALE) is a more comprehensive indicator than that of life expectancy because it introduces the concept of quality of life. DALE integrates data on mortality, long-term institutionalization and activity limitations in the population and represents a comprehensive index of population health status. Thus, the emphasis is not exclusively on the length of life, but also on the quality of life. To calculate DALE, a set of weights (relative values) is assigned to four states of health. These states are, in order from greatest to least weight: no activity limitations, activity limitations in leisure activities or transportation, activity limitations at work, home and/or school and institutionalization in a health care facility. These units are summed to yield a type of 'quality-adjusted' life expectancy.

⁵ 3. Disability-free life expectancy is a more comprehensive indicator than that of life expectancy because it introduces the concept of quality of life. It is used to distinguish between years of life free of any activity limitation and years experienced with at least one activity limitation. To that end, disability-free life expectancy establishes a threshold based on the nature of such limitations. Years of life lived in conditions above this threshold are counted in full. Those lived in conditions below the threshold are not counted. Thus, the emphasis is not exclusively on the length of life, as is the case for life expectancy, but also on the quality of life.

Cause of death, 2001		
	Rate/100,000	
	Health Unit area	Ontario
Total Mortality	706.4	597.8
All circulatory disease	250.6	205.0
All malignant neoplasms (cancers)	200.9	176.2
Ischaemic heart disease	145.8	118.3
All respiratory diseases	59.2	44.6
Lung cancer	57.1	43.8
Cerebrovascular disease	54.8	43.6
All other circulatory diseases	50.0	43.0
All other respiratory diseases	39.2	28.5
Unintentional injury	30.1	22.3
Prostate cancer	36.4	25.4
Female breast cancer	25.5	25.3
Colorectal cancer	17.6	18.4
Pneumonia and influenza	17.6	12.9
Suicide	6.9	7.7
Bronchitis, emphysema and asthma	2.4	3.1
AIDS deaths	F ⁶	1.2

Perinatal and infant mortality, 2001		
	Health Unit area	Ontario
Perinatal mortality:		
• Count	7	848
• Rate per 1,000 births (including stillbirths)	5.1	6.6
Infant Mortality:		
• Count	6	700
• Rate per 1,000 births (including stillbirths)	4.2	5.4

Two measures of human function for which Statistics Canada collects data are participation and activity limitation⁷ and 2-week disability days⁸. The reported incidence

⁶ Rates were suppressed due to both a very small underlying count, plus extremely high variability.

of these health issues within the Health Unit area is similar to that of the Ontario population as a whole.

Human function, 2005				
Participation and activity limitation:				
	Population aged 12+	Participation and activity limitation	No participation and activity limitation	Not stated
Health Unit area	137,440	30.7%	69.1%	F
Ontario	10,570,076	29.4%	70.3%	0.3%
2-week disability days:				
	Population aged 12+	1 or more 2-week disability days	No 2-week disability days	Not stated
Health Unit area	137,440	15.8%	83.4%	F
Ontario	10,570,076	17.1%	82.5%	0.4%

Other indirect indicators of a population's health status include what Statistics Canada calls personal resources. The following data indicates that the Health Unit area's population reports less stress and a greater sense of belonging to a local community than does the population of the rest of Ontario. Research shows a high correlation of sense of community belonging with good physical and mental health. The sense of belonging reported for the health unit area is supported by the experience in planning for the CHFHT, where there has been strong support and, in fact, community excitement at the prospect of establishing a family health team.

Personal resources, 2005					
Sense of belonging to local community, population aged 12+⁹:					
	Total	Very strong or somewhat strong	Somewhat weak	Very weak	Not stated

⁷ Population aged 12 and over who report being limited in selected activities (home, school, work and other activities) because of a physical condition, mental condition or health problem that has lasted or is expected to last 6 months or longer.

⁸ Population aged 12 and over who stayed in bed or cut down on normal activities because of illness or injury, on one or more days in the past 2 weeks.

⁹ Population aged 12 and over who describe their sense of belonging to their local community as very strong, somewhat strong, somewhat weak or very weak.

Personal resources, 2005					
Sense of belonging to local community, population aged 12+⁹:					
	Total	Very strong or somewhat strong	Somewhat weak	Very weak	Not stated
Health Unit area	137,440	75.8%	15.9%	5.2%	3.1%
Ontario	10,570,076	63.4%	24.0%	9.3%	3.2%
Life stress, population aged 18+¹⁰					
	Total	Not at all	Some	Quite a lot	Not stated
Health Unit area	122,679	13.9%	64.9%	21.2%	F
Ontario	9,567,663	10.6%	65.9%	23.1%	0.4%

The following health behaviours also impact on a population's health status. The Health Unit area's population tends to smoke more, starting at an earlier age than the rest of the province, are somewhat heavier drinkers and less inclined to undertake leisure-time physical activities.

Direct and indirect smoking, population aged 12+, 2005					
Age started smoking:					
	Total	5-14	15-19	20+	Not Stated
Health Unit area	88,521	36.2%	53.5%	8.9%	1.4%
Ontario	6,116,748	32.7%	49.9%	14.5%	2.9%
Type of smoker:					
	Total	Current	Former	Never	Not Stated
Health Unit area	137,440	26.6	37.5	35.6	0.3
Ontario	10,570,076	20.7	36.2	42.1	1.0
Exposure to 2nd-hand smoke – at home:					
		Yes	No		Not Stated
Health Unit area		9.8	90.2		
Ontario		7.3	92.5		0.2
Exposure to 2nd-hand smoke – in vehicles & public places:					

¹⁰ Population aged 18 and over who reported their level of life stress.

		Yes	No		Not Stated
Health Unit area		8.7	10.9		
Ontario		7.8	13.0		0.2

Frequency of drinking in the past 12 months, population aged 12+ who are current drinkers, 2005				
	Total	5 or more drinks on one occasion, 12 or more times a year	5 or more drinks on one occasion, less than 12 times a year	Never 5 or more drinks on one occasion
Health Unit area	103,268	24.5%	19.7%	53.7%
Ontario	8,084,021	21.5%	23.1%	52.2%

Leisure-time physical activity¹¹, population aged 12+, 2005				
	Total	Physically active or moderately active	Physically inactive	Not stated
Health Unit area	137,440	48.5%	49.8%	1.8%
Ontario	10,570,076	51.3%	45.8%	2.9%

The final group of health status indicators are classified as health conditions by Statistics Canada. They indicate that in most areas measured by Statistics Canada, the incidence of health issues is either at the Provincial average or higher.

Self-reported body mass index (BMI), excluding pregnant females, 2005						
Population aged 12-17						
	Total		Neither overweight nor obese		Overweight or obese	Not stated
Health Unit area	14,657		70.8%		20.5%	F
Ontario	999,716		74.8%		18.1%	7.1%
Population aged 18+						

¹¹ Population aged 12 and over reporting level of physical activity, based on their responses to questions about the frequency, duration and intensity of their participation in leisure-time physical activity.

	Total	Underweight, BMI under 18.50	Normal weight, BMI 18.50 to 24.99	Overweight, BMI 25.00 to 29.99	Obese, BMI 30.00 or higher	Not stated
Health Unit area	120,542	F	43.1%	30.3%	22.8%	2.6%
Ontario	9,476,542	2.7%	46.3%	33.4%	15.1%	2.5%

Asthma, 2005						
Population aged 12+						
	Total		With Asthma		Without Asthma	Not stated
Health Unit area	137,440		11.2%		88.8%	F
• Males	66,994		9.0%		91.0%	F
• Females	70,446		13.3%		86.7%	F
Ontario	10,570,076		8.0%		92.0%	0.1%
• Males	5,196,174		6.6%		93.3%	0.1%
• Females	5,373,902		9.3%		90.7%	0.0%

Arthritis or rheumatism, 2005						
Population aged 12+						
	Total		With Arthritis or rheumatism		Without Arthritis or rheumatism	Not stated
Health Unit area	137,440		23.0%		77.0%	F
• Males	66,994		17.8%		82.2%	F
• Females	70,446		28.0%		72.0%	F
Ontario	10,570,076		17.1%		82.7%	0.2%
• Males	5,196,174		13.1%		86.8%	0.2%
• Females	5,373,902		21.1%		78.7%	0.2%

Pain or discomfort that affects activities, 2000/2001						
Population aged 12+						
	Total	No pain or	Pain or	Pain or	Pain or	Not

	Respondents	discomfort	discomfort does not affect activities	discomfort affects a few activities	discomfort affects most activities	stated
Health Unit area	132,650	82.4%	4.5%	9.9%	3.1%	F
• Males	64,075	82.4%	4.4%	9.8%	3.0%	F
• Females	68,574	82.3%	4.6%	10.0%	3.1%	F
Ontario	9,877,292	83.6%	3.9%	9.2%	3.2%	0.1%
• Males	4,846,436	85.6%	4.0%	7.2%	3.0%	0.2%
• Females	5,030,856	81.7%	3.8%	11.0%	3.4%	0.1%

Pain or discomfort by severity, 2000/2001						
Population aged 12+						
	Total Respondents	No pain or discomfort	Mild pain or discomfort	Moderate pain or discomfort	Severe pain or discomfort	Not stated
Health Unit area	132,650	82.4%	5.4%	10.3%	1.8%	F
• Males	64,075	82.4%	5.6%	9.8%	F	F
• Females	68,574	82.3%	5.2%	10.7%	F	F
Ontario	9,877,292	83.6%	5.2%	8.5%	2.6%	0.1%
• Males	4,846,436	85.6%	5.0%	7.1%	2.1%	0.2%
• Females	5,030,856	81.7%	5.4%	9.8%	3.0%	0.1%

Risk of depression, 2000/2001						
Population aged 12+						
	Total	No risk of depression	Possible risk of depression	Probable risk of depression		Not stated
Health Unit area	132,650	90.8%	2.2%	5.9%		F
• Males	64,075	92.9%	F	5.4%		F
• Females	68,574	88.8%	3.2%	6.4%		F
Ontario	9,771,426	89.0%	2.8%	7.0%		1.2%
• Males	4,794,385	91.8%	2.4%	4.7%		1.2%
• Females	4,977,042	86.3%	3.3%	9.2%		1.3%

Diabetes, 2005						
Population aged 12+						
	Total		With diabetes	Without Diabetes		Not stated
Health Unit area	137,440		7.0%	93.0%		F
• Males	66,994		7.4%	92.6%		F
• Females	70,446		6.6%	93.4%		F
Ontario	10,570,076		4.8%	95.1%		0.1%
• Males	5,196,174		5.6%	94.3%		0.2%
• Females	5,373,902		4.1%	95.8%		0.1%

High blood pressure, 2005						
Population aged 12+						
	Total		With High Blood Pressure	Without High Blood Pressure		Not stated
Health Unit area	137,440		22.2%	77.7%		F
• Males	66,994		30.3%	79.7%		F
• Females	70,446		24.1%	75.7%		F
Ontario	10,570,076		15.2%	84.5%		0.3%
• Males	5,196,174		14.7%	84.9%		0.4%
• Females	5,373,902		15.7%	84.1%		0.1%

Low birth weight (less than 2,500 grams), number and rate¹², three-year average, 2001						
	Both Sexes		Male		Female	
	#	Rate	#	Rate	#	Rate
Health Unit area	68	4.7%	32	4.4%	36	5.0%

¹² Live births less than 2,500 grams, expressed as a percentage of all live births (birth weight known).

Ontario	7,383	5.7%	3,611	5.5%	3,771	6.0%
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All invasive primary cancer sites (including in situ bladder), age-standardized rate per 100,000 population, by sex, three-year average, 2002						
		Both Sexes (Rate per 100,000)		Males (Rate Per 100,000)		Females (Rate Per 100,000)
Health Unit area		399.5		446.5		365.8
Ontario		393.0		452.2		350.5

Injuries within the past 12 months causing limitation of normal activities, 2005						
Population aged 12+						
	Total		Injuries	No Injuries		Not stated
Health Unit area	137,440		14.3%	84.4%		F
• Males	66,994		15.7%	82.5%		F
• Females	70,446		12.8%	86.3%		F
Ontario	10,570,076		13.5%	84.0%		2.5%
• Males	5,196,174		15.8%	81.6%		2.5%
• Females	5,373,902		11.2%	86.2%		2.5%

Other Primary Health Care Services Available Locally to this Population:

The region contains a number of other primary care service providers that are available to the residents of the Central Hastings Family Health Team's catchment area. However, many of these programs are located in communities that require travelling as far as 50kms to take advantage of them. This is especially the case for hospital care. This creates a deterrent to the utilization of these services.

The fragmentation of the other primary care services due to their location in many of the surrounding communities makes it extremely difficult to coordinate and manage access and continuity of care.

These problems are exacerbated by the shortage of physicians and other health professionals in the Central Hastings Family Health Team's catchment area. Of the 49 municipalities in Southeastern Ontario, the patient population of the area ranks in the top

11 for percentage of low priority emergency room visits in 2002 by patients indicating that they did not have a family physician.

Examples of the services¹³ located locally or, theoretically, accessible through a local satellite office or on an outreach basis, include:

- Dentist (Madoc)
- Pharmacy (Madoc & Marmora)
- Audiologist (Marmora) – **how frequently?????????**
- Gateway Community Health Centre (Based in Teed):
 - Centre Hastings Diabetes Outreach (Madoc & Marmora) – Twice monthly by nurse and dietician
 - Parent education on children's stress (Madoc & Marmora) – 3-part program twice yearly
 - Weekly drop-in for expecting and new parents (Madoc & Marmora) – Early years nurse
 - Playgroups (Madoc & Marmora)
- Hastings & Prince Edward Counties Health Unit (Madoc):
 - Baby basics (prepare for arrival of newborn)
 - Nutrition drop-in for new mothers (Weekly with nurse and dietitian, transportation provided)
 - Immunization clinics (monthly)
 - Dental clinics (most elementary schools)
 - Prenatal classes
 - Sexual health clinics: testing, provision of reduced cost contraception, information and education, physician available by appointment (twice monthly)
- Heart of Hastings Hospice (Madoc) – Grief, bereavement support and palliative care
- Community Care for Central Hastings (Madoc) – Indoor walk program, 3 times weekly
- Children's Mental Health Services (Madoc) – Counselling and assessment
- Counselling Services of Belleville & District (Madoc):
 - Adult protective services
 - Early Start - targets autism prevention in children 2 – 5 years
 - Resource service for families with children with a developmental disability
 - Behavioural consulting service
 - Family court clinic
 - Infant development program
- Sexual Assault Centre for Quinte & District – 24-hour crisis line
- Mental Health Services Hastings-Prince Edward (Madoc):
 - Case management
 - Hospital liaison case management
 - Housing, support groups (consumer, family, and recreational)
 - Psycho-social rehabilitation
 - Mental health court diversion, sponsors family support network
 - Geriatric psychiatry.

¹³ Draft preliminary inventory prepared by the Southeastern Ontario District Health Council.

The most recent, August 2006, listing of services¹⁴ available to meet the needs of patients with specific health issues, whether or not these services are located in Madoc or Marmora, includes:

Access to primary care

- 2 full-time family physicians in Madoc – Dr. Janet Yorston and Dr. Janet Webb
- 3 full-time nurse practitioners in Madoc (1) and Marmora (2)
- Dr. Arun Dosaj, practicing in Madoc and Marmora at the Anti-Aging and Wellness Clinic, which offers acupuncture, chelation¹⁵, cosmetic treatments/procedures, food allergy testing, natural hormone replacement, supplements, weight management, etc.
- Dr. Gordon Forstner, who holds a clinic every other Friday and Saturday morning in Marmora

Diabetes

- Belleville, Campbellford and Trenton hospitals – 2-day hospital based program and ongoing support for insulin dependent diabetics
- Bancroft hospital – diabetic programs
- Gateway – 1 day every other week for group and some individual counselling around diet and education, over 10 to 12 weeks in both Marmora and Madoc
- CCAC – teaching re: administering insulin
- Darlene Rivers – foot care available at the Marmora Clinic

Cardiac Illness Prevention and Rehabilitation

- Kingston Rehab program - available only in Kingston
- Heart and Stroke Foundation – will lead seminars
- Blood pressure clinics – Community Care and church nurse
- Gateway – educational lectures for those with heart disease
- CHF program offered by Campbellford

Lung Disease

- Belleville anti-smoking programs through public health
- Pulmonary function testing available in Belleville
- Kingston program with respirology
- Lung Association help line

Seniors Programs

- Madoc Seniors Club
- Potluck lunches and Diners Club
- Blood pressure clinic
- Walking programs
- Meals on wheels

¹⁴ Produced by the Needs assessment Committee

¹⁵ A method for removing toxins, heavy metals and metabolic wastes from the body

- Hearing Clinic in Marmora
- Short-term equipment use (Medi Gas and Community Care)
- Community dinners and friendly visits
- CCAC
- Geriatric Team and Geriatric Psychiatry
- Caregiver support groups

Adolescent Medicine

- Youth Hab – housing and some counselling available
- Kingston psychiatry – new onset psychosis clinic
- Public Health – sex health at the clinic and at the health unit
- Susan Blakely (nurse practitioner) – ½ day clinic at the high school
- Christian Youth Worker
- Counselling available through community mental health

Mental Illness

- Community Mental Health (Tweed) – some in-home support and psychiatrist Dr. Maeve Fahy
- Schizophrenia support groups
- Mental Health Services – some counselling available free of charge for those with mental illness
- Crisis Centre – Belleville hospital
- Psychiatry – hospital in-patients (Belleville hospital)

Cancer Prevention and Palliative Care

- Heart of Hastings Hospice Care – volunteers
- CCAC palliative home care team

Service Gaps

In 2002, a working group was set up to establish, among other things, what health care services are needed by the citizens of Centre Hastings. The study¹⁶ was prompted by the retirement of Madoc's family physician, which affected the care of 5,000 residents.

As part of the study, health care providers were asked to identify the health service needs of the community.

They identified the following basic services as being absent:

- Physiotherapy
- Eye care
- Paediatric services
- Visiting specialists
- X-ray services

¹⁶ *Health Needs Assessment for Centre Hastings Medical Centre, August 1, 2002*

- There is a nursing home in Marmora, but no plans for one in Central Hastings
- Organized health services for the developmentally disabled living in supervised homes, e.g. nutrition, foot care, and medical care.

The following services were available, but frequently delivered on an as-needed basis from outside the catchment area, and were insufficient to meet the needs:

- Pre- and post-natal care
- Health promotion and education for seniors and young people
- Diabetic support
- Heart care
- Lifestyle education
- Teen pregnancy support
- Family counselling
- Youth counselling
- Abuse support
- Seniors support
- Addictions counselling.

Lastly, knowledge about services is fragmented and referrals can be problematic.

The Needs Assessment Committee, in its August 2006, listing of services, identified the following gaps on a program basis:

Primary Care

- Large number of residents without primary care

Diabetes

- Chiropodist
- Comprehensive Diabetes Mellitus management

Cardiac Illness Prevention and Rehabilitation

- No organized education available for either primary or secondary prevention
- Rehabilitation component in Kingston is too far away

Lung Disease

- No asthma education and follow-up re medications and illness
- Presently no access to spirometry
- Local anti-smoking programs

Seniors Programs

- Day Care Centre for those with dementia or high needs
- Long-term care facility in Madoc
- Safe retirement homes and adequate housing in Madoc
- Screening of the elderly for preventable illness (osteoporosis, cancer and heart disease) in a consistent manner

Adolescent Medicine

- No drug and alcohol addiction programs
- Mental health services not readily available
- Group homes - no primary care physician
- Adolescent clinic

Mental Illness

- Counselling for life cycle changes
- Psychiatrist support and referrals

Cancer Prevention and Palliative Care

- Regional palliative physician
- Palliative care bed availability in the community
- Consistent screening available for individual risk factors.

4.0 List of proposed programs and services for patient care

4.1 Services

The proposed services of the CHFHT would be focused on the patient-centred model and would provide a whole range of interdisciplinary services, including but not limited to:

- Primary Physician care, as defined by the basket of services for primary care provision determined by the Provincial Co-ordinating Committee on Community and Academic Health Science Centre Relations (PCCCAR)
- Services within the scope of practice of Nurse Practitioners, Registered Nurses, Dietitians/Nutritionists, Social Workers, Mental Health Workers, Pharmacists, etc.
- Specialist referrals
- Help coordinate emergency medical care where required
- Looking after residents in long-term care homes
- Chronic Disease/Health Problem Management through optimizing patient self-care.

The additional resources provided by the Ministry will be used to meet the following program priorities:

- Enhanced diabetic care at both Marmora and Madoc
- Teen clinics aimed at problems of this age group, especially in collaboration with the regional high school in Madoc
- Dealing with a wide variety of mental health problems, especially among elderly patients and youth, and counselling for life cycle change problems (e.g. related to marriage, retirement, babies, new children, looking after the elderly)
- A new nurse practitioner outreach clinic in Gilmour.

In addition, a key priority is to make inroads into the critical physician shortage in the catchment area by enhancing the physical facilities at the two clinics, and by being able to demonstrate an ideal working environment and approach to patient care through the inter-disciplinary, collaborative care being provided by the family health team.

4.2 Primary care providers

CHFHT's services will be delivered through a structure that follows the patient-centred approach to service delivery.

Patient care will be based in the two clinics, at Madoc and Marmora, with a nurse practitioner-based part-time clinic in Gilmour in the north of Hastings County.

The following table summarizes the number of physicians and the complement of allied health professionals and support staff required to provide effective and efficient primary health care services within their practices. This is the staffing level anticipated to be required during the first 12 months. Staffing levels will grow as additional physicians join and as the number of rostered patients grow. CHFHT believes that its model will allow it to absorb approximately 7,000 new patients over the next three years, with a nurse practitioner caseload of 500 and an additional 2 physicians.

FTE¹⁷ Health Professionals and Support Staff							
	Existing (Location shown)			Funding Request (Location shown)			+/- Overall Staff Level
	Madoc	Marmora	Total	Madoc	Marmora	Total	
Physicians	2.0			2.0	2.0	4.0	2.0
• Patients served ¹⁸			7,000			14,000	
Program Coordinator				1.0		1.0	1.0
Nurse Practitioners	1.0	2.0	3.0	1.0	2.0	3.0	
Registered Nurses	1.0	0.5	1.5	1.0	1.0	2.0	0.5
Registered Practical Nurses				1.0	1.0	2.0	2.0
Social Worker				0.5	0.5	1.0	1.0
Chiropodist				0.4	0.2	0.6	0.6
Dietitians				0.4	0.2	0.6	0.6
Kinesiologist				0.2		0.2	0.2
Receptionist/Booking Clerk/Support (for all	2.0	1.0	3.0	4.0	4.0	8.0	5.0

¹⁷ Full-time equivalents

¹⁸ Presently approximately 4,500 rosterable patients, 1,000 high school students and 2,000 summer visitors, growing to 9,500 rostered patients (4 physicians x 2,000 + 3 NPs x 500), 1,000 high school students, 2,000 summer visitors and ad hoc, but rosterable patients if there were an additional physician.

FTE¹⁷ Health Professionals and Support Staff							
	Existing (Location shown)			Funding Request (Location shown)			+/- Overall Staff Level
	Madoc	Marmora	Total	Madoc	Marmora	Total	
health professionals)							
Office Coordinator/Support		0.5	0.5		0.5	0.5	
FHT Administrator				1.0		1.0	1.0
Office Manager	1.0		1.0	1.0		1.0	
Total non-physician staff	5.0	4.0	9.0	11.5	9.4	20.9	11.9

The roles of these staff are set out in Appendix A.

4.3 Recruitment timelines

The following table shows out the estimated timelines for recruitment of the additional resources shown above (Phase I). By the end of the 2007-2008 fiscal year, it is expected that the CHFHT will be ready to expand its range of services and to significantly increase the number of patients that it has rostered and otherwise serves (Phase II).

The recruitment plan assumes that Ministry approvals are received by the end of December 2006/early January 2007.

Recruitment of Health Professionals and Support Staff							
	Year 1¹⁹	Year 2				Year 3	
	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
Physician 1				X			
Physician 2					X		
Program Coordinator		X					
Registered Nurses		X					
Registered Practical Nurse 1	X						
Registered Practical Nurse 2				X			

¹⁹ Based on the government's fiscal year of April 1st to March 31st.

Recruitment of Health Professionals and Support Staff							
	Year 1 ¹⁹	Year 2				Year 3	
	4 th Qtr	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	1 st Qtr	2 nd Qtr
Social Worker		X					
Chiropodist (or RN)		X					
Dietitians		X					
Kinesiologist			X				
Receptionist 1	X						
Receptionist 2		X					
Receptionist 3		X					
Receptionist 4				X			
Receptionist 5					X		
FHT Administrator	X						

4.4 Compensation mechanisms for physicians

The two physicians currently practicing in Madoc are compensated in accordance with the comprehensive care model, which is primarily fee-for-service, but which has some capitation and bonus features. Because there will still only be two physicians when the CHFHT commences operations, they will contract with the CHFHT but will receive salaries and additional incentive payments as per the agreement between the Ministry and the OMA, with the funds being flowed through the through the CHFHT. Once an additional physician is recruited, they will convert to a blended capitation model and all physicians will be partners in, and will be paid through, a Family Health Network to be established at that time.

and changing the payment mechanism for the 2 existing physicians from their comprehensive care (fee-for-service, with some bonus payments for screening patients, etc. model from fee-for-service billing to an approved capitation payments

4.5 Location of services and programs

At full operation, the CHFHT's services will be available through the clinics in Marmora and Madoc, as well as through a satellite centre in Gilmour. Some services will be provided by health professionals who visit patients in their homes. This will alleviate the rural problem of lack of public transportation and the fact that not all residents have access to personal vehicles.

4.6 Location readiness

The two existing clinics require renovations or replacement. The communities have discussed plans as to how this might be achieved. However, because of the November municipal elections, it has not been possible to finalize plans. In the interim, a small amount of space is available to house some of the additional staff on a temporary basis, and space will have to be rented to house other staff in Madoc.

The satellite clinic in Gilmore also requires renovations that have been estimated to cost \$25,000. A detailed submission will be submitted for approval shortly.

4.7 Location of after-hours services

After-hours services will be available through both the Madoc and Marmora clinics. A schedule will be developed that will ensure that the service is properly coordinated between the health professionals based at the two clinics. This includes on-call/THAS service.

4.8 Information on current numbers of rostered clients

The two clinics currently serve approximately 7,000 patients. The physicians have been gradually rostering these patients in anticipation of the CHFHT becoming operational.

4.9 Anticipated enrolment with estimated timelines

The addition of the requested staff will facilitate and significantly speed up the enrollment process. It is expected that virtually all of the existing eligible patients of the two clinics will be rostered by the end of the 2007-2008 fiscal year.

The addition of two physicians late in 2007-2008, one in the third quarter and another in the fourth quarter, will lead to an increase in enrollment during the 3 to 6 months after each of them commences practice until each practice is at capacity.

4.10 Physician alternative funding agreements

See section 4.4.

5.0 Summary of business plan timelines

The following table shows the anticipated timelines for the major activities required to achieve a successful implementation and subsequent operation for the CHFHT.

2006-2007					2007-2008											
Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Service/program delivery																
Finalize and implement governance																
	MOHLTC approvals															
Implementation, operational and strategic planning and review																
Recruitment																
Continuing development, formalization and implementation of community partnerships																
Building plans																
Building renovation/construction																

6.0 Financial forecast

See companion Excel worksheet.

Part C: The Operational Plan

1.0 Core, optional, and special services/programs

Enrolment

See Business Plan section 4.9.

Programs and services

The following table provides an overview of the CHFHT's current and planned programs and services for 2006-2007 and 2007-2008.

Where services are currently provided, the addition of the requested health professionals and support staff will enable the CHFHT to provide the service/program to more patients, more effectively, and to monitor and evaluate results.

Core Comprehensive Care Services	Description, Objectives, How program will address needs/gaps	Provider Type & FTE. Provider roles	Linkages/partnerships with other service delivery organizations, Services to be delivered	Key milestones and timelines for roll-outs
Health assessments	Services provided in Madoc, Marmora and Gilmour clinics, as well as at the high school, in homes, and in screening clinics as the programs are developed.	Services provided by 4 physicians, 3 NPs and 2 RNs.	<u>CCAC</u> : Interaction with the nurses, occupational and physiotherapists, and the palliative care team <u>Public Health</u> : Sexual health clinic at the high school and at the public health clinic <u>Respirology Technology</u> : for oxygen management <u>Parish Nurse</u> : United Church in Madoc	The Gilmour clinic can commence as soon as renovations have been completed. Some linkages with other providers already exist. Once the initial additional staff are recruited, other

Core Comprehensive Care Services	Description, Objectives, How program will address needs/gaps	Provider Type & FTE. Provider roles	Linkages/partnerships with other service delivery organizations, Services to be delivered	Key milestones and timelines for roll-outs
				linkages will be put in place throughout 2007.
Diagnosis and treatment	Diagnosis and treatment will be expanded using multi-disciplinary clinics for chronic diseases such as diabetes, heart disease, respiratory disease, and for seniors in particular.	As above	<u>CCAC</u> : Home care nurses <u>Medical specialists</u>	As above
Primary mental health care	Counselling around life cycle change points for individuals, couples and families. Some geriatric psychiatry services out of Kingston (with office in Belleville) whereby visits made to peoples homes for assessment and advice to patients and	Physicians and social worker	Patients referred to: Children's Mental health Youth Rehabilitation Counselling Services of Belleville & District Sexual Assault Centre Mental Health Support Centre Addiction Counselling	Currently provided. Will be expanded once requested staff are hired.

Core Comprehensive Care Services	Description, Objectives, How program will address needs/gaps	Provider Type & FTE. Provider roles	Linkages/partnerships with other service delivery organizations, Services to be delivered	Key milestones and timelines for roll-outs
	physicians.			
Primary palliative care	In-office and in-home palliative care	Physicians	CCAC Palliative Care Team Palliative care physicians at the Belleville hospital and Centre Hastings Hospice	Currently provided
Support for hospital, home, public health and long-term care facilities	Care for orphan patients discharged from hospital. Currently providing physician care to a long-term care facility in Marmora	Physician and other health professionals		Currently provided
Service coordination and referral	Educate patients about resources available in community Coordinate referrals when necessary	Physicians and other health professionals	CCAC and other health service provider organizations	Currently provided. Once requested staff are hired, this can be done more effectively.
Patient education and preventive care	Patient education sessions Talks to groups such as Women's Institutes	Physicians, NPs and RNs	Public Health Alzheimer Association Cancer Society Heart & Stroke Foundation	Currently provided. Once requested staff are hired, this can be done more effectively.
Access to pre-natal, obstetrical, post-	Care provided to third trimester, then	Physicians and NPs	<u>Public Health</u> : Healthy Babies Gateway	Currently provided

Core Comprehensive Care Services	Description, Objectives, How program will address needs/gaps	Provider Type & FTE. Provider roles	Linkages/partnerships with other service delivery organizations, Services to be delivered	Key milestones and timelines for roll-outs
natal maternal care and in-hospital newborn care	referral to an obstetrician for care. Hospitals are too far away for CHFHT physicians to provide in-hospital care			
Early years care			<u>Public Health and Gateway:</u> Cradling Arms program Me & My Dad Many other family programs to age 5	CHFHT will develop links to these programs
Arrangements for around-the-clock care	After-hours clinics, and 24/7 calls with THAS backup	Physicians and NPs		Will be reorganized between Physicians and NPs
Chronic disease management programs	Clinics will be held for a number of chronic health problems	Multi-disciplinary team		Diabetes care will be organized as soon as staff are approved and recruited
Organized health promotion and disease prevention programs	A range of programs will be developed. The rostered practice will be screened for immunizations, etc. through reports produced off the EMR	Multi-disciplinary team		These will start in mid-2007
X-ray,	The local			This is on

Core Comprehensive Care Services	Description, Objectives, How program will address needs/gaps	Provider Type & FTE. Provider roles	Linkages/partnerships with other service delivery organizations, Services to be delivered	Key milestones and timelines for roll-outs
ultrasound, sleep studies, pulmonary function studies, nuclear medicine	<p>availability of diagnostic facilities such as x-ray would avoid many unnecessary patient trips to hospital emergency rooms.</p> <p>Services are available in Belleville, Campbellford and Bancroft.</p>			the “back-burner”
Laboratory services	<p>Both clinics operate as a phlebotomy site in concert with MDS labs.</p> <p>Some tests are done on site, e.g. pregnancy testing, ECGs, spirometry, strep throat and urinalysis.</p>			
Some minor day surgery, some specialist services	Minor emergency care can be provided at the Madoc clinic	Physicians		Currently provided
Other services	Home visits provided to fragile seniors	Physicians and NPs		Currently provided

Core Comprehensive Care Services	Description, Objectives, How program will address needs/gaps	Provider Type & FTE. Provider roles	Linkages/partnerships with other service delivery organizations, Services to be delivered	Key milestones and timelines for roll-outs
	and patients without transportation			

2.0 Human resources and recruitment plan

Human Resources Plan

See Business Plan section 4.2

Recruitment plan

See Business Plan section 4.3

Existing and Proposed Sources of funding for:

The 2.0 FTE physicians at the Madoc – see Business Plan section 4.4.

The 1.0 FTE nurse practitioner at the Madoc clinic is funded through the Underserved Area Program. It is proposed that this cost be adopted by CHFHT.

The 2.0 FTE nurse practitioners at the Marmora clinic are funded through the NP Pilot Project Program.

The registered nurses are funded as follows:

- 1.0 FTE nurse in Madoc is funded by the physicians. It is proposed that this cost be adopted by the CHFHT and that the overhead add-on to the physicians' salary-based remuneration that will flow through the CHFHT be used to offset it.
- 0.5 FTE nurse in Marmora is funded by the Municipality of Marmora & Lake in the absence of MOHLTC funding. It is proposed that this cost be absorbed by the CHFHT.

The office coordinator and receptionists are funded as follows:

- 2.0 FTE receptionists in Madoc are funded by the physicians. It is proposed that this cost be adopted by the CHFHT and that the overhead add-on to the physicians' salary-based remuneration that will flow through the CHFHT be used to offset it.
- 1.5 FTE office coordinator and receptionist in Marmora are funded through the NP Pilot Project Program

The 1.0 FTE office manager in Madoc is funded ½ by the Underserved Area Program and ½ by the Centre Hastings Medical Centre. It is proposed that this cost be adopted by the CHFHT.

3.0 Collaborative team practice

The CHFHT has already started work on redefining roles and responsibilities within a collaborative team practice through meetings between the physicians and the nurse practitioners to discuss after hours clinics and 24/7 on-call.

While specific plans have yet to be developed, by starting gradually, all existing and new staff should have minimal difficulty in adapting to this new practice style.

The major roadblock will be the problem that always exists when services are based at and delivered from more than one centre – in this case the clinics in Madoc and Marmora.

However, all existing staff and the advisory committee are committed to making the change work. As necessary, they will use change management consulting support to facilitate the development of goals and objectives, approaches to problem solving, and appropriate structures and strategies.

The team will be fully functional when the CHFHT gets its formal Ministry approval, and will evolve in an orderly fashion as new staff come on board.

4.0 Physical site preparation

See Business Plan section 4.6.

5.0 Information technology and electronic medical records (EMR)

Very limited MIS capability is currently used at the two clinic sites. A new comprehensive information system, including an EMR, is required.

Planning for this capability is at the embryonic stage.

6.0 Extended hours/Telephone Health Advisory Service (THAS)

See *Arrangements for around-the-clock care* in the *Programs and services* table in section 1.0.

7.0 Other programs

Medical students from Kingston have spent electives at the Madoc clinic.

One of the Madoc physicians taught family medicine as an assistant professor at the University of Toronto for 15 years. With expanded space, the clinic could easily provide a site for postgraduate family medicine.

The Madoc Clinic has a high school student under a co-op program.

Students from the Laurentian University post-graduate nursing program do graduate work in health management.

In the past, student nurses have done a practicum at the Madoc clinic.

Discussions are currently underway with McMaster University for CHFHT to provide rural clinical experience to its medical students.

8.0 Evaluation

All CHFHT programs will be evaluated on a regular basis.

Evaluation criteria will be established and implemented for each new CHFHT activity. The criteria will be based on clinical experience and literature reviews.

Overall evaluation approaches for the CHFHT will be developed and will include such things as increased enrolment and service to orphan patients, enhanced treatment of chronic health conditions, waiting times for referrals, patient and provider satisfaction surveys, etc. This will be supported by the implementation of enhanced computer technology to enable the collaborative approach to service delivery, together with the regular compilation of data/statistics and the production of comparative and trend reports, along with input through the Community Advisory Committee.

Specific examples include:

- Before programs start, baseline measurements will be established. They will deal with such questions as:
 - what is the size of each physician's roster, i.e. number of rostered patients?
 - are patients and physicians satisfied with access to services?
 - what are the bottlenecks to service?
 - are patients getting timely access to care?
 - are patients getting access to a broad range of services?
 - are patients making clinical gains?

The baseline measures will be revisited on a regular basis to determine the program's impact (including its effectiveness and efficiency outcomes).

- It is proposed to track two kinds of measures: outcome measures and process measures for specific programs, e.g. for diabetes:
 - Outcome measures for diabetes follow the 2006 Canadian consensus guidelines for diabetes mellitus, and include:
 - % of patients with LDL < target
 - % of patients with blood pressure reading < 130/80
 - % of patients with HgA1C < target
 - % of patients with total chol/HDL < target.

Process measures for diabetes could include:

- registry size
- % of patients with two Hemoglobin A1C's in the last year
- % of patients with a microalbumin test

- % of patients with a dental exam in the last 12 months
 - % of patients with flu vaccination
 - % of patients with a documented foot exam in the last 12 months
 - % of patients with a dilated eye exam in the last 12 months
 - % of patients who are current smokers
 - % of patients who report using aspirin daily
 - % of patients with documented self- management goals.
- For more general programs different types of evaluation criteria will be used, e.g.:
 - reduction in the use of emergency room visits by unattached patients for services such as renewal of prescriptions for stable medical conditions
 - ensuring that individuals have access to routine screening such as mammography, pap tests , blood pressure measurement
 - helping establish a roster of potential patients for new family practitioners joining the FHT
 - supporting integration to the existing physician resources.

Other types of evaluation attempt to place a monetary value on the health system savings derived from interventions. While it is extremely difficult to project the actual savings that will result from the establishment of FHT, annual treatment costs identified by the Society of Women’s Health Research reproduced in Appendix C from DrDonnicca.com shows the following costs (in US dollars).

Condition	Annual Incremental Cost per Patient
Diabetes	\$5,500
CVD	\$6,700.
Hypertension	\$3,300
Renal Dialysis	\$40,000.00 per patient

Other sources identified in the appendices provide patient cost and economic burden data for the following conditions.

Condition	Annual Incremental Cost per patient
Anemia	\$5,000
Smoking	Not known

The Statistics Canada data reproduced below shows a number of indicators of health status.

Characteristics	Ontario		
	Total	Male	Female
Self-rated good health (% of age 12+)- 2003	88.1	89.6	86.8

Characteristics	Ontario		
	Total	Male	Female
Functional health status ²⁰ with moderate or severe functional health problems (% of age 12+) – 2000/2001	20.1	18.5	21.7
Smokers (% of age 12+) - 2003	22.1	24.9	19.4
Physically Active (% of age 12+) - 2003	50.0	53.2	46.8
Obesity, with BMI 30+ (% of age 18) - 2003	14.8	16.0	13.7
Arthritis/rheumatism diagnosed (% of age 12+) - 2003	17.5	13.1	21.8
All invasive primary cancer sites (age standardized rate/100,000 population) - 2002 ²¹	393.0	452.2	350.5
Contact with a medical doctor in past 12 months (% of age 12+) - 2003	81.1	75.9	86.1
Contact with alternative health care provider ²² in past 12 months (% of age 12+) - 2003	11.4	8.1	14.7
Contact with health professionals about mental health in past 12 months (% of age 12+) - 2003	6.8	4.4	9.1
Contact with dental professionals in past 12 months (% of age 12+) - 2003	69.3	66.6	71.8
Reported unmet health care needs (% of age 12+) – 2000/2001	12.1	10.2	13.9
		Female	
Routine screen mammography last 2 years (% of age 50-69)		49.8	
Pap smear <3 years ago (% of age 18 to 69) - 2003		73.9	

Source: Statistics Canada, Canadian Community Health Surveys

With a catchment area population of approximately 12,000 to 14,000, it is safe to assume a minimum of 15% co-morbidity on Diabetes, CVD and Hypertension. At those illness rates significant annual fee-for-service costs could be avoided in the region with the introduction of a health centre (FHT) approach to care. That is only for the first three conditions in the first table in this section, without the inclusion other very expensive conditions. These numbers are supported in the speech made on September 4, 2004 by Mr. Sam Shekar, HRSA Associate Administrator, to the National Association of Community Health Centres. While the study is from the United States, the figures identified in Mr. Shekar's presentation, parts of which are reproduced as Appendix B,

²⁰ Eight measures: vision, hearing, speech, mobility, dexterity, feelings, cognition and pain

²¹ Simcoe Muskoka District Health Unit

²² Defined by Statistics Canada as: massage therapists, acupuncturists, homeopaths or naturopaths, Feldenkrais or Alexander teachers, relaxation therapists, biofeedback teachers, rolfers, herbalists, reflexologists, spiritual healers, religious healers, etc.

support the anticipated cost benefits of the FHT. Additional articles and abstracts on the costs of health care are included in Appendices B - G.

There are many other cost-saving advantages from the CHFHT including, reduction of avoidable admissions, better control of medications and reduction of drug inter-action costs as the patient-centred model would ensure that all medications taken by an individual patient would be known and many adverse reactions prevented.

Part D: Quick Reference Sheet- Critical Details

Name of Family Health Team	Lead Mailing Address	Contact Information

Family Health Team Characteristics:

1 Total population served and planned:

2 Catchment area:

3 Number and type(s) of Providers:

Type of Providers	Number
Physicians	
Nurse Practitioners	
Registered Nurses	
Registered Practical Nurses	
Mental Health Workers	
Dieticians	
Clinical Pharmacists	
System Navigators	
Total	

4 Proposed governance structure:

Not-for-profit corporation, with a ??? member board of directors representing physicians and allied health professionals, and ??????????

5 Core services:

All core primary care services required of a FHT.

6 Optional services

7 Special services

8 Service partnerships:

Administrative Requirements:

1 Timeline to become fully operational:

2 Type of funding partnerships and total contribution:

3 One-time start-up budget:

4 Annual funds requested from the Ministry for operational plans:

5 Total funding for multi-year business plan implementation (all years):

6 Single location or multiple location:

Appendix A: Staff Functions

MADOC

FHT Administrator (Madoc & Marmora)

- Oversees Both Madoc & Marmora Clinics
- Attends FHT board meetings (Secretary to Board)
- Responsible for financial, statistical and management reports to MOHLTC
- Budget
- Human resource management of professional & allied health personnel
- Liaise with partners

Office Manager (Madoc & Marmora)

- Human resource management of office personnel – Madoc & Marmora
- Bookkeeping & preparation of financial documents –Madoc & Marmora
- Billing – Madoc & Marmora
- Community resource expert & contact – Madoc & Marmora
- Tracking of screening tests – mammograms, etc and phone recalls - Madoc
- Ordering office supplies – Madoc
- Supporting the Administrator, as required.

Program Coordinator (Madoc & Marmora)

- Design of tracking program for screening, etc.
- Research and evaluation of effectiveness of screening and development of new programs (including liaison with other programs, e.g. Gateway, public health)
- Diabetic Clinic – organize, patient contact, track patients
- Creating template(s) to be used for other chronic illness management, etc.
- Teen Clinic
- Mental Health Clinic

Nurse Practitioner (Madoc)

- Individual Patient Assessment - Health assessment, immunizations, ordering laboratory-screening tests, diagnosis, treating illnesses and follow-up, health promotion and disease prevention counselling.
- Provide Same Day/ Walk In services to Family Medicine Patients for acute episodic illnesses.
- Provide house calls and community outreach visits when appropriate.
- Liaison with physicians and other team members as required
- Record and document as required by the CHFHT
- Arrange physician consultation if illness or treatment is outside NP's scope of practice.
- Specialist referrals and appointments in consultation with physician.
- Liaise with community agencies as required.
- Patient education; provide individual and group sessions to patients in the understanding and management of particular health issues

- Teaching: Inter-professional Team Members where it would help them in their practice
- Research: Participate in on-going research related to client groups of the BCFHT
- Provide clinic level leadership for education of nurses.
- “Seamless Care” Activities – Provide communication to hospital and community staff and other inter-disciplinary team members as required to ensure smooth transition for care between care sites.

Registered Nurse (Madoc)

- Triage for emergency patients, patients in office, telephone patients
- Assists physicians in procedures and emergency care
- Injections, dressings, ear syringing
- Patient referrals to physicians
- Phone call advice as required
- Diabetic Clinic – blood pressure, weight, etc.
- Preparing patients for physicals, etc.
- Coumadin monitoring and tracking
- Ordering medical supplies
- Stocking rooms

RPN (Madoc)

- Draw blood
- EKG
- Cleaning and autoclaving
- Assisting physicians and RN, as required

Receptionists (Madoc)

- Answering telephone calls
- Book clinic appointments for healthcare providers
- Filing
- Help with recalling patients
- Making referral arrangements
- Follow calls up as required by healthcare providers

Dietitian (Madoc & Marmora)

- Diabetic clinics in Madoc and Marmora
- Support for Teen Clinic (Madoc)
- Role will expand to cardiovascular and other programs

Social Worker (Madoc & Marmora)

- Counseling/psychotherapy
 - For patients families experiencing life cycle change problems
 - Psychotherapy for patients who do not have access to other mental health programs

- Liaison with other mental health programs (Geriatric/Youth, Community Mental Health)
- Support/education for team practitioners for the counselling that they do (especially: problems of counselling patients; medical ethics; doctor–patient and NP-patient relationship problems)

Foot Care – Chiropodist (Madoc & Marmora)

- Basic foot care
 - Shoe ware
 - Ulcer management
- especially for diabetics and the elderly

Kinesiologist (Madoc & Marmora)

- Diabetic clinic
- Teens.

MARMORA

Nurse Practitioner (Marmora)

- Individual Patient Assessment - Health assessment, immunizations, ordering laboratory-screening tests, diagnosis, treating illnesses and follow-up, health promotion and disease prevention counselling.
- Provide Same Day/ Walk In services to Family Medicine Patients for acute episodic illnesses.
- Provide house calls and community outreach visits when appropriate.
- Liaison with physicians and other team members as required
- Record and document as required by the CHFHT
- Arrange physician consultation if illness or treatment is outside NP's scope of practice.
- Specialist referrals and appointments in consultation with physician.
- Liaise with community agencies as required.
- Patient education; provide individual and group sessions to patients in the understanding and management of particular health issues
- Teaching: Family Medicine Residents, Medical and Nursing students.
- Teaching: Inter-professional Team Members where it would help them in their practice
- Research: Participate in on-going research related to client groups of the BCFHT
- Provide clinic level leadership for education of nurses.
- “Seamless Care” Activities – Provide communication to hospital and community staff and other inter-disciplinary team members as required to ensure smooth transition for care between care sites.

Registered Nurse (Marmora)

- Lab, EKG, Injections

- Preparing patients for rooms as required
- Autoclaving
- Ordering medical supplies
- Stocking rooms
- Diabetic Clinic – weight, blood pressure, flow sheets

RPN (Marmora)

- Draw blood
- EKG
- Cleaning and autoclaving

Receptionists (Marmora)

- Ordering office supplies
- Booking appointments
- Answering telephones
- Computer tracking
- Recalls
- Making referral arrangements
- Follow calls up as required by healthcare providers

Appendix B: Extracts from Mr. Sam Shekar's Presentation to NACHC

Remarks to the 2004 National Association of Community Health Centers Annual Convention and Community Health Institute

By Sam S. Shekar, Associate Administrator, Health Resources and Services Administration, U.S. Department of Health & Human Services

Web reference for presentation: <ftp://ftp.hrsa.gov/newsroom/Shekar-NACHC-Sept18-2004.pdf>

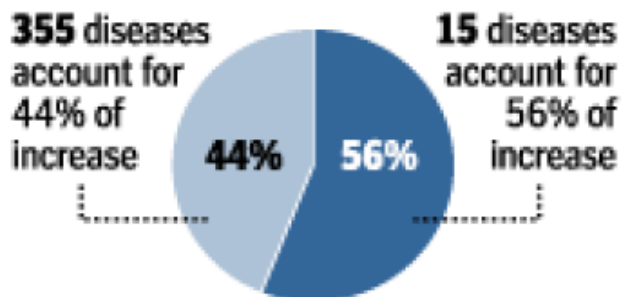
Slide 4:

Treating Chronic Illnesses

The Costliest Maladies

Between 1987 and 2000, health care spending rose from \$429 billion to \$628 billion in inflation-adjusted dollars, but a small number of diseases accounted for more than half of the increase.

Percentage of health care cost increase from 1987 to 2000 attributed to specific diseases:



Ranked by money spent in 2000

1. Heart disease
2. Pulmonary conditions
3. Mental disorders
4. Cancer
5. Hypertension
6. Trauma
7. Cerebrovascular disease
8. Arthritis
9. Diabetes
10. Back problems
11. Skin disorders
12. Pneumonia
13. Infectious disease
14. Endocrine disorders
15. Kidney disease

SOURCE: Health Affairs

THE WASHINGTON POST

From: 15 Illnesses Drive Up Costs. Connolly C. The Washington Post. Wednesday, August 25, 2004

Slide 18:

Health Center High Quality Care

Cost of treating Health Center Medicaid patients is 30-34% less than cost for those receiving care elsewhere; 26-40% lower for prescription costs; 35% lower for diabetics; 20% lower for asthmatics.

Center for Health Policy Studies. Final Report; November 1994.

Health Center Medicaid patients are 22% less likely to be hospitalized for potentially avoidable conditions than those obtaining care elsewhere.

Falik et al. Medical Care Vol. 39, No 6; 2001.

Health Center Medicaid patients are 19% less likely to use the ER and 11% less likely to be hospitalized for potentially avoidable conditions than those with a usual source of care who obtained care elsewhere.

ACSC II Study to be published.

Appendix C: Extract from Dr. Donnica.com

The First Study on Lifetime Medical Costs for Women

Donnica Moore, M.D.

Web reference: <http://www.drdonnica.com/news/00005412.htm>

Washington, D.C. (September 19, 2002) The Society for Women's Health Research, on behalf of The Partnership for Long-Term Health for Women, today announced the results of the first-ever study quantifying the lifetime medical costs of treating women with chronic illnesses. The study, conducted by Analysis Group | Economics, focused on women who have been treated for cardiovascular disease (CVD), diabetes, or stress urinary incontinence (SUI), three conditions that differentially affect women in the United States.

Lifetime incremental medical costs for women include \$423,000 for CVD, \$233,000 for diabetes (i.e., Type 1 and Type 2), and \$58,000 for SUI. These are the costs of treating a woman with the condition versus the cost of treating a woman without the condition. Coexisting conditions that may be increasing the cost of CVD include the added costs of hypertension, hypercholesterolemia, and obesity. Coexisting conditions that may increase the cost of diabetes include hypertension, retinopathy and nephropathy. Costs of stress urinary incontinence patients are also related to the treatment of coexisting conditions, such as menopause, obesity and urinary tract infection. The study examined both lifetime and annual medical costs for women.

"The findings show that the medical costs for treating women with these three conditions are staggering and we view these results as prompting a much needed call-to-action," said Phyllis Greenberger, MSW, President and CEO of the Society for Women's Health Research. "The study helps us raise awareness of the need for women to educate themselves about their potential health risks, understand the importance of disease prevention and the need for more research to advance treatments and therapies, as well as prepare themselves financially."

Annual incremental medical costs were also found to be high. The annual incremental medical costs for women up to age 64 who were treated for CVD, diabetes or SUI are \$6,700, \$5,550 and \$3,300, respectively. For women treated for hypertension and/or hypercholesterolemia (who also may have been treated for CVD), the average annual incremental cost is \$3,100.

According to published government statistics, medical costs to treat a woman 65 years and older are approximately **five times higher** than those of a woman aged 64 and younger. The annual incremental medical costs for women 65 years and older being treated for CVD, diabetes or SUI are \$30,700, \$25,000 and \$15,000, respectively. These lifetime cost findings are the first-ever estimates and suggest the need for further research and methodological developments. Both lifetime and annual figures are incremental costs, which are defined as the costs to treat the conditions and their

related co-morbid (i.e. coexisting) conditions. These costs may be driven by treatment of related CO-morbid conditions and patterns of medical services use.

“The study provides a snapshot of the high costs of treating women burdened with these conditions and demonstrates that medical costs for treating these women can be a great economic burden,” stated Howard Birnbaum, Director of the Health Economics Practice at Analysis Group | Economics in Boston, which conducted the independent study. “The results provide a starting point for policy discussions about the lifetime economic burden of illness for women and the nation. They also provide a good baseline for women to take appropriate action regarding their health and financial security.”

These findings serve as an indicator for what is spent on the medical treatment of women suffering from a particular disease. The study also conveys the need for policy makers to provide more resources for additional clinical research, gender-based healthcare information, and access to preventive care for all women.

The study’s research objective was to estimate the medical cost for treating women with CVD, diabetes, or SUI over their lifetime. Researchers used medical claims data from a national Fortune 100 company, which were supplemented with government statistics. The research sample included over 20,000 women. Women treated for each condition were matched to similar women (“controls”) without the condition (based on age, employment status, geographic locations, and per capita income levels).

The estimated costs of women 65 years and older are based on claims data and published government statistics. These annual cost estimates form the basis for calculating lifetime costs.

Prevalence of Cardiovascular Disease, Diabetes and SUI

Cardiovascular Disease is the leading cause of death among women. About 950,000 Americans die of cardiovascular disease each year, equaling one death every 33 seconds. More than half of all cardiovascular disease deaths each year occur among women.

Diabetes is a chronic, debilitating, and often deadly illness. It is the seventh leading cause of death in the United States alone. Diabetes is also a progressive illness that requires different treatments at different stages and has a high prevalence rate among women (8.2%), affecting approximately 8 million women in the U.S.

A May 2002 survey by the National Association for Continence found that stress urinary incontinence affects one in three American women in the US. SUI is the involuntary leakage of urine brought on by "stress" or pressure upon the bladder as a result of laughing, coughing, sneezing, lifting, or exercise, and often goes undiagnosed because women are frequently too embarrassed to discuss it. Estimates show only 1 out of 12 women will talk to their healthcare professional about SUI.

About The Society for Women's Health Research

The Society for Women's Health Research is the nation's only not-for-profit organization whose sole mission is to improve the health of women through research. The Society advocates increased funding for research on women's health, encourages the study of sex differences that may affect the prevention, diagnosis and treatment of disease, and promotes the inclusion of women in medical research studies.

About The Partnership for Long-term Health for Women

The Partnership for Long-term Health for Women was formed in 1999 by leaders from national and international organizations representing women, healthcare, aging, and minority communities who joined together to identify ways to provide women with accurate health information and empower them to take preventive action. The Partnership currently represents more than 50 national organizations and is funded by the Lilly Centre for Women's Health, whose mission is to produce extraordinary value for women by understanding and leveraging sex and gender-based research and the influential role of women in healthcare.

Appendix D: Article from Alliance for Aging Research

The Costs of Being a Woman!

Living Longer and Loving it! Winter 2003 Alliance for Aging Research

Web reference: http://www.agingresearch.org/living_longer/winter_03/costofwomen.cfm

It's no secret that chronic illnesses are costly to treat. But until now, few had any idea just how costly. A recent study examined three diseases that strike women especially hard - cardiovascular disease, diabetes, and stress urinary incontinence. The results show that these diseases have the potential to cripple you financially as well as physically. For example, it can cost \$423,000 over a woman's lifetime to treat her cardiovascular disease and the conditions associated with it, such as high blood pressure and obesity. The lifetime cost of treating a woman's diabetes and associated health problems is \$233,000; for stress urinary incontinence, a lifetime of treatment costs \$58,000.

Phyllis Greenberger, president and CEO of the Society for Women's Health, which announced the study, tells the Alliance, "This study clearly is a call for more research. Ideally, you don't want to spend the money on treatment, you want to prevent these conditions. Prevention research is very important." The study also should help women realize how essential it is to prepare themselves financially for obtaining the necessary care. "It makes the case for the importance of having health care coverage, and having health insurance coverage specifically for women as they age," Greenberger says. H

Howard Birnbaum of Analysis Group/Economics of Boston, which conducted the study, agrees, saying the study "demonstrates that medical costs for treating these women can be a great economic burden." The study's figures "provide a good baseline for women to take appropriate action regarding their health and financial security," he says.

The study represents the first-ever attempt to quantify lifetime medical costs, focusing exclusively on women. The study's findings included the costs of visits to doctors' offices, prescription drugs, hospitalization, and other medical service claims. It also included the cost of treating health problems typically associated with these three conditions.

"Cardiovascular disease is an area that women still don't think is important to them, when in fact, it's the No. 1 killer of women," Greenberger explains. Cardiovascular disease kills about 950,000 Americans every year, more than half of them women. Clogged arteries reduce the amount of blood and oxygen that reaches the heart or the brain, potentially causing heart attacks or strokes. For women under age 64, treating cardiovascular disease costs about \$6,700 per year. But for women aged 65 and over, that figure skyrockets to \$30,700 per year. On average, medical costs for women over 65 are five times higher than those for younger women, according to government figures.

A second chronic condition, diabetes, affects about 8 million women in the U.S. "Diabetes is an ever-growing epidemic, especially for women and minorities," Greenberger says. In fact, it is the seventh leading cause of death in the U.S. The study found that, for women under age 65, diabetes treatments cost \$5,500 per year. But once again, after age 65, that figure jumps dramatically, to \$25,000 per year. Overall, the lifetime cost of treating a woman's diabetes was \$233,000, or just over half as much as cardiovascular disease costs. That figure includes both Type 1 (juvenile-onset or insulin-dependent) diabetes, and Type 2 (adult-onset or non-insulin dependent) diabetes. The study also included the cost of treating accompanying conditions such as high blood pressure and retinopathy, an eye disease that damages the retina by weakening the blood vessels that nourish the retina.

Finally, the study considered stress urinary incontinence, or SUI. This condition involves the leakage of urine caused by pressure on the bladder from activities such as laughing, coughing, sneezing, or certain types of exercise. It often goes unreported and undiagnosed, perhaps because women dismiss its severity or are embarrassed to mention it to their physician. Nevertheless, once diagnosed, SUI treatments can cost \$15,000 annually for women over age 65, and \$58,000 over a woman's lifetime. "Nobody really wants to talk about this condition, so by including incontinence in this study, it highlights the need to do more research," Greenberger says. "Women may have these symptoms and think they're the only ones, or that nothing can be done about it. I think this study brings attention to an unmet need."

The study's researchers examined medical claims information from more than 200,000 women up to age 64 affiliated with a Fortune 100 company. For costs involving women over age 65, researchers used medical claims data and published U.S. government health statistics. In general, the study found, women with these medical conditions use more of all types of medical services than healthier women. In particular, women with cardiovascular disease and diabetes are hospitalized far more frequently than healthier women. Modern medicine can successfully treat these diseases, of course, but such advances come at a steep price. The bottom line, then, is that preventing these diseases in the first place makes good sense, both medically and financially.

Appendix E: The Cost of Obesity in Canada

The Cost of Obesity in Canada

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Web reference: <http://www.cmaj.ca/cgi/content/abstract/160/4/483>

BACKGROUND: Almost one-third of adult Canadians are at increased risk of disability, disease and premature death because of being obese. In order to allocate limited health care resources rationally, it is necessary to elucidate the economic burden of obesity.

OBJECTIVE: To estimate the direct costs related to the treatment of and research into obesity in Canada in 1997.

METHODS: The prevalence of obesity (body mass index of 27 or greater) in Canada was determined using data from the National Population Health Survey, 1994-1995. Ten comorbidities of obesity were identified from the medical literature. A population attributable fraction (PAF) was calculated for each comorbidity with data from large cohort studies to determine the extent to which each comorbidity and its management costs were attributable to obesity. The direct cost of each comorbidity was determined using data from the Canadian Institute of Health Information (for direct expenditure categories) and from Health Canada (for the proportion of expenditure category attributable to the comorbidity). This prevalence-based approach identified the direct costs of hospital care, physician services, services of other health professionals, drugs, other health care and health research. For each comorbidity, the cost attributable to obesity was determined by multiplying the PAF by the total direct cost of the comorbidity. The overall impact of obesity was estimated as the sum of the PAF-weighted costs of treating the comorbidities. A sensitivity analysis was completed on both the estimated costs and the PAFs.

RESULTS: The total direct cost of obesity in Canada in 1997 was estimated to be over \$1.8 billion. This corresponded to 2.4% of the total health care expenditures for all diseases in Canada in 1997. The sensitivity analysis revealed that the total cost could be as high as \$3.5 billion or as low as \$829.4 million; this corresponded to 4.6% and 1.1% respectively of the total health care expenditures in 1997. When the contributions of the comorbidities to the total cost were considered, the 3 largest contributors were hypertension (\$656.6 million), type 2 diabetes mellitus (\$423.2 million) and coronary artery disease (\$346.0 million).

INTERPRETATION: A considerable proportion of health care dollars is devoted to the treatment and management of obesity-related comorbidities in Canada. Further research into the therapeutic benefits and cost-effectiveness of management strategies for obesity is required. It is anticipated that the prevention and treatment of obesity will have major positive effects on the overall cost of health care.

Appendix F: The Cost of Treating COPD Patients

The Cost of Treating COPD Patients

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Web reference: <http://www.chestjournal.org/cgi/content/abstract/110/2/411>

OBJECTIVE: In greater Paris and its surrounding (as it is in all France), oxygen is home delivered by not-for-profit (NP) associations or profit-making (PM) health organizations. Both are financed by the national health insurance. This dual context and the current economic climate justify an economic evaluation of all respiratory care for patients with COPD receiving long-term oxygen therapy (LTO). This pragmatic approach identifies the variables that have the greatest impact on direct medical costs and estimates the annual cost for respiratory care per COPD patient.

DESIGN: Retrospective study.

SETTING: Health insurance scheme for self-employed professionals (CANAM).

PATIENTS AND METHODS: Between July 1985 and March 1994, 234 patients registered in CANAM files began LTO, 24% in the PM sector, 76% in the NP sector, mainly using concentrator (78%), mean age of 74 +/- 10 years, male predominance (74%), PaO₂ of 56.2 +/- 10.5 mm Hg, FEV₁/FVC of 43 +/- 15%, and 51% having 1 or more severe illness(es) associated. The economic appraisal was performed on a representative sample of 61 patients and measured the total resources consumption for respiratory care per COPD patient and per year (physician visits and tests, drugs, physiotherapy, oxygen therapy, hospitalizations for acute respiratory failure, transport costs).

RESULTS: A quarter of the patients in each sector did not meet the LTO prescription guidelines (PaO₂ > 60 mm Hg). For patients having their oxygen delivered by NP sector, the total ambulatory cost for respiratory care was lower (\$4,506 per patient and per year vs \$5,399) because they mainly used concentrator, all the other direct ambulatory costs being equal. The total annual cost for respiratory care of a COPD patient receiving LTO amounted to \$11,672 (NP and PM sectors merged). Oxygen therapy represented 73% of the total ambulatory cost. In a multiple linear regression model, hospitalization represented the largest share of cost, significantly higher when PaO₂ was 55 mm Hg or less (\$2,287 per patient per year vs \$8,717). In contrast, none of the covariates (age, sex, PaO₂, FEV₁/FVC) influenced at a significant level the total cost of visits, tests, drugs, and physiotherapy, amounting to \$1,507.

CONCLUSION: As oxygen treatment plays an important role in the variation of costs, further pragmatic studies should help to better understand what are the real motivations to choose one mode of oxygen administration more than another and should determine factors that may lead physicians sometimes not to comply with clinical guidelines.

Appendix G: The treatment and the economic cost of anemia

Economic burden of anemia in an insured population

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Web reference: <http://www.amcp.org/data/jmcp/Original Research 565 574.pdf>

OBJECTIVE: Anemia is a common hematological disorder characterized by reduced hemoglobin concentrations. Despite information on prevalence and associated outcomes, little is known about the impact of anemia on health care utilization and costs. This study examines anemia prevalence and associated medical costs and utilization, using administrative claims for adults newly diagnosed with anemia, including up to 12 months of follow-up.

METHODS: Patients predisposed to anemia, based on selected comorbid conditions (chronic kidney disease, human immunodeficiency virus, rheumatoid arthritis, inflammatory bowel disease, congestive heart failure, and solid-tumor cancers), were identified. Costs for anemic patients and a random sample of nonanemic patients with these conditions were compared. Associations were evaluated after adjustment for potential confounders using a regression model. Clinical care patterns were examined overall and by condition.

RESULTS: Anemia was observed in 3.5% (81,423) of approximately 2.3 million health plan members in 2000; 15% of anemic patients received an identified treatment, with transfusion being the most frequent intervention. Utilization and costs were significantly higher for anemic patients ($P < 0.001$). Average annualized per-patient costs were 14,535 US dollars for anemic patients (55% outpatient, 33% inpatient, 13% pharmacy), 54% higher than the 9,451 US dollars average cost for nonanemic patients (45% outpatient, 36% inpatient, 19% pharmacy). After adjustment for age, other comorbidities (e.g., chronic kidney disease and cancer), sex, and insurance type (indemnity, preferred provider organization/point of service, or health maintenance organization, in the Medstat MarketScan database), anemic patients had average costs that were more than twice the adjusted costs of nonanemic patients.

CONCLUSION: Medical costs for anemic patients are as much as twice those for nonanemic patients with the same comorbid conditions.

Economic Burden of Patients with Anemia in Selected Diseases

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Web reference: <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1524-4733.2005.00058.x>

ABSTRACT

Objective: To examine the economic impact of patients with anemia in selected diseases.

Methods: A retrospective cohort design was used to estimate the differences in costs between anemic and nonanemic patients. The analysis used administrative claims data (1999–2001) from a US population to assess direct costs and disability and productivity data (1997–2001) to estimate indirect costs. Adult patients with a diagnosis of rheumatoid arthritis (RA), inflammatory bowel disease (IBD), chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), cancer, or congestive heart failure (CHF) were identified. Costs were estimated using a generalized linear model, adjusting for age, sex, comorbidities, and disease severity. The adjustment variables for disease severity were based on ICD-9, HCPCS, or pharmacy codes. These costs were projected to a 1-million-member, similar population.

Results: The percentage of anemia patients varied among conditions (6.9–26.1%); the CKD population had the highest prevalence. CKD anemic patients incurred the greatest average annual direct costs (\$78,209), followed by CHF (\$72,078) and cancer (\$60,447). After adjusting for baseline characteristics including severity, the difference in direct costs between anemic and nonanemic patients decreased for all diseases; CHF patients incurred the greatest adjusted cost difference between anemic and nonanemic (\$29,511), followed by CKD (\$20,529) and cancer (\$18,418). Unmeasured severity and coding bias may account for a portion of the differences in the adjusted cost.

Conclusion: Anemia may substantially increase health-care costs at a level that is economically very relevant, despite the fact that these patients may comprise only one tenth of the overall anemic population.

Appendix H: The cost of smoking

Literature web references:

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