The Patient Journey Through Emergency Care in Nova Scotia

A Prescription for New Medicine

Prepared by Dr. John Ross
Provincial Advisor on Emergency Care
October 2010

The Patient Journey Through Emergency Care in Nova Scotia

A Prescription for New Medicine

"Many years ago, I sat down with the administrators of a major hospital to think through the mission statement of the emergency room. It took us a long time to come up with the very simple, and (most people thought) too obvious statement that the emergency (department) was there to give assurance to the afflicted...The doctors and nurses GIVE ASSURANCE.

We worked it out, but it sounded awfully obvious. Yet translating that mission statement into action meant that everybody who comes in is now seen by a qualified person in less than a minute…some people are rushed to intensive care, others get a lot of tests, and yet others are told…don't worry…But the first objective is to see everybody, almost immediately—because that is the only way to give assurance."

~ Peter F. Drucker[1]

[1] Peter Drucker. *Managing the Non-Profit Organization*. Oxford: Butterworth-Heinemann, 1990.

Contents

Executive Summary

Examination of the Problem

In September 2009, the Nova Scotia government appointed Dr. John Ross—a 20+ year veteran emergency physician—as its first provincial advisor on emergency care. Over the past year, Dr. Ross visited or spoke with staff from every Emergency Department (ED) in the province. He talked with doctors, nurses, paramedics, and other health-care workers; district health authority management and board members; community health boards; and civic leaders, citizen groups, and patients.

In summary:

> *"...most residents of this province have become accustomed to a level of access and quality that is less than what Nova Scotians deserve. ... When they cannot get in to see their family doctor for six weeks—a common enough occurrence—they conclude 'I guess that is the way it is.' Then they thank their good fortune at having an Outpatients Department nearby where they can at least go to see a physician. Ironically, the doctor they finally see in the Emergency Department may be the same family doctor they couldn't get in to see earlier that day at their office.* ***This is not how the 'system' is supposed to work.****"*

In this report, the symptoms and diagnosis of a system not working are presented. The Emergency Department is simply the canary in the coal mine, alerting people to the troubles that are putting the entire health care system at risk.

Finally, this report prescribes the treatment—recommendations to make the "patient journey" work the way it should—for patients, of course, and for all who care for them.

Symptoms and Diagnosis

In conversations with hundreds of people, common themes recurred.

- People wait too long for emergency care and to see their doctor.
- People are confused about where to go if they have a medical problem.
- People are afraid of losing existing health services.
- People have a limited understanding of paramedics' knowledge and skills, and are concerned about the cost of calling an ambulance.
- Access to mental health services is limited.
- People trust their doctors and nurses, but distrust District Health Authorities and the Department of Health.
- People want more doctors and nurses hired.

The report presents common myths that have grown in the absence of factual information. These myths deal with how the different parts of the health care system interact (or don't interact) with each other; how the system is funded; how staff are working and trained; and who is going to Emergency Departments, and why.

The Treatment

In response to the concerns identified, recommendations are offered relating to six areas: funding and standards; bigger hospitals; smaller hospitals; Emergency Health Services (paramedics); care for seniors; and mental health emergencies.

For Funding and Standards

Use standards to set the bar for delivering quality care. Make quality of patient care and performance the basis for funding.

Funding should be performance-based and linked to improved health outcomes, while remaining fiscally responsible. As well, patient- and provider-centred funding models must be developed to promote better health outcomes and support recruitment and retention. The province paid doctors $661 million in 2009 and is expected to pay $699 million in 2010–11. Everyone—including doctors—wants to ensure health outcomes are improving as a result of this investment.

No standards exist for emergency care anywhere in Canada. Standards will raise the quality of emergency care and bring consistency to every region. Nova Scotia should be the first province to adopt and meet them.

For Bigger Hospitals

Move patients out of Emergency Departments sooner.
It will ease overcrowding and reduce wait times.

In bigger hospitals, the major problem is overcrowding.

Some patients need more options, including same-day or next-day primary-care appointments and after-hours clinics. People requiring emergency care need to be discharged or moved to a hospital bed as quickly and safely as possible once the emergency is stabilized, in order to accommodate those who have not yet been assessed.

Moving patients into special-purpose areas can speed patients' access to a decision-maker. For example, "fast-track" areas can be available for assessing and treating minor injuries and illness. Some common diagnostic tests could be performed by

staff in the fast-track areas. X-rays and other common tests for emergency patients should be considered high priority by the hospital. Other types of providers should be considered to work with doctors in the Emergency Department.

The new Rapid Assessment Unit at the Halifax Infirmary allows patients who are waiting for specialist consultations to be diverted out of the Emergency Department, to ease overcrowding and reduce wait times.

Most people who go to Emergency—85 to 90 per cent—are not admitted to hospital. The 10 to 15 per cent who do require admission, however, stay in the Emergency Department for hours or days. That prevents the department from functioning effectively. Patients do not receive timely assessment and are left worrying that they have a serious condition that will get worse. Some have simple conditions that nonetheless need a few moments of medical expertise. In all cases, tens of thousands of hours of peoples' valuable time is spent waiting.

Other recommendations include:

- staggering shift changes so all staff aren't leaving and arriving at once
- improving communications with patients who are waiting, as well as among hospital staff, paramedics, and outside agencies (e.g., those offering home care)
- reviewing and changing the roles of everyone who works in and around the Emergency Department, so everyone's experience and skills are being used to their fullest extent
- training more experts in emergency care
- staffing Emergency Departments to meet patient needs, including moving staff from other parts of the hospital to cover for staff who are sick

For Smaller Hospitals

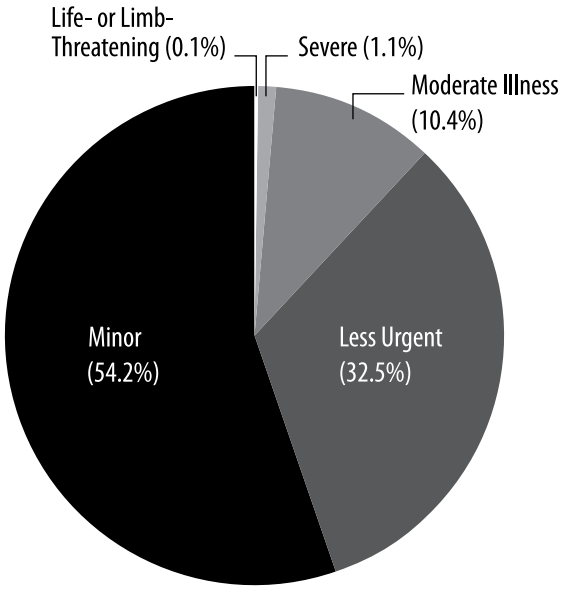
In communities with small hospitals, provide better access to primary care, including same-day or next-day appointments.

Almost 90 per cent of visits to small Emergency Departments are for problems that could be adequately treated in a clinic setting, and most of those visits occur during the day and evening. Random Emergency Department closures cause confusion and considerable concern if there are no other options.

Emergency Department closures create uncertainty:
In 2009-10, Emergency Departments were closed for more than 19,000 hours—or the equivalent of 795 days—province wide.

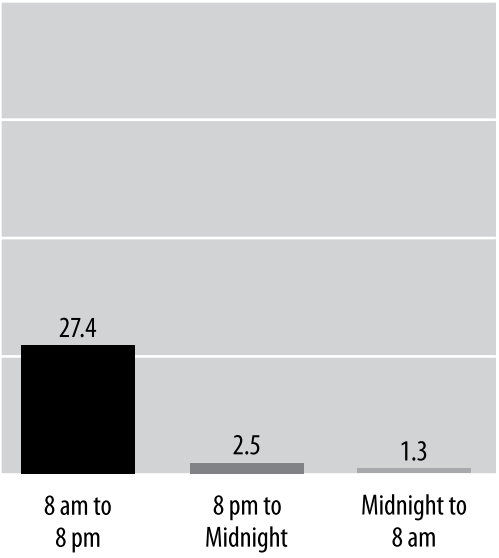
As in larger hospitals, many patients go to emergency or outpatient services in smaller hospitals because they cannot see their doctor. Many communities reported a six-week wait for a doctor's appointment. Improving access to primary care—doctors, nurse practitioners, mental health workers, or other primary caregivers—is a vital part of health-care reform.

Vast majority of visits are for non-emergency care



The public expectation is that the staff in any Emergency Department will render expert care. However, it is very difficult for doctors and nurses to maintain their emergency care skills when they rarely manage severe emergencies.

Night-time visits are rare
Summary of visits to one smaller Emergency Department, 2009–10 (see p. 49).



One smaller hospital averaged about one patient per night. Then the on-call doctor and nurse may not be available to work the next day. Are valuable staff being used effectively when most people need them during the day and evening?

Overnight shifts are costly:
The average cost to taxpayers for having doctors on overnight emergency call for small hospitals is $350,000 to $700,000 per year per site.

But serious emergencies DO occur and people must have quick access to the care they need. Primary and emergency care can be provided far more effectively than it is today. The public can gain far better access to appropriate primary care, while having reliable and predictable emergency care when it is needed.

We need to develop more clinics that deliver primary care and chronic disease management through open access (same-day or next-day appointments) and collaborative teams of doctors, nurses, and allied health providers. This is already happening in parts of Nova Scotia.

Minor emergency care can be provided in Community Health Centres and small hospitals that have collaborative teams under one roof (a Collaborative Assessment Room for Emergencies, or CARE). Major emergencies should be cared for and transported by Emergency Health Services (EHS) directly to the most appropriate regional or provincial hospital in the shortest time possible. The cost of EHS use must be addressed.

Aside from services on-site, nurses working with Health Link 811 can provide advice on minor emergency care. As well, paramedics can provide basic care during home assessments, arrange clinic follow-up, or provide more advanced care while transporting patients to hospital.

Developing innovative on-call systems by leveraging current technology must be part of the solution. This will free up more doctors to provide daytime care, while ensuring patients in every community can get the emergency care they need. This should also include using Telemedicine technology to link experienced doctors with other providers who can provide care even when a local doctor is not on site.

Each community is distinct, yet all are passionate about their health care. There is not one solution that fits all communities. A community's energy and ideas must be the driving force as 'full service' Community Health Centres are formed.

For Emergency Health Services (Paramedics)

Use paramedics to bring advanced emergency care to where people live and work.

Emergency Health Services-—delivered by highly trained paramedics who can bring life-saving care to people's doorsteps—must also be enhanced. And when paramedics bring patients to hospital, they should be able to get patients into the Emergency Department quickly—within 20 minutes for 9 out of 10 patients. Some alternatives to using paramedics for routine transfers should also be examined, in the interest of making the best use of valuable paramedics' time.

For Seniors' Care

Give seniors the care they need in the right place.

A visit to the Emergency Department creates anxiety for anyone. Imagine the added stress of the noise, bright lights, and rapid pace when the patient is elderly. With this in mind, all Emergency Departments should analyze their processes, physical layout, and approach.

Many seniors land in Emergency Departments when what they really need is care provided in their home or nursing home. Improving access to these services should be a priority.

For Mental Health Emergencies

Use Emergency Departments as an uncommon exception.

Mental health patients often end up in Emergency Departments because it is "the path of least resistance." Yet they would be better served outside the Emergency Department. Providing greater access to mobile crisis teams across the province is recommended. The government's commitment to creating a provincial mental health strategy is also welcomed.

Prognosis: There is hope

In larger hospitals, people want to see and experience shorter wait times in the Emergency Department. This requires better collaboration of primary care providers (more evening access), whole-hospital flow improvement, and collaboration with Continuing Care. It is absolutely possible, but it requires clear leadership and the right incentives.

In smaller communities, Nova Scotians fear losing the defining element of their hospital—their Emergency Department—in some cases after having already lost surgery, obstetrics, and other services.

This report is about GAINS, not losses. Shorter wait times in larger Emergency Departments. Same-day or next-day access to doctors and other care providers that can meet the needs of the vast majority of patients. Emergency care available to all.

Summary of Recommendations

For Funding and Standards

Use standards to set the bar for delivering quality care. Make quality of patient care and performance the basis for funding.

1. Forge a new health care funding path.
2. Develop innovative patient-centred and provider-centred funding models for physicians.
3. Adopt the recently developed Emergency Department Standards.

For Bigger Hospitals

Move patients out of Emergency Departments sooner. It will ease overcrowding and reduce wait times.

4. Provide better access to primary care to take the pressure off Emergency Departments.
5. Stream emergency patients into special-purpose areas.
6. Stagger shift changes and offer more shifts of varying lengths.
7. Improve communication with people who are waiting and among hospital staff, EHS (paramedics), and outside agencies.
8. Give non-traditional providers a bigger role in the emergency health system.
9. Produce more specialists in emergency care.
10. Staff the Emergency Departments to adequately meet patient needs.
11. Ensure that at least 90 per cent of admitted patients are in the Emergency Department less than eight hours.
12. Use information technology to track and enhance the patient journey.

For Smaller Hospitals

In communities with small hospitals, provide better access to primary care, including same–day or next–day appointments.

13. Make access to primary care a priority.
14. Make emergency care a seamless part of primary care.
15. Consider an evolution of select Emergency/Outpatient Departments to a Collaborative Assessment Room for Emergencies (CARE) model.

16. Develop very clear policies around hours of operation, ensuring the priority of patient safety at all times.
17. Consider an innovative on-call system for clinicians.
18. Harness the energy and capacity of communities.
19. Communicate, communicate, communicate.

For Emergency Health Services (Paramedics)

Use paramedics to bring life–saving care to where people live and work.

20. Improve the ambulance patient offload time to 20 minutes, 90 per cent of the time.
21. Develop shuttle services for select hospital transfers to maximize the use of the paramedics' scope of practice.
22. Better coordinate the movement of patients between facilities to make the best use of resources.

For Seniors' Care

Give seniors the care they need in the right place.

23. All Emergency Departments should analyze their processes, physical layout, and approach through the lens of an elderly, confused, and scared patient.
24. As continuing care becomes a responsibility of District Health Authorities (DHAs), all DHAs should support proactive alternatives to emergency and acute care.
25. People over the age of 75, who are frail and see a primary care clinician, should be assessed using the Comprehensive Geriatric Assessment Tool.

For Mental Health Emergencies

Use Emergency Departments as an uncommon exception.

26. Provide access to more Mobile Crisis Teams in Nova Scotia.

Background

Mandate

Nova Scotians should expect to have timely access to emergency services that includes getting quickly to the most appropriate emergency health-care provider. As the Provincial Advisor on Emergency Care, I have been tasked with leading emergency care improvements with the goal of significantly improving the delivery of emergency services in Nova Scotia.

The purpose of my current review is to visit individual communities within District Health Authorities (DHAs), listen to local concerns, find common themes, and develop a provincial strategy for the whole emergency services system instead of the current individual temporary solutions that have occurred over time. I have met many experienced, knowledgeable, and caring people in Nova Scotia who together can supply the answer: the Advisor role is to collect those solutions, acting as a voice for the people I have met, and present them to the Deputy Minister and the Minister of Health.

(Mandate statement from the Interim Report, April 2010)[2]

A Brief Review of the Interim Report

In *Emergency Care in Nova Scotia: Interim Report*, released in April 2010, seven main themes were highlighted under 'What I Learned':

1. Create provincial Emergency Department standards.
2. Improve access to primary care.
3. Address wait times at regional and referral hospital Emergency Departments.
4. Improve emergency care of the elderly.
5. Identify and address the role of the hospital Emergency Department as a social safety net.
6. Improve access to emergency mental health care.
7. Develop reliable data—in the process ensuring improved and transparent data access and analysis—to inform decisions.

[2] John Ross. *Emergency Care in Nova Scotia: Interim Report*. Nova Scotia Department of Health: April 2010

Since the April report, visits and follow-up have occurred with health districts around Nova Scotia. During visits to over 30 sites with Emergency Departments, I heard valuable opinions and recommendations from Emergency physicians, family physicians, internists, surgeons, radiologists, nurses, paramedics, social workers, mental health staff, dieticians, pharmacists, physiotherapists, managers, vice presidents, chief executive officers, District Health Authority board members, Community Health Board members, and citizens from around the province. By listening to the opinions of people who work near the "coal face," I now have a better understanding of what works and what does not. Some advice has recurred over and over, confirming its importance and value. Innovators in Ontario, British Columbia, and Saskatchewan have also contributed experiences and advice. As well, numerous reports published by a broad range of groups in North America, the United Kingdom (UK), and Australia have influenced this report. I heard many good ideas about how Nova Scotia can invest its tax dollars more wisely, given our population of just over 940,000 and an annual health care budget of $3.4 billion.

Despite 20+ years as a full-time Emergency physician, educator, and administrator, this has been a year of profound learning and reflection. My clinical career has been based in a busy urban teaching centre. Over the years, I have been honored to work with highly skilled people in Halifax and also across the province as a Trauma Team leader and instructor, Life Flight physician, Poison Centre consultant and airway procedures instructor. While working on this report, I have been both gratified and humbled to meet with so many dedicated people—clinicians, DHA executive teams and boards, and Community Health Boards—who profoundly care about making our health-care system better for patients. Much of this report is composed of their ideas and opinions, collected during meetings and interviews across Nova Scotia. The public should be confident: visionary leadership exists and great ideas are out there. We are in good hands.

A Caution About Disease Care, Health Care, and Patient-Centred Care

Health-care services for Nova Scotians are usually referred to as the "health-care system." In this province, as in every other province in Canada, that term is a misnomer. Its use contributes to some of the problems facing emergency care in this province. In truth, we have a "disease-care non-system." Clear language is necessary to sort and compartmentalize the issues that require resolution.

A landmark 1974 report by Marc Lalonde, Minister of National Health and Welfare, was one of the first documents to point out that Canada's emphasis on a purely biomedical "health care" system is wrong. Instead of being consumed by increasingly sophisticated and expensive sickness and disease care, *A New Perspective on the Health of Canadians*[3] recommended placing a new emphasis on four broad elements—

human biology, environment, lifestyle, and health-care organization—as the keys to health. From the report's point of view, true "health" exists outside, rather than within, the traditional and existing "health care" system. The report placed an increased onus on individuals to change their behavior and take responsibility for disease prevention and true health promotion. It also recommended identifying the segments of the population at highest risk for disease, and focusing attention on them.

It is staggering to read the report 36 years later and see, now as then, virtually identical descriptions of preventable diseases and the resulting hospitalizations and deaths. Unfortunately, the report's sage advice has been largely ignored. Most of the Canadian "health care" system is managed and delivered by professionals who are trained in the "disease care" model. Medical and nursing training programs spend little time on prevention and health promotion. Instead, the health-care professionals of tomorrow are trained in a type of reactive disease care, which strives endlessly for more expensive diagnostic tools and treatments. The word "system" refers to a set of interacting or interdependent entities forming an integrated whole. Our system simply does not meet those criteria.

Our population is trained to believe that magical things can happen in hospitals. The public is left to believe that those of us who practice the magic art of medicine can diagnose and undo all the stresses and strains of today's society. A test, pill, or operation absolves us of responsibility for managing our own affairs. We can eat too much fried food, avoid exercise, abuse alcohol and drugs, drive too fast without seat belts or bike helmets, and take on increasingly higher levels of stress, and still expect the system to take care of us when totally predictable—and fully preventable—illness and injuries occur. We want our system to be all things to all people all the time. Mostly this unsustainable disease-care "non-system" is anything but.

Anyone who has been a patient or accompanied a patient to an Emergency Department quickly discovers that the realm they are entering is dysfunctional—a non-system if you will: multiple specialty groups that do not communicate with each other; multiple delays and hand-offs; partial data; little accountability; and, in the end, limited evidence that all these investments and activities produce the desired outcomes.

There is a better way. Several excellent recent reports have nicely summarized the qualities of patient-centred care (PCC). The Ontario Medical Association policy paper sums up patient-centred care as "a system where patients can move freely along a care pathway without regard to which physician, other health-care provider, institution or community resource they need at that moment in time. This system is one that would consider the individual needs of patients and treat them with respect and dignity."[4]

[3] Marc Lalonde, *A New Perspective on the Health of Canadians: A Working Document*. Government of Canada, 1974.
[4] Hanna, A. "Patient-Centred Care," *Ontario Medical Review* (June 2010): 34.

In his 2009 report to the Saskatchewan government, Steven Lewis, a respected health policy advisor, highlighted the following characteristics of patient-centred care:[5]

1. Respect for patients' values, preferences and expressed needs.
2. Coordination and integration of care.
3. Information, communication, and education.
4. Physical comfort.
5. Emotional support.
6. Involvement of family and friends.
7. Delivery systems that provide for caring hand-offs between different providers and phases of care.

PCC is talked about in many disease-care settings. Unfortunately, it has become more of a slogan than a practice or the foundation of a strategy. Instead, much of today's disease-care system is provider-centred—designed for the convenience of the practitioners. By that measure it is a rousing success. Patients, however, have a different perspective. (See Appendix 1.)

After visiting almost every Nova Scotia community with an Emergency Department or "outpatients" unit, I've concluded that most residents of this province have become accustomed to a level of access and quality that is less than what Nova Scotians deserve. They are afraid to question the availability or the quality of our doctors and nurses for fear that those providers become offended and leave. When they cannot get in to see their family doctor for six weeks—a common enough occurrence—they conclude "I guess that is the way it is." Then they thank their good fortune at having an outpatients department nearby where they can at least go and see a physician. Ironically, the doctor they finally see in the Emergency Department may be the same family doctor they couldn't get in to see earlier that day at their office. This is not how the "system" is supposed to work.

True patient-centred care is possible if the disparate services and providers truly embrace the concept and use it as the unifying principle to create an interdependent system. Nova Scotia's primary health-care professionals are working to make this a reality. This report attempts to use true people-centred care as the principle on which to rebuild emergency care.

[5] Steven Lewis, *Patient-Centred Care: An Introduction to What It Is and How to Achieve it – A discussion paper for the Saskatchewan Ministry of Health*. 2009. p. 1.

The Journey

The report is called "the patient journey" because, in the simplest terms, caring for patients is why a coordinated system was needed in the first place. First came the sick person; second came the caregiver. As the number of sick people and caregivers increased, a system that could support them was needed. And yet fast forward to 2010 and the natural order of things has been reversed. We have allowed the system to see the patient more as a burden than its very reason for being. To some, patients are 'cost drivers' and to others they border on being nuisances who get in the way of a smoothly functioning bureaucracy.

The shift has been gradual. In the middle of the 18th century the origins of diseases and their treatments began to be discovered. Also, doctors began dividing the body into separate functional groups. The medical and surgical specialties evolving from this process have greatly advanced our ability to diagnose and treat disease. But, they have also resulted in separate silos that do not communicate and rarely consider the patient as a whole. Patients, as a result, are left to make their way through and between these opaque and incomprehensible specialists' silos with little help from practitioners who are sometimes unsure how their own area is supposed to function, let alone how to navigate the larger path ahead.

The automobile giant Toyota, over time, perfected the complicated process of linking a series of specialists along an assembly line. They created a culture of cross-functional teams in which anyone along the line could stop the process if they found a problem. But its success required a high attention to quality monitoring and improvement as well as a solid understanding of the final objective of all those specialists—building a good, safe vehicle. Toyota's recent history has demonstrated that without those overarching principles, and strict attention to them, fortunes and reputations can fall hard.

Nova Scotia is well positioned to be a leader in patient care and health promotion. But for that to happen it must do things differently. Consider the following example, which (through the bracketed numbers) indicates the number of people and hand-offs a patient would experience in the course of an emergency procedure.

Tom, 68, developed chest pain, nausea, and whole-body sweating. His wife Mary, concerned it might be his heart, called the family doctor's office, unsure what to do. The receptionist (1) answered and while the doctor was busy, asked the nurse (2) to talk to Mary. The nurse heard the story and recommended they go directly to the Emergency Department (ED). Mary drove Tom to the hospital and pulled up to the ED and asked the volunteer (3) to get a wheelchair. She wheeled Tom into the ED and spoke to the first assessment/triage person (4). It was quickly determined that a 12-lead electrocardiogram (ECG) was needed. An ECG tech (5) was paged and arrived soon after. The ECG results were given to a doctor (6) who determined Tom was having a heart attack. He was then moved into a special room where two different nurses (7 and 8) attached monitors and started IVs. While a blood technician (9) from the lab took blood, a registration clerk (10) obtained some information and placed a name bracelet on his wrist. The doctor returned, and after a few questions, a nurse started running a clot busting drug though one of the IVs.

On a good day, that's how the treatment of a heart attack would proceed in many parts of Nova Scotia and across Canada. Even then, delays between each step would likely add time to the process. In a growing number of Nova Scotia communities, however, the following occurs:

> *Tom, 68, developed chest pain, nausea, and whole-body sweating. His wife Mary, having watched the local TV station, knew to call 911 (1). Within minutes, paramedics arrived at the house. The two paramedics (2, 3) assessed Tom and suspected a heart attack. They attached some monitor leads while assessing his vital signs, and performed a 12-lead ECG. It was quickly determined that Tom was having a heart attack that could benefit from "clot busting" medication. They used their special checklist and were assured there was no reason not to give the drug. Contact was made with the Emergency physician (4) in the regional Emergency Department who, as a second opinion, confirmed the patient complaint and ECG indications for the medication. Paramedics administered the medicine in the ambulance on the way to the hospital.*

In a case where every minute that an artery is blocked results in more heart damage, this example represents a huge time saving and an improved process that enhances patient safety and quality of care. From Tom's point of view, such an arrangement represents a journey to the most appropriate treatment—one that was created for the patient rather than the convenience of the provider.

With a population of less than one million people, but a full spectrum of care services, Nova Scotia is poised to make major strides in providing for the current and future needs of its population. We can also show other provinces what can be done to improve the patient's lot. Nova Scotia, through the input of many health-care professionals and Community Health Board members, has developed the first provincial Emergency Care Standards, which will be released soon after this report. They cover the fundamentals of good emergency care and are intended to raise the quality of care and ensure consistency across the province. Some of the performance expectations will be difficult for some hospitals to meet. Despite the challenges, there are tremendous opportunities.

The Symptoms

In conversations with hundreds of people about the state of emergency care in Nova Scotia, common themes began to recur. The coast-to-coast nature of the challenges suggests that with the necessary will, courage, and focus we can address those common issues in a manner that will have a significant impact on patient outcomes and, in some cases, take emergency care in this country in a fresh new direction.

These are some recurring complaints:

- Patients have to wait far too long—in worst cases up to seven weeks—to see their family doctor.
- Nova Scotians trust their doctors and nurses, but distrust Health Authorities and the Department of Health. They are also confused about who is accountable for health-care delivery decisions.
- People are confused about where to go if they think they have a medical problem.
- Nova Scotians are afraid of losing their existing health services.
- It was suggested numerous times that Nova Scotia should hire more doctors and nurses.
- Regional Emergency Departments are overcrowded and patients face long wait times.
- Many people, including some hospital staff, do not know about the broad scope of knowledge and skills of Emergency Health Services' paramedics.
- The ambulance fees charged by Emergency Health Services (EHS) are not well understood by the public, and may be a barrier to using the service. Worrying about having to make a choice between calling an ambulance or buying food for the family should not be a concern during a medical emergency.
- Conversely, ambulance transfers between hospitals do not have any fees. Many inter-hospital transfers do not require the skills of trained paramedics who could be used elsewhere in the system. Furthermore, paramedics spend a long time standing in Emergency Department hallways waiting to deliver patients—again, a poor use of that limited resource.
- Although most Nova Scotians have little understanding of how doctors are paid, access to doctors is driven, in part, by how they are compensated. Compensation for Emergency Physicians is not competitive within the Maritimes or the rest of Canada. That makes it more difficult to attract and keep physicians trained in Emergency Medicine in Nova Scotia. Family Physician funding schemes are different and may or may not encourage doctors to see patients in their offices urgently.

- Emergency mental health services are severely inadequate.
- Historically, the common solution to staffing problems has been to spend more money. Instead of endlessly spending more, we need to spend what we have more wisely.

The Diagnoses

There is no way to begin to address problems with emergency, primary, and continuing care without confronting the many enduring myths about health care in this province. These myths get to the root of the broader issues within our system. For larger hospitals the issues are mainly around flow of access and treatment. For smaller hospitals most of the issues relate to primary care access.

MYTH ***There is a recognized standard of emergency care across the province.***

A customer can go into a well-known coffee shop anywhere in Nova Scotia and expect the facility, service, and products to be essentially of the same quality. Why can't they expect the same for emergency care? Of course, providing emergency services is more complicated than serving a coffee and donut. But the principles should be the same. Emergency Department Standards have been developed, with the input from many health professionals, District Health Authority executives and boards, and Community Health Board members. These are the first such provincial standards in Canada. These are needed to raise the bar on quality of care and 'level the playing field' so that people can be assured that geographical location will not affect their access to emergency care.

MYTH ***We need more doctors and nurses.***

Not necessarily. In truth 94 per cent of Nova Scotians have an identified family doctor. But that alone doesn't necessarily mean everyone sees a doctor when they most need one.

Demand to see a doctor is driven by several factors:

- Health problems arise as usual from time to time and chronic conditions require on-going monitoring.
- Since there are no specific criteria for visiting a doctor, people may want to see one for many reasons. But in some cases they may not need a doctor. A pharmacist, social worker, home-care provider, or physiotherapist could actually be a better choice.
- Many employers demand a physician's assessment and note if an employee misses time due to illness. Publically funded Emergency Departments should not be used for occupational health assessments.
- Clinicians like doctors and nurses are sometimes a substitute for mothers and grandmothers when young people move away for school and work.
- Self-diagnosis via the Internet appears to create more concerned people. At the same time, despite the information explosion, people are less knowledgeable about self-care than they were 15–20 years ago.

- People have become health-care "consumers" and want to decide when and where they access health-care delivery. Also, work demands result in greater need for after-hours and weekend access.
- Life is generally more stressful, causing symptoms that can be interpreted as medical problems.
- People are living longer, often with multiple chronic health problems that require on-going maintenance. The demand for continuing care at home, with assistance from visiting professionals, or in Long-Term Care homes, already out-strips supply. We are facing an accelerating increase in demand for more of this type of care.

Access to doctors, on the other hand, is also determined by several factors:

- Many doctors are paid according to the number of patients they see or procedures they perform. This can lead to medical offices that strive to see more uncomplicated patients that require shorter visits. This is unfortunate for several reasons: with time such doctors lose the skills needed to treat truly sick patients. There are also fewer openings for unexpected patients who are left to seek care elsewhere—often in Emergency Departments.
- A Winnipeg study[6] showed that family doctors aged 30–49 in 2001 saw 20 per cent fewer patients than their peers did ten years before. Doctors in the 50–59 age group saw 5 per cent fewer while doctors aged 60–69 saw 30 per cent more in 2001 than a similar age group did in 1991. This shift is due to the following:
  - Generational differences: older doctors grew up in an era where there was a different work/life balance.
  - Gender differences: there are more female doctors working part-time. They are more likely than male doctors to need time away from work to raise a family and want greater work/life balance. This phenomenon has been reported elsewhere in Canada. There are many factors at play, but simply put, replacing one retired older physician may require two younger doctors unless there are other practice changes—such as adding other types of clinicians or changing patients' expectations.
- The overall Canadian population is aging. Older patients take longer to assess and treat, reducing total throughput.
- Fewer doctors provide house calls, go on-call or work in evening clinics because there is little financial incentive to do so and because they are making different personal life-style choices.

[6] Diane Watson et al., Supply, Availability and Use of Family Practitioners in Winnipeg. Manitoba Centre for Health Policy, Department of Community Health Sciences, Faculty of Medicine, University of Manitoba, 2003.

- Some doctors decide to work in walk-in clinics as employees because they want a stable income without the overhead expenses of running their own offices. Walk-in clinics, open on evenings and weekends, fill a need for busy Nova Scotians with conflicting work and family demands, whom are searching for convenient health care. But, the location and function of many walk-in clinics are not coordinated as part of an overall District Health Authority strategy. These clinics are also independent businesses without linkages to other health-care "outlets," such as family doctor' offices, multi-disciplinary clinics, and Emergency Departments. As such, their convenience comes at the following cost:
  - fewer family doctors, working with multi-disciplinary teams, to provide patient-centred care
  - reduced continuity of care
  - variable quality of care
  - no utilization controls. A patient can get five "second opinions" in a day, and doctors can practice "turnstile medicine" to take in more taxpayer-funded revenue without necessarily improving health outcomes.

Registered nurses are also in great demand. They provide not only traditional bedside roles but also work in clinics, become managers and leaders within hospitals and DHAs. Due to demographic trends many have begun retiring or working casual or part-time. A nursing shortage looms. Exactly what kind of a shortage is hard to quantify. At blame, it seems is a system that is working at cross-purposes with itself: at a time when Nova Scotia is short of bedside nurses we are creating more nurse management positions that take experienced nurses away from clinical care. Some registered nurses question whether licensed practical nurses (LPNs) have the right training for clinical, bedside settings—even though integrating LPNs in some traditional RN positions has worked out very successfully, and must be further explored. We need an overall plan to provide the province with the right type of nurses (clinical and non-clinical), where and when we need them.

MYTH ***We could keep Emergency Departments open if we made all doctors and nurses share the load.***

At public meetings during DHA visits, some participants wondered why the government does not mandate that all doctors in a DHA cover ED shifts. Such a step would leave a bigger problem:

- Forcing people to do things that that they don't necessarily want to do is not a long-term strategy.

- Not all doctors and nurses have training in emergency care. Many feel unqualified to manage severely ill or injured patients. Some doctors, who nonetheless feel duty-bound to cover the ED in their community, hope that certain kinds of sick people will not show up during their shift because they rarely get to practice the skills needed to manage them.
- In addition to not having the necessary knowledge or skills, clinicians in EDs are also at higher risk of being sued if there is a poor patient outcome. It is in the best interest of everyone—patients, hospitals, and clinicians—that the most appropriately trained people deliver emergency care.

Staff shortages and closures, in other words, exist because the province lacks enough qualified and able people to provide the necessary coverage. As of today, the Halifax Infirmary ED, most of the Regional EDs, and many Community EDs are short of experienced, qualified emergency staff.

MYTH ***Nova Scotia cannot afford to train doctors and nurses in emergency care.***

The fact is Nova Scotia cannot afford *NOT* to train Emergency physicians and nurses. Dalhousie University has one of only two Emergency Medicine training programs east of Montreal producing certified Emergency physicians—doctors, in fact, who often become leaders locally, provincially, and nationally. The quality of emergency care in this province is, in part, related to the quality of the leadership. Nevertheless, the province's EDs, at the moment, are barely able to fill monthly schedules. The ideal staff mix is to have a small core of full-time Emergency Physicians and Family Physicians who have an interest in Emergency Medicine. The full-time emergency doctor core can focus more on continuing education directly related to Emergency Medicine. They, in turn, can share that knowledge and skill set with Family Physicians, who must also stay current in the breadth of Family Medicine. This kind of mentoring system helps to encourage and retain doctors who may feel less comfortable managing emergency cases. Learning in the emergency setting is a fantastic example of how disciplines can interact and work towards the common goal of treating a patient. Any progress in this direction is valuable; for too long we have taught nurses, doctors, social workers, pharmacists, physiotherapists and others in isolation from each other. That is not what a patient sees, however—the patient interacts with all disciplines.

The 2007 Provincial Hospital Services Operational Report (PHSOR)[7] contained a section on preserving the role of the academic health sciences centre. It recommended the Queen Elizabeth II (QEII) Health Sciences Centre and IWK Health Centre broaden their mandates in supporting other sites in Nova Scotia to help meet increasing clinical, education, and research demands. Allowing learners to gain valuable skills in settings around the province is the first step to attracting clinicians to non-urban sites.

[7] *Changing Nova Scotia's Healthcare System: Creating Sustainability through Transformation*. December. 2007.

Repeated interviews revealed that recruiting and retaining new doctors depended, in part, on ensuring the newcomers had a positive learning experience during a core or elective rotation. Learners often report that their best overall clinical experiences happen in non-urban-based "real world" settings with family doctors, small-hospital nurses, and paramedics. The Health Sciences Centres, therefore, have a duty to support mentors who may be struggling with a heavy clinical schedule as they, for example, juggle providing guidance to a new learner with their role as a clinical investigator in a research project.

Excerpts from comments made by medical students about their ED experience

1. One learner reflected on how easy it is to prejudge patients inappropriately. This reflection came after interviewing a patient who was known to be a "tough man" in the community, who arrived with possible heart issues. The learner was able to have a lengthy and empathetic conversation which revealed that the tearful patient had a lot of situational anxiety and his symptoms were more in keeping with a panic attack. It turned out that even tough men involved with the criminal element can have life stresses that get them down.

2. Another learner discovered the importance of acting as a patient advocate in the ED through effective communication and collaboration with consulting services. It turned out to be a major turning point in their education. Learning how to communicate and collaborate allowed them to get other services involved to provide proper care for a patient. The learner commented that this experience helped to put the entire process of health care into perspective and provided them with a lot of confidence.

3. "The most important thing I learned during this shift," said one learner, "was to not allow other health-care staff involved in the care of patients to inform my initial impression of a patient, or to cloud it and prejudge a patient's situation. This lesson occurred as I was to go see a patient I was informed presented to the ED intoxicated after neighbours had called for an ambulance. Some of the staff seemed to be mocking the patient from just outside the room. I admit that I was very hesitant, almost scared, to go and see this patient, because I did not know what to expect.

   I approached the patient very gently. She was very open, honest and genuine. She was very worried that her daughter was going to die, and that her daughter wouldn't discuss it with her and didn't seem interested in obtaining any sort of treatment. In contrast to what I had expected to find on entering the room, I saw someone completely different, and I felt almost ashamed when I left the room because I had been completely wrong about this patient.

   I think it's important, across every level of medical training, to understand that each patient is a human being, living under a different set of circumstances and with a different upbringing. It may not have made a difference to her ultimate treatment had I walked in and been very focused, in an almost dismissive sense, and chalked all of the other things she discussed as emotional ramblings related to her mental illness, but it made a big difference to me to just see her as someone's mother, someone's friend….I don't want to ever reach a point in my medical career where I stop caring for people and focus only on their illness."

Academic Health Science Centres are good for the mentors too. Anyone who has spent any time around a Health Science Centre knows that the emergency doctors who work there tend to be a different breed of physician. While excellent clinicians, Nova Scotia's emergency medicine academic doctors have also created and taught international airway courses, written text books, and published practice-changing research articles while playing leadership roles in one of the best ambulance systems in North America. They are creative multi-taskers. Without a supportive academic Health Sciences Centre, these clinicians either move away or fail to reach their full potential. Not surprisingly, the lingering uncertainty over Health Science Centre funding has sapped their enthusiasm and productivity.

Nurses currently take additional training in critical and emergency care, generally provided at the DHA level, to be able to work in the provincial and regional EDs. The Canadian Nurses Association may also certify nurses in Emergency and Critical Care Nursing, requiring expertise in a rigorous list of competencies. It includes a recertification process every five years based on maintenance of skills and continuing education. This has produced nurses that evolve into superb clinicians, educators, researchers, and leaders. High-quality, innovative education of future clinicians, in and outside Halifax, is critical for the sustainable future of emergency care in Nova Scotia.

MYTH ***Emergency care is a stand-alone service that is isolated from primary care.***

In a well-functioning health-care system—one that offers interdependent functions, reliable communication and good patient understanding of how things work—emergency care should rarely be needed. In fact, what all Nova Scotians really need is access to high-quality, comprehensive, long-term primary care capable of dealing with unexpected illness or injury and helping with the management of chronic illnesses in a timely fashion. Only an adjustment in the expectations of both consumers and providers will allow that to happen. The National Health Service (NHS) in the United Kingdom already understands the connection between primary and emergency care. The NHS has started developing health-care indicators and outcome measures to look at the success or failure of primary care in keeping patients with treatable conditions out of EDs and to avoid hospital admissions.[8]

[8] Liberating the NHS: Transparency in outcomes – a framework for the NHS. July 2010 p. 27

The question of primary care access is even more directly related to emergency care in smaller hospitals:

- Research consistently shows that the majority of patients seen in small rural Emergency Departments could be assessed and treated in an office setting. However, there ARE some emergency illnesses and injuries that need to be expertly cared for.
- The first Nova Scotia Annual Accountability Report on Emergency Departments, released in May 2010[9], listed 8,718 scheduled and 10,398 unscheduled hours of closure, which is the equivalent of 795 lost days of emergency access. These were disruptive, confusing, and frightening to residents in the affected areas. This cannot be a long-term strategy for managing staffing shortages.
- Some argue that closing or reducing the hours of some small Emergency Departments will save money. In fact, those savings may be negligible compared to savings that could be found elsewhere in the system. For example, a recent Ontario study, called Bending the Health Care Cost Curve,[10] points out that 5 per cent of the population in that province account for 84 per cent of combined hospital and home care costs. By focusing on select high-user groups, we could improve the care of some of those patients and reduce the need for hospitalization while dramatically decreasing costs.

[9] *Annual Accountability Report on Emergency Department Closures*. Nova Scotia Department of Health: March 2010.

[10] *Ideas and Opportunities for Bending the Health Care Cost Curve – Advice for the Government of Ontario*. Toronto: The Ontario Association of Community Care Access Centres; The Ontario Federation of Community Mental Health and Addiction Programs; The Ontario Hospital Association, April 2010.

Just a few people account for most of the costs

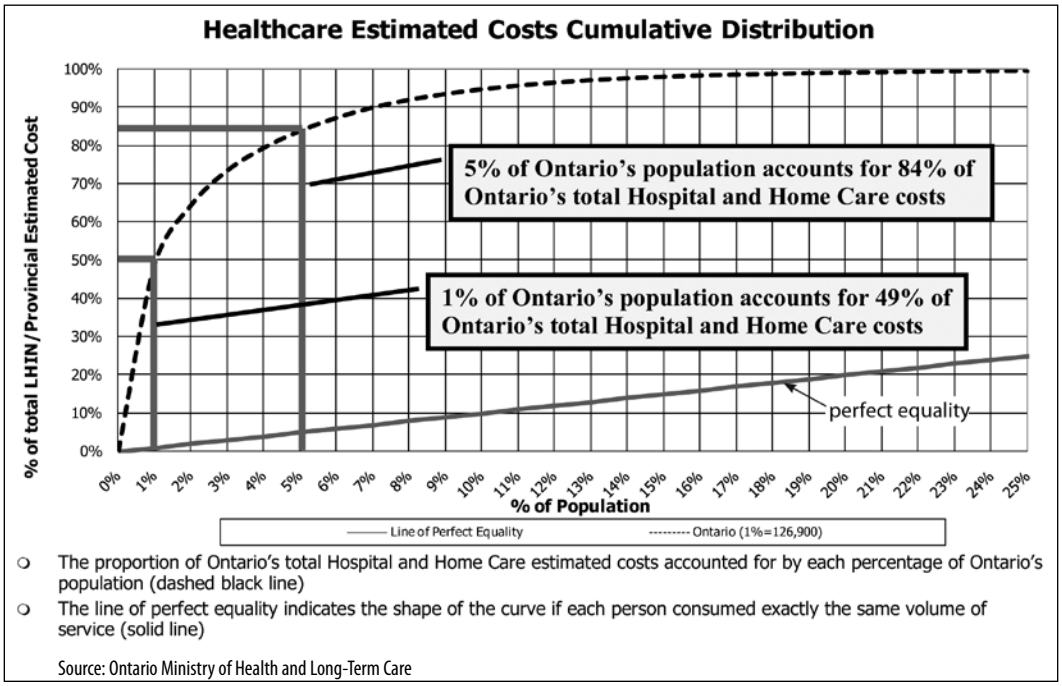


Figure 1: The dotted line indicates actual expenditures that are mostly used by a small number of people. The straight line along the bottom indicates what the graph would look like if everyone got 'their fair share.' Using the health-based allocation model, health-care costs can be tracked. Remarkably, a very small population of patients uses a large proportion of hospital and home care resources. By identifying disease types, geographic locations, and high users, specific care plans and better management strategies can be developed to reduce hospitalization and overall costs. (From *Ideas and Opportunities for Bending the Health Care Cost Curve—Advice for the Government of Ontario, Appendix 2*.)

- As already pointed out, emergency care must be patient-centred, providing timely assurance and integration in a way that makes the best use of all available resources. Historical practices and beliefs must be scrutinized in light of advances in pre-hospital care, better primary-care delivery, patient safety and quality, and fiscal responsibility.

MYTH *Emergency Departments in bigger hospitals are full of people with the flu and paper cuts.*

Anyone who has sat in an Emergency Department waiting room as a patient, relative, or friend has cast an eye around the room and seen people who appear to not belong there. And it is true that the ED is the final common health-care pathway when nothing else is available. The perception isn't helped by those times when the "Fast Track" area—configured in some EDs to see minor injury and illness—sees patients quickly while sicker patients wait longer. (It must be said that there are few situations more troubling than waiting for five hours with an elderly parent who is vomiting into

a garbage pail while a 20-year-old, accompanied by two giggling friends, has their small laceration repaired in 90 minutes.) Making the best use of available stretchers in a crowded ED is a tremendous challenge. There is a constant struggle to place sicker patients from the waiting area and ambulance stretchers, while also managing the minor injuries and illnesses. The triage (sorting) system takes the sickest patients first. Those who are less sick sit in the waiting areas longer—adding to the impression that it is full of too many people who do not need immediate help. However, when people waiting for hospital admission or for specialists occupy the stretchers, even really sick people end up far too long in the waiting room.

Large hospital emergency crowding is NOT due to people with paper cuts and runny noses. This is supported by a number of research papers and a good, short review article in Mythbusters.[11] The problem is already-admitted patients remaining in the ED far too long. They should be receiving their treatment and rest in a hospital bed on an in-patient ward. This is NOT what an Emergency Department is for. A crowded ED is often a manifestation of dysfunction and failure.

In truth, relatively few emergency patients are there unnecessarily. Although the Emergency Department may not be the ideal setting for some patients, the majority of the patients in larger regional or provincial Emergency Departments have a legitimate reason for being there:

- Urban areas have a larger number of students and new arrivals who lack a local primary care clinician. The Emergency Department is their only perceived source of care.
- In towns or cities with limited primary-care access, the ED becomes a default entry point into the health-care system.
- Many answering machines for family doctors and specialists direct callers to the local Emergency Department.
- Some homeless and mental health patients may not look sick, but actually suffer from significant illnesses and/or profound social problems.

[11]Canadian Health Services Research Foundation. "Myth: Emergency Room Overcrowding is Caused by Non-Urgent Cases." October. 2009. Accessed autumn 2010.

A small number of patients have a large number of ED visits where the diagnosis is not clear. They often get exposed to multiple blood tests and x-rays, and may see numerous specialists while being treated with various medications. Although some uncommon diagnoses sometimes follow that same path, Somatization Disorder can also cause this. That is the manifestation of emotion-based problems causing a series of troubling symptoms, such as headaches, chest pain, and abdominal pain. A group of psychiatrists and psychologists in Halifax have become experts at identifying and treating patients who have Somatization Disorder, resulting in satisfied patients, less use of hospital resources, and fewer medications. Other parts of the province could benefit from this service.

MYTH

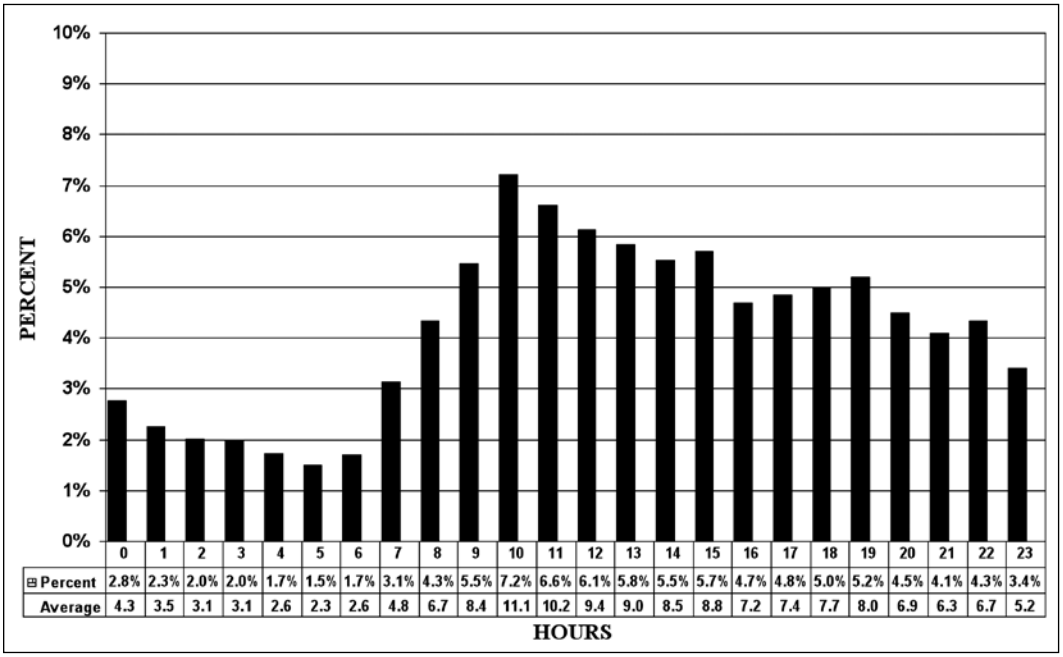
Emergency staff in bigger hospitals spend too much time sitting around talking and drinking coffee when they should be working.

Most Emergency Departments have a fixed staffing system that is related to the predictable daily patient arrival cycle (e.g., fewer staff when the ED is quiet, more when things get busy.) But many do not. Physician staffing is determined by the provincial Department of Health under a formula that fails to reflect today's reality of more complex, often elderly, patients. No Emergency Department, as a result, has the capacity to easily respond to the ebbs and flows in demand. The more people who show up at an ED, the longer the wait times.

There is an element of truth to the "sitting around talking and drinking coffee" cliche. Sometimes there IS more talking, loud laughing, eating, and drinking near sick patients. And, yes, it is sometimes inappropriate. But this is partly a symptom of chronic department congestion: staff miss breaks or take them on the fly; the department is full to capacity, leaving patients on stretchers in hallways, adding to unreasonable patient/staff ratios so that breaks are more difficult to take.

Moreover, real "teams" are forged when the members get to know each other by debriefing after a difficult situation. Some of the "sitting around drinking coffee when they should be working" is sharing a learning experience from the shift before. But it might also be showing pictures of the new cat. For the people employed there, EDs are as much a work place as any office or shop. The closer the team, the better it functions—and the better the outcome when real team-work is most needed. If an unexpected emergency patient arrives, help has to be nearby, which is why "breaks" are sometimes taken while working.

Emergency Registrations by Hour



	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Percent	2.8%	2.3%	2.0%	2.0%	1.7%	1.5%	1.7%	3.1%	4.3%	5.5%	7.2%	6.6%	6.1%	5.8%	5.5%	5.7%	4.7%	4.8%	5.0%	5.2%	4.5%	4.1%	4.3%	3.4%
Average	4.3	3.5	3.1	3.1	2.6	2.3	2.6	4.8	6.7	8.4	11.1	10.2	9.4	9.0	8.5	8.8	7.2	7.4	7.7	8.0	6.9	6.3	6.7	5.2

Figure 2: This graph shows the percentage of people who register at the Halifax Infirmary each hour. The pattern of arrival is identical to most urban Emergency Departments in North America. Registrations decrease between 11:00 pm and 6:00–7:00 am, and then increase rapidly and remain relatively sustained throughout the day. These are average registrations. There can be considerable hour-to-hour and day-to-day fluctuation. If patient arrival demand is greater than provider supply or treatment area availability, lineups can take many hours to resolve. Although patient arrivals appear low from midnight until 7:00 am, staff are still busy during that period. Many are seeing patients who arrived earlier and have been kept waiting for many hours.

MYTH ***Emergency Departments would operate smoothly if ED staff simply worked harder.***

Actually, a good deal of the backlog and flow problems at EDs are due to factors beyond the control of doctors, nurses and other staff members:

- The patient flow problem in chronically backed-up Emergency Departments is exacerbated by the self-perpetuating nature of the problem itself. Patients arrive expecting to be disappointed and angry. Relatives and friends expect to have to advocate loudly for the patients they accompany. Some waiting areas are dark, dingy and, in some cases, in poor condition—reflecting the attitudes of patients and staff. In that sort of environment staff members can develop a sense of hopelessness and helplessness that can further add to inefficiency and wait times.
- The design and staffing flow processes of EDs, in some cases, are inefficient. Some EDs were not designed for their present day purpose or patient volume. Staffing numbers may be inadequate or the mix may not match patient needs.

- Larger Emergency Departments tend to be partially—or sometimes mostly—occupied with admitted patients who should have been moved to another hospital bed long ago. Consequently, incoming patients may back-up into the waiting areas. As an example, a 14-stretcher ED with nine admitted patients and two others waiting to see specialists leaves the functional equivalent of only a three stretcher ED to see all incoming patients.

Figure 3: ED Crowding is so common in this NS Regional ED that hallway stretcher spaces have letter labels. Later, on the day this photo was taken, all these stretchers were filled with admitted patients waiting to leave the ED. There is one toilet and sink for approximately 10 stretcher patients. Some people can wait in the ED for days under the constant lights and noise.

- The occupied stretchers and patients already waiting in hallways mean that incoming ambulances have no place to deliver patients. Paramedics often wait beside their patients, continuing to deliver care as needed until a hand-over can occur. The provincial standard from the moment a patient arrives until their care is transferred to ED staff is recommended to be 20 minutes. But some EDs, most notably at QEII and Dartmouth General, often have significantly longer off-load times. The current average is over two hours, but there are times when paramedics are left waiting for as long as 10–12 hours. As a result, some paramedics spend a whole shift in the ED hallway. Since those paramedics are not covering their assigned area outside the hospital, other paramedics in ambulances are moved to compensate. As more paramedics are held in EDs, coverage throughout the province gets thinner, and the risk of not being able to quickly respond to emergency calls increases.

Figure 4: Ambulance stretchers, paramedics, and patients waiting to be assigned an ED stretcher at the former Provincial ED. In a situation like this, what happens when an emergency call is made from someone's home?

- Research clearly shows that admitted patients who wait for prolonged periods in the Emergency Department experience longer hospital stays, more complications, and increased mortality compared to patients who move to in-patient beds within eight hours.

MYTH *Large hospitals function and operate as a unified whole.*

Large hospitals are often more a loose collection of somewhat-related functions than an integrated whole. There is a constant tension between providing for the seemingly endless needs of patients and the convenience of the care providers. As a result, patients encounter long waits in the ED for a wide variety of reasons. For example:

- Hospital leadership, whether administrators or physician and nurse leaders, have not made emergency care a priority—in part due to the mistaken belief that, because emergency delivery has similar problems elsewhere in Canada, it cannot be fixed in Nova Scotia.
- In larger Regional and Health Sciences Centres in North America, the more specialized a hospital, the more likely the Emergency Department is to be crowded. Specialists and subspecialists are busy people. Maintaining patient flow in the ED may not be a priority of theirs. However, every hour of waiting for a decision means that newly arriving patients cannot use a stretcher.
- Hospitals must juggle multiple functions: day and emergency surgery, intensive care units, and outpatient clinics, along with diagnostic tests like x-rays and CT scans, and handling seasonal illnesses. Institutions of this size naturally also face human resource challenges. The problem is that Emergency Departments must interact with

and depend on these multiple departments, each of which is doing important work. When providing emergency care to the public is not treated as a core priority of the whole hospital, EDs will naturally experience crowding.

- Is the Emergency Department for people with undiagnosed illness and injury or a hospital multi-purpose area? Strangely, EDs may also be expected to fulfill functions that have little to do with their real function—assessing, treating and stabilizing as-yet-undiagnosed illness or injury. Some hospitals or specialists use them as outpatient procedure areas because emergency staff are trained to deal with unusual complications and ED space is well-equipped. This may work well in smaller EDs where shared functions make sense. In larger EDs, that sort of arrangement often prevents newly arriving patients from being seen quickly. Some specialists also use the Emergency Department to get a hard-to-find bed for their patients. That may be nice for a patient seeking specialist service. But those patients occupy stretchers that cannot be accessed by patients on ambulance stretchers or in the waiting room who are in greater need of help. It is this relative lack of control over the decisions of specialist "colleagues" who perceive the ED as theirs to use that can cause staff stress and, at times, unintended compromised care in Emergency Departments. Ultimately, the ED is for emergency patient care. Prioritizing patient care must be done consistently, fairly, and through one generally accepted authority.
- There is another misconception regarding the care provided in hospitals. Some people think that having dad or mum occasionally admitted for general checkups, or just to have a rest, is good for their parents. Often the opposite is true. Patients can acquire special antibiotic-resistant "super-bugs" while admitted for routine problems; medical errors occur; physical deterioration from lying in bed happens; and the numerous interruptions that occur in any hospital actually make rest hard to come by. Many studies have demonstrated that, whenever possible, it is better for people to be treated or convalesce at home than to be admitted to hospital.

MYTH ***Doctors, nurses, and other professionals work cohesively with a clear leader to guarantee the best outcomes for patients.***

Along the way a patient may encounter dozens of people from different disciplines who are involved in their care. But patients and relatives often complain that they do not know who, ultimately, is in charge of a patient's care. No one, it seems to them, understands the "big picture." This is a legitimate concern: without someone who has the big picture, the result is analogous to building one car with parts from GM, Ford, Hyundai, and Toyota. The car will work poorly and spend more time in the repair shop. Disconnects between care providers in multiple disciplines can have the same kind of negative impact. Consider the following composite example:

John, 73, who lived on a fixed income with his wife, Elizabeth, had a degenerative brain disease that led to worsening confusion and inappropriate and violent behavior. John had threatened to harm his wife several times. He also wandered at night and repeatedly left the stove on. Elizabeth was afraid of him and could no longer take care of him. Their two children lived out of province. One Friday afternoon she brought him to the Emergency Department and refused to take him home again.

The ED team completed a thorough history and physical examination. Various tests ruled out any active medical problems that could be easily treated. The mini mental status examination (MMSE) showed that John had significant cognitive (brain function) impairment. He was demanding to go home. But there was a big question about his decision-making ability. If he was unable to look after himself—and Elizabeth refused to take him home—John would have to become a ward of the province under the Adult Protection Act, a program administered by the Department of Health. A bed in a suitable care facility, under the Community Services Department, would have to be found.

This sort of scenario occurs with increasing frequency across Nova Scotia. Every emergency care worker has stories of the incredible disconnect between the need for this type of patient care and the ability to deliver. What happens next usually follows a predictable pattern:

- The hospital social worker is called to assist in contacting Adult Protection.
- A competency assessment is needed since deeming John incompetent has significant legal implications. While any doctor can do this, some are more experienced than others. Often disagreements and long delays occur in this process as negotiations between the Emergency Physician and specialists in Internal Medicine, Geriatrics, Psychiatry, and occasionally Neurology drag on.
- If, in this case, John is felt to be competent, then every effort would be made to get him home, often with home supports for Elizabeth. This might take 1-2 days.
- If John is found incompetent, an assessment is conducted by an Adult Protection worker. Once the assessment is completed and Adult Protection is deemed appropriate, a search for a willing care facility begins. *This can take days or even weeks*.
- Meanwhile John must stay in the ED. Otherwise he would occupy an acute-care bed desperately needed by someone else. Moreover, once admitted he is no longer deemed in need of Adult Protection, since he is safely cared for in hospital. The "urgency" to place him in a long-term care facility is therefore removed.

John was held in the Emergency Department for nine days while various hospital consultants assessed him and agreed he did not require admission to hospital but could not return home. After assessment by Adult Protection, the search for an appropriate bed began. He needed a sitter to watch him 24/7. Nineteen shifts of different nurses, nine social worker shifts, and 27 shifts of emergency physicians tried to care for him. But the demands of emergency patients and those admitted who were waiting for beds consumed almost all their time. On day eight, John developed a fever and was diagnosed with pneumonia, possibly after being restrained on his back for hours after almost hitting the sitter. Four months later, he was still in the hospital, occupying an acute care bed.

MYTH

The health-care system is funded in a manner that ensures the best possible outcomes for patients.

Paying health-care professionals has become an extremely complex process. Some doctors are paid on a fee-for-service (FFS) basis that means they keep track of every person and procedure they perform and then collect piecework fees from the provincial Department of Health afterwards. When demand is greater than supply, FFS may encourage greater productivity: by seeing more patients doctors make more money. However, with FFS there is a risk of "turnstile medicine"—a high volume of predictable, pre-booked, lower necessity visits possibly coupled with unnecessary procedures.

Reproduced with the permission of the Canadian Health Services Research Foundation.

Some alternate payment plans (APP) provide a more predictable up-front income for doctors in the hope of increasing the amount of time they spend with patients. Overall, however, patient throughput may decrease under this sort of arrangement. Patients who get in to see their doctors may feel they are getting a more patient-centred experience. But anyone who cannot get in to see their own physician is clearly not well served.

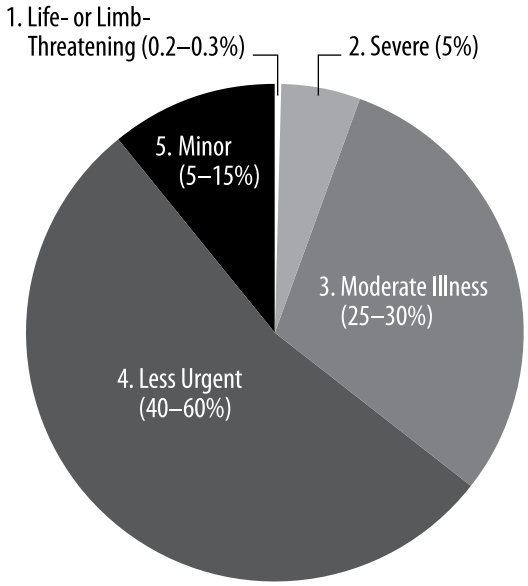
Nurses and other allied health-care workers, on the other hand, are paid either under an arrangement with their private clinic or by union collective bargaining agreements. Funding is unrelated to patient throughput or quality of the care delivered. Collective bargaining contracts usually provide for regular percentage pay increases, which are unrelated to performance.

A system of financial incentives that is more closely linked to performance and health outcomes would almost certainly improve patient care. Although money is clearly not the only incentive for doctors, nurses, and other health-care professionals, historically it is a strong motivator for desired outcomes and common goals.

MYTH ***All Nova Scotia Emergency Departments can handle anything that comes in the door.***

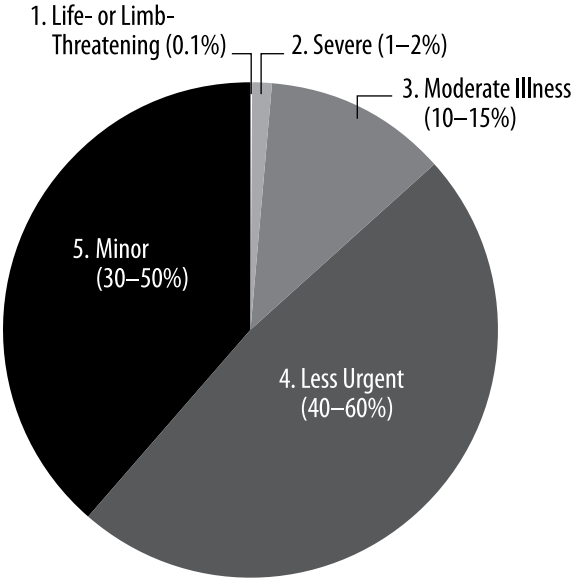
Even in the busiest Emergency Departments in Nova Scotia, fewer than 15 per cent of the people who show up at the ED require admission to hospital. That does not necessarily mean the other 85 per cent should not be there, but instead that they can be assessed, treated, and discharged safely. The following data shows the severity of illness for patients who visit Emergency Departments in Nova Scotia. Although data using the Canadian Triage and Acuity Scale (CTAS)—an initial assessment and sorting method—is somewhat differently applied at different sites, this gives a general idea of the types of patients who are currently using the ED for emergency care.

A typical regional hospital ED (Yarmouth, Kentville, Bridgewater, Amherst, Truro, Dartmouth, New Glasgow, Antigonish, Sydney) sees the following types of patients, based on 2008–09 data:



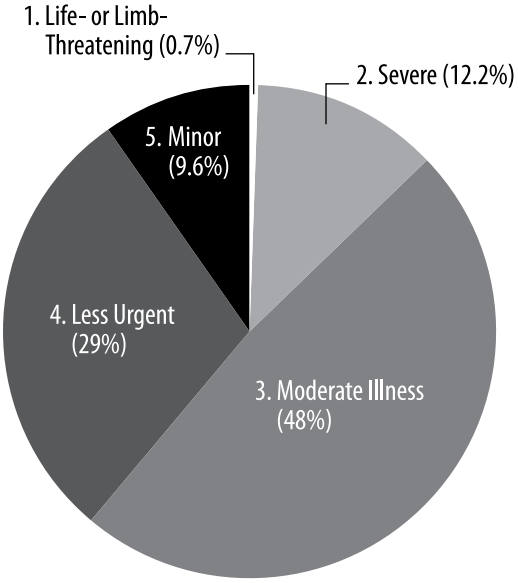
6–8% of all patients seen in regional EDs are admitted or transferred to another hospital (QEII, IWK).

A typical small ED/outpatient unit sees the following types of patients, based on 2008–09 data:



2–4% of all patients seen in rural EDs are admitted or transferred to another hospital (Regional, QEII, or IWK).

The Halifax Infirmary (QEII) had the following data in 2008–09:



15% of all patients seen in the Halifax Infirmary are admitted—but this includes patients who are transferred from other hospitals.

Despite the variations, it is fairly clear from the data above that life-threatening problems are relatively rare at Emergency Departments. Part of the reason for this is that EHS paramedics treat most cardiac arrests outside the hospital—an example of bringing the Emergency Department to the patient. But when real emergencies do occur, they require rapid, expert attention. The people who treat them need the kind of expertise that comes from initial special training and ongoing maintenance of knowledge and skills. The challenge for Nova Scotia, a province with a small, spread-out population, is to provide professionally staffed sites that are accessible for all. Many small sites that were visited offered that their strength was in primary care and they were less comfortable managing unstable patients.

MYTH ***All illnesses and injuries treated in Emergency Departments are "accidents."***

The dictionary defines an accident as an *event that happens by chance or that is without apparent or deliberate cause*.

Accidents DO happen and diseases do strike, sometimes for no obvious reason. But too often people are responsible for their own avoidable problems. There are many other predictable factors that influence health, as well. Health Canada has determined 12 determinants of health:

1. Income and social status
2. Employment
3. Education
4. Social environment
5. Physical environment
6. Healthy child development
7. Personal health practices and coping skills
8. Health services
9. Social support networks
10. Biology and genetic endowment
11. Gender
12. Culture

Although some of these are due to 'luck of birth' and broad societal issues, numbers 6, 7, and 8 are more closely related to individual choices. As we struggle to deal with increasing health-care demands—and no comparable increase in funding—preventable illnesses and injuries that routinely require valuable emergency care resources must come under greater scrutiny. For example:

- Smoking complicates asthma, causes emphysema (COPD), heart and vascular disease, hypertension, strokes, and cancer.
- Obesity results in acute and chronic back pain, joint pain, diabetes and other maladies.
- Failing to take the correct precautions exacerbates chronic diseases such as diabetes, heart failure, and COPD.
- Poor judgement—for example, riding a bicycle without a helmet—results in preventable injuries.
- Drinking alcohol and using drugs while operating motor vehicles results in severe injuries.
- Substance abuse leads to fights, falls, and medical complications. These are behaviours we have come to accept as a 'normal' part of our society. (Getting drunk and vomiting everywhere is part of growing up, right?)

To understand the extent of the problem, consider the findings from an audit of the ED registrations at the QEII and Dartmouth General Hospital between July 1 and December 31, 2007, during the overnight period from midnight to 5 am. Even though such things tend to be under-reported, at least one in seven visits was alcohol-related. Over half of the alcohol-related visitors were under the age of 25. There was one death. Meanwhile, 39 people were admitted to hospital and 13 visitors were discharged in the custody of the police. The long list of diagnoses included cuts, broken bones, and head injuries, as well as "alcohol intoxication" for those who arrived unconscious. These patients used 117 CAT scans, 261 x-rays and 1,770 blood tests—resources that could have been used for the care of others. Almost half of the patients arrived with EHS paramedics. Not surprisingly, there was a spike in September—when all levels of students return to school—with almost one-quarter of all visits in that month. Should every Nova Scotian have to pay for the poor decisions of a few? This ethical dilemma has become more focused as we struggle to provide the care where it is most needed. Illness and injury prevention should be the responsibility of every citizen.

The Treatment

The problems in the Diagnoses section may sound insurmountable. They are not. Having spent a year visiting every DHA and Community Health Board (CHB) in the province, I can say with certainty that the solutions are out there and Nova Scotia is well positioned to take the lead in creating a better-integrated primary and emergency care system. Ultimately, as Peter Drucker pointed out on the opening page of this report, patients want assurance that, when they are worried about their health, they can quickly see someone with the knowledge and experience to know how serious their condition is, and who will ensure they receive the correct advice and treatment. Nova Scotia has the right people and access to emergency care to make this happen.

Recommendations for Funding and Standards

Before prescribing a treatment for the problems highlighted in the Diagnoses section, one major caveat must be noted. It has to do with the way we fund health care in this province. In the 1970s, the detailed accounting that tracked the cost of hospital procedures, supplies, and staffing was replaced by less costly "global budgets"—lump sums paid out to hospitals, and eventually health authorities, to fund health-care services. At first, those budgets grew slowly and predictably. But over time, the costs of equipment, new treatments, and staff skyrocketed. So has patient demand for more services. Because hospitals no longer operate on business models, any rigorous cost-benefit analysis cannot be done even as our health-care budget doubles every decade or so. Though information technology is a well-established tool in most industries to track every process to ensure efficiency and effectiveness, it is rarely used that way in health care. Clinicians, meanwhile, have a very limited understanding of the cost of the tests, treatments and procedures they order. When conflict arises, they seldom put the system first. To their way of seeing things, the needs of their patients come before the financial health of a critically overburdened health-care system. More recently, some physicians are following an American trend of 'defensive' medicine and ordering more tests—paid for by the public—in an attempt to avoid lawsuits and complaints.

The result is that increasing consumer demand—caused by an aging population, more expensive technology and treatments, and the perception that health care can cure almost everything—has created immense pressures inside provincial health-care budgets. But the lack of accountability for how tests and treatments are ordered is equally problematic. We continue to try to pay for everything within a budget that is unrelated, and unresponsive to the pressures from within. This leads to unacceptable wait times and one crisis after another.

This report proposes some improvements to the emergency care journey in Nova Scotia. With the right political, institutional, and individual will, most of these recommendations are realizable in one to three years. They will, moreover, be important strides toward improving emergency care in this province. But alone they just scratch the surface. Nova Scotia's heath care system is nearing the end of its sustainable path unless we do three important things immediately:

- Identify population health outcomes that we can measure and modify (e.g., diabetes, care after a heart attack, heart failure, chronic lung disease, obesity, depression). Better management of these outcomes will have a large positive impact on quality of life and health-care costs.
- Pay health-care providers differently. Encourage productivity and work that produces the desired health outcomes. British Columbia and Ontario are having success with performance-based funding.
- Encourage the following:
  - public forums to discuss what we can and cannot afford to pay for publicly
  - support for doctors to provide palliative care when medical treatments are not indicated
  - support for families to learn more about what a limited health-care system can provide

These concerns lead directly to the first two recommendations, which may be the most pressing.

RECOMMENDATION 1
Forge a new health-care funding path.

Develop innovative, performance-based models to pay physicians and other health-care workers that will improve health-care outcomes while remaining fiscally responsible. Nova Scotia, in fact, should take its lead from funding models such as these:

- The National Health System in the United Kingdom has published the following key documents, outlining a path that is patient-centred and focused on health outcomes and system performance to fit their fiscal reality:
  - *Equity and excellence: Liberating the NHS* (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_117353)
  - *Transparency in outcomes—a framework for the NHS* (http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_117583)

- The performance-based funding model currently being expanded in British Columbia is an extension of a trial started several years ago with select hospitals. However, before encouraging more surgery, consider starting with primary care initiatives. Focus on better control of chronic diseases (diabetes, heart failure, chronic lung disease, kidney failure, dementia, mental illness) as well as disease and injury prevention through incentives.
- Ontario recently announced continued and expanded hospital performance-based funding to improve ED wait times following success with a limited number of hospitals.

RECOMMENDATION 2
Develop innovative patient-centred and provider-centred funding models for physicians.

Physicians are currently treated differently and paid differently than other health-care providers. They operate, in many cases, as independent corporations that are not directly accountable to anyone. As with any topic that involves money, this is extremely delicate. It is time to determine future innovative funding that is designed to promote better patient health outcomes while being attractive for recruitment and retention in this province. This is not special code for implying money will be taken from doctors. But there is a huge range of annual income as well as a huge range of services provided by doctors—from 24/7 clinic and on-call services to limited hours and no call. Physicians need to be re-engaged to play a lead role in health-care delivery while acknowledging the importance of other allied health providers. The usual adversarial contract negotiation process has produced some important improvements, but it has failed to closely tie physician behavior and clinical practice with valued health outcomes. Physician funding appears to be focused on increasingly expensive disease care, and less on keeping people healthy. Incentives need to change and physicians need to work more closely with other allied health providers. Nova Scotia paid approximately $661 million to physicians in 2009 and is expected to spend $699 million in 2010–11,[12] and yet there are few outcome or performance measures tied to those fees.

[12]Nova Scotia Department of Health. "Annual Statistical Tables: 12 months ending March 31, 2009."

RECOMMENDATION 3
The Department of Health should adopt the recently developed Emergency Department Standards.

Once released and approved, a fair but short timeline should be set for all Emergency Departments to meet the standards. Incentives and penalties will need to be explored in order to help achieve the minimum standards. Performance Profiles will be developed to assist EDs in meeting the prescribed goals.

Recommendations for Bigger and Smaller Hospitals

The following recommendations are for large and small hospitals with Emergency Departments.

There are some similarities and some significant differences between the problems encountered in bigger hospitals and those of smaller hospitals. The treatments differ also. The terms "rural" and "urban" are difficult to apply in Nova Scotia as they depend on one's perspective.

Following is a list of Nova Scotia's hospitals, categorized as bigger or smaller for the purposes of this report.

BIGGER HOSPITALS	District
South Shore Regional Hospital	South Shore (DHA 1)
Yarmouth Regional Hospital	Southwest (DHA 2)
Valley Regional Hospital	Annapolis Valley (DHA 3)
Colchester Regional Hospital	Colchester East Hants (DHA 4)
Cumberland Regional Health Care Centre	Cumberland (DHA 5)
Aberdeen Hospital	Pictou County (DHA 6)
St. Martha's Regional Hospital	Guysborough Antigonish Strait (DHA 7)
Cape Breton Regional Hospital	Cape Breton (DHA 8)
Cobequid Community Health Centre	Capital (DHA 9)
Dartmouth General Hospital	Capital (DHA 9)
QEII Health Sciences Centre	Capital (DHA 9)
IWK Health Centre	—

SMALLER HOSPITALS	District
Fishermen's Memorial Hospital	South Shore (DHA 1)
Queens General Hospital	South Shore (DHA 1)
Digby General Hospital	Southwest (DHA 2)
Roseway Hospital	Southwest (DHA 2)
Annapolis Community Health Centre	Annapolis Valley (DHA 3)
Soldiers Memorial Hospital	Annapolis Valley (DHA 3)
Lillian Fraser Memorial Hospital	Colchester East Hants (DHA 4)
All Saints Springhill Hospital	Cumberland (DHA 5)
North Cumberland Memorial Hospital	Cumberland (DHA 5)
South Cumberland Community Care Centre	Cumberland (DHA 5)
Eastern Memorial Hospital	Guysborough Antigonish Strait (DHA 7)
Guysborough Memorial Hospital	Guysborough Antigonish Strait (DHA 7)
St. Mary's Memorial Hospital	Guysborough Antigonish Strait (DHA 7)
Strait Richmond Hospital	Guysborough Antigonish Strait (DHA 7)
St. Anne Community and Nursing Care Centre	—
Buchanan Memorial Community Health Centre	Cape Breton (DHA 8)
Glace Bay Hospital	Cape Breton (DHA 8)
Inverness Consolidated Memorial Hospital	Cape Breton (DHA 8)
New Waterford Consolidated Hospital	Cape Breton (DHA 8)
Northside General Hospital	Cape Breton (DHA 8)
Victoria County Memorial Hospital	Cape Breton (DHA 8)
Sacred Heart Community Health Centre	Cape Breton (DHA 8)
Eastern Shore Memorial Hospital	Capital (DHA 9)
Hants Community Hospital	Capital (DHA 9)
Musquodoboit Valley Memorial Hospital	Capital (DHA 9)
Twin Oaks Memorial Hospital	Capital (DHA 9)

Recommendations for Bigger Hospitals

Pearl, 84 and a retired homemaker, developed a cough and fever during the night. She was weak and short of breath. When it appeared she was getting worse and not better her 87-year-old husband took her to the Regional Hospital 30 minutes from their home. It was 8 p.m. and the waiting room was full. After the initial assessment, they were told to wait to see the doctor. Two ambulances arrived and other people slowly were taken in from the waiting room. Pearl was still coughing and leaning on her husband. There was no indication when they would get in to see the doctor.

RECOMMENDATION 4:
Provide better access to primary care to take the pressure off Emergency Departments.

The waiting room in the above example might have been less crowded if more of the patients were able to see their own primary care provider, whether a physician, nurse practitioner or Family Practice nurse. A strategically placed walk-in or after-hours clinic—coordinated with the District Health Authority plan for primary care delivery—would be an alternate delivery model that could complement the primary care system for the area. This is part of the Nova Scotia Primary Health Care strategy currently being worked on by the Department of Health and all of the DHAs.[13]

[13] Nova Scotia Department of Health website. "Primary Health Care: Collaborative Teams."

Useful definitions

Primary health care is the more holistic consideration of health, incorporating the 12 determinants of health: income and social status; employment; education; social environments; physical environments; healthy child development; personal health practices and coping skills; health services; social support networks, biology and genetic endowment; gender; and culture.

Health services are what we often think of as all of health care. They involve primary care and special (secondary, tertiary, and quaternary) care.

Primary care is health and disease care provided to individuals and families initially and in follow-up by primary care clinicians. Such clinicians may be family physicians, nurse practitioners, family practice nurses, physicians' assistants, or extended-role paramedics. General internists and general pediatricians, who provide an overlap of some primary but mostly secondary care, can support them. The focus is on service delivery. It involves health promotion, disease prevention, acute episodic care, continuing care of chronic diseases, education, and advocacy.

Secondary care is care provided with a narrower focus, often by specialists—surgeons, ophthalmologists, dermatologists, etc. General hospitals also provide secondary care when needed. Secondary care also includes palliative care provided by family physicians or palliative care specialists.

Tertiary care is even more specialized care—usually provided in a larger medical centre, often associated with a medical school.

RECOMMENDATION 5:
Stream emergency patients into special-purpose areas.

For example:

- Designate "Fast-Track" areas for the assessment and treatment of minor injuries and illness.
- Use select point-of-care tests in the Fast Track—e.g., blood sugar, kidney function, heart damage, and urine tests.
- Use comfortable, easy-to-clean chairs instead of stretchers for patients who can safely sit. Consider converting one or two areas already occupied by stretchers into multi-patient chair rooms. Identify a nearby area where patients can be taken for confidential discussion.
- Have patients stay in the main reception/waiting area or internal waiting areas when stretchers are not absolutely needed.

- Set up a Rapid Assessment Clinic such as the one at the Halifax Infirmary. This is an area near but not in the ED for patients who have been sent from other sites for specialist consultations but who do not need the special staffing or equipment of the ED. The area is close to the ED in case a patient's condition changes. ED staff may be shared in special circumstances or for some procedures. A Rapid Assessment Clinic can also provide a much-needed space for vital clinical research that is difficult to do in an overcrowded ED.
- Appoint a provincially funded team consisting of an experienced emergency nurse or physician, systems engineer, structural engineer, and architect to help departments look at what they can do differently. This could result in low-cost changes that could yield significant patient-flow improvements and enhance the patient journey.

Patients with a perceived emergency want to know as quickly as possible whether their ailment is serious—and will receive rapid care—or not. The challenge is to get each patient to a clinical decision maker quickly. If not, clinicians eventually give up and patients lower their expectations. If fewer stretchers are occupied by waiting patients, the onus is back on the ED staff to achieve efficiency.

The CTAS data cited earlier tells us that, on average, fewer than 1-in-100 patients have an immediate life- or limb-threatening problem. All told, 1-in-5 to 1-in-10 need urgent attention. As well, over half will require a comprehensive assessment that may require blood tests, x-rays, and specialist consultations. The remainder will require fewer investigations and staff time. On average :

- 80 per cent of CTAS 1 (most emergent) cases require admission
- 50 per cent of CTAS 2 cases require admission
- 30–40 per cent of CTAS 3 cases require admission
- 5–10 per cent of CTAS 4 cases require admission
- 1–2 per cent of CTAS 5 (minor injury) cases require admission

On average, only 10–15 per cent of provincial and regional ED patients require admission to hospital. This means that 85–90 per cent of all the patients are seen, investigated, treated, and discharged by resources available in the ED. That is good news: many conditions actually get better faster at home than in hospital. But even that relatively small number of admitted patients blocks the ED from ensuring the majority of visitors receive timely *assurance*.

The impression from traveling around Nova Scotia is that staff in most urban EDs are so accustomed to the norm—over-crowding, patients staying in the ED for days, hospital flow problems, a lack of support for innovation—that they have given up trying. The new ED Standards will recommend that NO admitted patient should stay in the ED longer than 24 hours after initial triage. They will also recommend that virtually all admitted patients leave the ED in less than eight hours after initial triage. If that occurred, ED staff would have the opportunity to more effectively manage the department for the patients who are not admitted.

Following are some other suggestions for increasing ED efficiency:

- Conduct a brief initial assessment, including the measurement of vital signs. Ambulatory patients with stable or relatively minor complaints can have vital signs completed once they are placed in the ED.
- Streamline the registration process and consider health card swipes, limited field completion, and bedside registration.
- Have a senior decision-maker—an RN, MD, nurse practitioner, paramedic, or physician's assistant—see the patient as quickly as possible to determine their anticipated length of stay. The Fast Track stream uses chairs and rapid-turnaround stretchers, whereas a slower track will involve more detailed consultations, tests, and treatment. Once admission seems inevitable, immediately begin a hospital search for a bed.
- Ensure quick turnaround times for commonly used laboratory tests and plain x-rays. Those tests and x-rays are used frequently by emergency staff. It is critical that managers from the emergency, lab, and X-ray departments meet regularly to address any problems in information flow.
- Use point-of-care (POC) tests wherever possible, especially in lower-volume EDs where control over lab turnaround times can have a big impact on patient time in the department.
- Clean stretchers and chairs as soon as the patient leaves.
- Ensure all staff members work to their full scope of practice. Time demands on nursing and physicians, as well as manpower shortages, may actually be addressed by adding, for example, LPNs and paramedics who can assist the RNs and MDs. With mutual respect and communication among disciplines these changes can improve the patient journey.
- Establish a more responsive on-call system for specialists. If all hospital staff believe that a well-functioning Emergency Department truly matters then specialists should consider calls from the ED a priority. According to Figure 2, patient arrival times are predictable. So is the number of times specialists will be called upon for daily consults at most hospitals. Specialists need to establish an on-call system that can

respond quickly. Patients who are waiting are occupying valuable assessment spaces that can be used by other patients. One proposal is that specialists who are asked to assess a patient in the ED make arrangements to see that patient in the ED or other assessment area and make a decision to admit or discharge within two hours, 90 per cent of the time. This assumes that emergency personnel have completed an adequately detailed assessment before the consult so that further extensive investigations are unnecessary prior to a decision. Performance-based incentives to help improve the ED flow should be considered.

- Ensure access to home care and discharge planning during the high-volume times of the day so that patients can be discharged safely with follow-up in place.

RECOMMENDATION 6:
Stagger shift changes and offer more shifts of varying lengths.

Shift changes for most staff often occur at 7 am–7 pm or 8 am–8 pm each day. Productivity dips by the end of a 12-hour shift: staff often slow down and spend more time reviewing patients already in the ED. After a shift change, the new staff become familiar with the current patients, check equipment, and chat with co-workers. All these are normal and safe practices but mean that ED flow decreases dramatically, especially during the evening change-over.

One answer is to stagger shift changes by 15–30 minutes so that staff arrive and leave at different times, ensuring discharges and admissions continue throughout the hand-offs. Also, consider more alternatives to exhausting 12-hour shifts, such as 10 and 8 hours. Provide as much scheduling flexibility as possible to meet the needs of younger workers, working mothers, and retired casual staff. Remember that 80–90 per cent of the people seen in the ED are ultimately discharged; continuous chair and stretcher turnover is vital. Patients do not stop arriving during shift changes. Relay runners do not stop and start; they overlap while running and focus on a smooth hand-off.

RECOMMENDATION 7:
Improve communication with people who are waiting and among hospital staff, EHS (paramedics), and outside agencies.

With the people waiting: Inform people regularly (every one to two hours) why they are waiting. People know that EDs can be busy, but they also want their time respected. Consider having a senior staff member make regular announcements about the condition of the ED. There are automated ways of doing this, such as

Patient Flow Dashboards and Information Screens located in patient reception and waiting areas. Much like airport arrival/departure screens, they inform people of current and expected ED activity. Some screens also provide patient education and or entertainment.

Among hospital staff, EHS (paramedics), and outside agencies: There are many processes and communication exchanges that must occur to navigate a patient safely into and through the ED and on to a hospital ward. Hospital leadership should create regular opportunities for meaningful exchange between care groups who may become pre-occupied with their own set of tasks and forget about the smooth linkages that are required as patients are handed off from one service to another. Regular, SHORT, face-to-face exchanges are invaluable in problem solving. Avoid e-mail and letter writing whenever possible.

Although the members of different health-care disciplines (like doctors and nurses) often meet together, cross-discipline meetings are really important. This should also include the out-of-hospital disciplines, such as paramedics and continuing care.

Pearl's husband tried to get her placed, but the staff were very busy. At 1 am—five hours after the initial assessment—Pearl finally was seen on a stretcher in one of the Emergency Department cubicles. Once in the department, she was assessed by a nurse who suspected pneumonia. Some blood tests were performed and a chest x-ray ordered. Thirty minutes later the Emergency Physician assessed Pearl and after the examination and review of the tests confirmed the nurse's suspicion of pneumonia. Pearl's blood oxygen level was low and she was clearly too weak to safely go home. A request for admission to the hospital was made. An antibiotic was given, along with oxygen and IV fluid.

RECOMMENDATION 8:
Give non-traditional providers a bigger role in the emergency health system.

The situation described above is far too common. The Emergency Department is designed and staffed to serve patients who will have a short stay. Admitted patients, when they complete the initial assessment and treatment phase, need to also move elsewhere inside the hospital for more investigation or treatment. It makes sense for the comfort and wellbeing of the patient—the lights, noise, and confusion can only be tolerated for a short time. It also makes sense from a patient outcome and cost point-of-view.

The staff were extremely busy on the night Pearl arrived because they had to deal with two sick calls from staff—one RN and one clerk—which meant that the ED was short-staffed. (With a more patient-centred funding model, there would have been two doctors working that shift instead of just one.) He quickly fell behind, as happens almost every late afternoon and evening.

Hospital staffing is unquestionably difficult, and with an aging work force, will likely get more complicated. However, we need to challenge the old thinking about appropriate staff skill sets. How can in-department paramedics, LPNs, nurse practitioners, physicians' assistants, nursing attendants, and others supplement the traditional roles of physicians and nurses? Some departments are beginning to experiment with new staff mixes. The greatest resistance comes from traditional disciplines—locked into traditional values—who are unwilling to consider new ways in which patient care can be provided. It is time for a new way of thinking.

In many other places it is already happening. The Institute for Health Care Improvement (IHI) is a global quality-focused alliance of hospitals. It has a number of resources that could be used to determine ideal staffing complements for Emergency Departments in Nova Scotia. Ontario and British Columbia already have staffing formulas for emergency physicians to better address the complexity of urban EDs. A more rational approach to determining daily physician coverage AND some innovation in scheduling other types of clinicians—whether nurse practitioners, physician's assistants, extended-role paramedics, social workers, mental health social specialists, physiotherapists, or others—would improve wait times and quality of care.

RECOMMENDATION 9:
Produce more specialists in emergency care.

For virtually all medical specialties there is a single recognized qualification. But there are at least seven possible qualifications for emergency doctors in Nova Scotia:

a. International medical graduate with a site-specific defined license. (If full-time, these are often called emergency physicians.)

b. Training in a specialty other than family medicine or emergency medicine—such as general surgery or internal medicine—which allows one to practice as a generalist with emergency care as part of one's role.

c. The General Practitioner designation, which requires a one-year internship after medical school and years of acquired wisdom. (If full-time these are called emergency physicians.)

d. The Family Physician designation granted by the College of Family Practitioners of Canada (CFPC), which requires two years training in family medicine after medical school plus an examination. (This is also called an emergency physician if full-time.)

e. A special certificate in Emergency Medicine (CCFP-EM) for family physicians who take a year of additional training and pass a specialist examination. (They most often practice full time and are called emergency physicians.)

f. Designation as an Emergency Physician FRCPC, which requires five years of training after medical school and passing an exam to become a Fellow of the Royal College of Physicians and Surgeons of Canada.

g. Designation as a Pediatric Emergency Physician, which requires four years of training in pediatrics after medical school, as well as a two-year fellowship in Pediatric Emergency Medicine.

Confused? No wonder people think that any doctor can work in the ED. Even the two Emergency Medicine training programs—CCFP-EM and FRCPC—cannot agree on a single route to training an emergency physician. Yet expertise in Emergency Medicine in busy regional and provincial EDs influences patient outcomes and streamlines decision-making. It is also necessary for the training of future physicians in both small and large centres. Dalhousie University offers both programs. Nova Scotia's Certified Emergency Physicians are experts in managing the poisoned patient (toxicology), pre-hospital care (ambulance systems and patient transport), disaster medicine, trauma care, and critical care. They are often effective, popular educators as well as innovators in system design, leadership, and research.

It seems short-sighted that Nova Scotia does not recognize CCFP-EM as a specialist designation in Emergency Medicine. Doing so would encourage more family physicians who have some expertise in emergency care to advance their skills and knowledge and obtain the EM certification. CCFP-EM physicians are the present and future leaders of regional and community Emergency Departments in Nova Scotia. Their unique skills and knowledge should be recognized. Doing so would also further raise the bar for patient care.

Emergency nursing is facing a serious crunch in the next few years. As was predicted more than 15 years ago, nurses are retiring at an alarming rate; finding experienced "emerg" nurses is growing increasingly difficult. In the past, no nurse would be accepted into the ED without a minimum of five years nursing experience in other areas of the hospital, including some intensive care unit experience. Now new graduates enter several month-long critical care courses to prepare them for emergency work. It is hard to tell if this new route to RN preparation is better, worse, or simply different. With proper support and mentoring, and a drive to be certified by the National Emergency Nurses Association, Nova Scotia can hope to attract young nurses to this important area of the hospital.

We also need to train more paramedics. There is a need for more advanced-care paramedics (ACP) and critical-care paramedics (CCP). They can work both inside and outside the Emergency Departments. Another specialized role is community paramedicine—providing continuing care and chronic disease management while collaborating with primary-care clinicians.

RECOMMENDATION 10:
Staff the Emergency Departments to adequately meet patient needs.

Staffing shortages like the one when Pearl arrived are a common occurrence. Usually when someone calls in sick, the clerk, charge nurse, or another staff member is left to go through a long staff list by phone to find a replacement. I have watched this process for years and am startled that it is still the norm. This time-consuming activity takes staff away from other duties. It also defies reason: if the Emergency Department is really considered an important hospital service why, when it is short-staffed, is a decision made to close a section of an already chronically overcrowded department? An important public service like an ED needs to be supported by moving staff from other parts of the hospital. It would be folly to simply move staff from one understaffed area to another without taking patient care into consideration. However a gridlocked regional ED affects more than the patients and staff in the ED. It also affects the referral hospitals in the region, as well as hampering the EHS with long offload times which, in turn, can jeopardize public safety outside the hospital.

A provincial or regional ED must have strategies in place to provide timely assurance to the majority of patients who can be discharged, and true emergency care to those who need it. Maintaining a full staff complement and appropriate capacity is vital to attaining this goal.

Some of the last-minute staff shortages are due to sick calls from staff. These are due to actual illnesses or injury, and sometimes to stress and burnout. Staff that are satisfied with their jobs and feel valued report fewer sick calls. Last-minute calls result in last-minute overtime replacements, if they can be found, and considerably higher staffing costs. Respecting employees, empowering them to participate in problem-solving, and giving them some control over their clinical environment would increase morale, decrease sick time, decrease costs, and improve patient care.

In the case of physician shortages, locum tenens or 'locums' are sometimes used. A locum is usually a temporary position for only a few shifts or longer. Some provinces have government-run locum programs. Although they address an immediate need filling empty shifts on a schedule to avoid closing EDs—locums can also create problems. Most locum programs attract physicians with premium pay rates. That means some doctors may fill locum positions at the expense of their day jobs in clinics or other EDs. EDs with a high locum turnover put more stress on nurses who have to get doctors up to speed by showing them where things are and how the local system works. The quality of care from fill-in physicians with no prior knowledge of the ED or area also varies dramatically. Locums are no long-term solution. A better resolution is to assess the needs of the patients being seen in a particular ED and determine if there is an innovative staffing mix and schedule that will work—e.g., instead of several hours per day where there are two doctors in the ED, perhaps one doctor could work with a nurse practitioner or extended-role paramedic or, when allowed in civilian practice, a physician's assistant.

Two days and five shift changes later, Pearl finally left the Emergency Department stretcher for a hospital bed. By then she was exhausted from the constant lights, noise, and confusion of the ED. Disoriented, she attempted to climb over the bedrails several times and finally had to be physically restrained.

RECOMMENDATION 11:
Ensure that at least 90 per cent of admitted patients are in the Emergency Department less than eight hours.

This is the standard recently adopted in Ontario[14] and British Columbia. Eight hours or less from the time of first assessment (triage) to leaving the ED is felt to be a reasonable duration to make a provisional diagnosis, determine whether the patient needs to be admitted, then contact a specialist, locate a bed and move them to the most appropriate in-patient location if admission is necessary. Being in the ED for more than eight hours—as is the case with Pearl—increases the chance of error and medical complications—and increases the length of hospital stay once they finally get a bed.

[14] Ontario Ministry of Health and Long-term Care. "Emergency Room Wait Times - Emergency Room Targets."

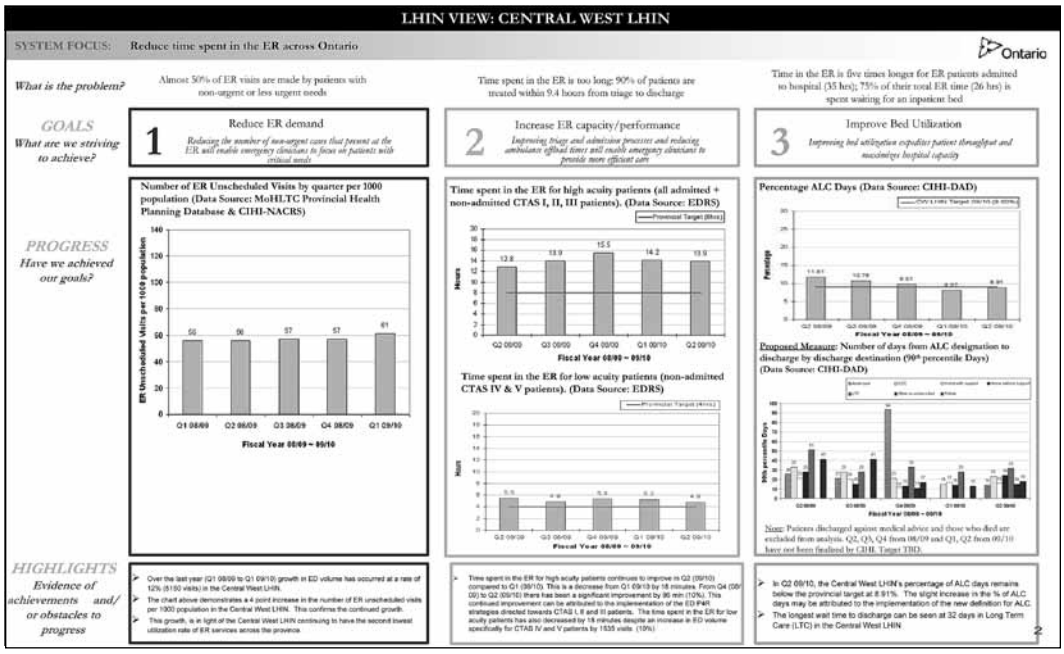


Figure 5: Example page from Quarterly Stocktake Report from one LHIN (health district) in Ontario. All LHINs must publicly report their progress, which also determines the amount of incentive funding available. There are three main strategies to reduce ED crowding: (1) better manage input by reducing demand for less urgent care; (2) improve throughput efficiency; (3) tie emergency flow to more effective nursing home placement (alternate level of care, or ALC, patients) to increase hospital capacity for acute care and decrease waiting in the ED for a hospital bed. This chart is from the Ontario Ministry of Health and Long-term Care. "Emergency Room Wait Times—Emergency Room Target." http://www.health.gov.on.ca/en/pro/programs/waittimes/edrs/pdf/central_west_20100101.pdf.

There is another reason that Pearl should have left the ED sooner. By occupying a stretcher for two days at a time of limited space in the ED, 12 patients had to wait longer before being assessed, treated and discharged. As the number of admitted patients occupying stretchers—and their length of stay—increases, the ability of the ED to meet standards similar to those recently adopted in Ontario and BC decreases and wait times rise.

Decreasing wait times requires better communication and collaboration:

- Patients seen at other hospitals and referred to regional or provincial hospitals for specialist care should be admitted directly to in-patient units unless a diagnosis or treatment is uncertain—or if the patient is unstable and needs Emergency Department resources. Currently, too many patients who already have a diagnosis and treatment plan in place are still being assessed in the receiving hospital ED. More refined transfer arrangements and better communication would reduce this waste of EHS and ED resources.
- Begin planning discharge on the day of admission.
- When possible, move patients from Provincial and Regional Hospitals closer to home at Community Hospitals.

- Follow the lead of the Cape Breton Regional Hospital (CBRH), which has decided that the "pull" philosophy makes more sense than the "push" approach. Instead of emergency staff relentlessly calling in-patient units to find out if beds are ready (the push), CBRH requires that each of four different units have at least one bed available daily at 0900, 0930, 1000, and 1030. Admitted patients are automatically "pulled" into each of these beds. This approach has made a big difference in hospital flow and ED congestion as well as improving communication between different staff. Most importantly, patient care has also improved. Every hospital in the region would benefit from such a system. ED admissions, after all, are predictable. An approach similar to the CBRH's would allow hospitals to better plan for each admission request.
- Encourage family doctors to take care of more patients in hospital. Some patients do not require specialist and subspecialist care. Without the involvement of their family doctors, some patients receive unnecessary tests and treatments. The irony is that immediate follow-up after in-patient care is often delegated to the family doctor through an illegible, hand-written summary which is sent days after discharge. Family doctors actively involved during the hospital stay should stay involved in decision making, both advocating for patients they know and being part of the goal-setting—for example, when to investigate and treat certain conditions and what can be done as an outpatient.
- Discharge should occur by 10:00 am. Currently people leave hospital late in the afternoon or evening. Although this may be convenient for relatives, it makes the ED the default holding area at a time when the new patient traffic is highest.
- Clean rooms quickly. Sometimes, after a patient leaves it takes hours before the room is cleaned and ready for a new occupant. Ideally enough housekeeping staff should be available so that, barring an unusual infectious concern, a room could be available within 60 minutes of being vacated.
- Ensure better access to home care.
- Ensure that all long-term care (LTC) beds in the province are being actively used. Patients waiting for LTC unnecessarily occupy acute-care hospital beds (alternate level of care, or ALC patients). At the moment, nursing home beds paid for by taxpayers are remaining empty for weeks at time due to processing inefficiencies. In June 2010 there were 5,053 empty bed days in 48 nursing home facilities in Nova Scotia. There are numerous reasons for this, related to patient or family decisions, nursing home policies, and Department of Health policies. However, these beds must be used more effectively.
- Explore more innovative staffing arrangements to allow nursing homes to receive new admissions outside daytime hours and on weekends. Health care is a 24/7 activity. Although 24/7 admissions are most likely unrealistic, expanded hours are critical for hospital patient flow.

- Create and refine performance-based compensation for care teams. The best way to do this is to use benchmarked turnaround and response times and quality indicators—length of stay and complication frequency, for example—based on desirable outcomes. Although the devil is always in the details, the current funding mechanisms are not patient-centred. They do not reward high performance, nor do they discourage inefficiency.

RECOMMENDATION 12:
Use information technology to track and enhance the patient journey.

The patient journey through emergency care begins when they have a health problem and seek help. As soon as they make contact with an emergency care provider, we should be able to begin the tracking and not stop until the problem has been dealt with. Health Link 811, 911, and EHS appear to have reasonable data and flow management. But once the patient enters the Emergency Department, it is almost impossible to follow their progress. Most businesses in this province have better integrated information systems than our health-care system.

- Implement an Emergency Department Information System (EDIS) for all Regional/District sites. Currently Capital Health sites at Hants Community Hospital, Cobequid Community Health Centre, Dartmouth General Hospital, and the Halifax Infirmary have an EDIS. Electronic triage is more consistent, patient locations and tracking is simplified, and a wealth of data is available to guide quality improvement, efficiency, and health-care provider feedback. This would provide managers with information to target quality improvement, allow sites to identify best practices, provide timely wait time data and communicate ED status with the rest of the hospital.
- Implement the National Ambulatory Care Reporting System (NACRS.) The Canadian Institute for Health Information developed it in response to the growing need for ambulatory care data across Canada. NACRS provides hospitals and community-based organizations with a standard data collection and reporting tool to capture data for ambulatory care visits, including day surgery, Emergency Departments and clinics. Using NACRS enables consistent, reliable, comparable information provincially, inter-provincially and nationally.

NACRS provides the following advantages:

- Supports the delivery of quality, unbiased, relevant and reliable information to support decision making and informed health-care discussion
- Collects, processes and analyzes summary data on hospital ambulatory care
- Supports management decision-making at the hospital, regional and provincial/territorial levels
- Facilitates provincial and national comparative reporting
- Supports related approved analysis and research

• Implement a Utilization Management program to better track and analyze patient-related in hospital processes. The delivery of acute in-hospital care is one of the most expensive aspects of the care continuum. Like many other jurisdictions in Canada, Nova Scotia depends on manually gathered bed counts, anecdotal evidence and provider/physician preferences to manage these resources. Other provinces in Canada—namely New Brunswick and Alberta—have introduced information management applications designed to provide the data required to identify opportunities to use resources more efficiently and effectively.

  Utilization Management provides evidence to guide decisions on the number, location, and the type/level of care required for beds. It also identifies service gaps in community programs that are related to delayed discharge and readmission, and uses an evidence based approach in determining if each individual patient requires admission and on-going in-patient care. The availability of data for comparison with other DHAs will provide benchmarking opportunities. It will facilitate better understanding, management and potential strategy development in the area of alternative level of care patient stays in acute care beds.

Recommendations for Smaller Hospitals

Sam, a 48-year-old teacher who lives in a small Nova Scotia community spent his March Break in Mexico. On the return trip, he developed diarrhea, which continued for another five days. Instead of recovering he was feeling increasingly tired and losing weight. He called his family doctor's office and was told it would be five weeks before he could get in to be seen. (The office was fully booked and there were no extra appointments.) The receptionist suggested that if he was concerned, he should go to "outpatients" at the local Emergency Department. He found out from his neighbour that if he went that day, his family doctor was covering the ED and would probably end up seeing him.

RECOMMENDATION 13:
Make access to primary care a priority.

This is not news. Marc Lalonde, federal Minister of Health, made this point in *A New Perspective on the Health of Canadians* more than three decades ago. It has already been noted that the 2002 Romanow Commission on the Future of Health Care in Canada emphasized the importance of making profound changes to primary care, including increased access to emergency, acute care, and continuing care. And a year later a complementary report, *Primary Health Care Renewal: Action for Healthier Nova Scotians*,[15] also outlined the current state of primary care in this province and made recommendations for change—as did the Provincial Hospital Services Operational Review (PHSOR) in 2007.

In the case above, Sam didn't need to go to an ED. What he really needed was to see a primary-care clinician. And, therein, lies the problem. Poor access to primary care came up in every District Health Authority (DHA) that was visited. In some towns, people wait anywhere from a few days to seven weeks to see a family physician. But not everywhere. In all DHAs, more collaborative practices—which include family physicians, nurse practitioners, family practice nurses, dieticians, pharmacists, physiotherapists, occupational therapists, continuing care coordinators, and addictions counselors—are dramatically increasing access, in many cases seeing patients the same day they call.

An excellent 2005 study used evidence from several countries, including the United States and the United Kingdom, and concluded that there is a correlation between access to primary care clinicians and a decline in hospitalization rates and health-care costs. This is particularly true when patients see a regular health-care provider and less true when different providers supply primary care. Intriguingly, studies also show that mortality and cost is often higher in communities with limited access to primary care even when they have higher than normal access to specialists.[16] (There are a number of explanations for this causal effect including greater access to services for at-risk populations, better quality of life, a greater focus on prevention as well as less exposure to the potentially harmful effects that come from seeing a specialist.)

[15] *Primary Health Care Renewal: Action for Healthier Nova Scotians: A report of the Nova Scotia Advisory Committee on Primary Health Care Renewal*. Nova Scotia Department of Health, May 2003.

[16] Starfield B, Shi L, Macinko J. "Contribution of Primary Care to health systems and health" *The Milbank Quarterly* (2005); 83 (3): 457-502.

Dr. Mark Murray has authored an instructive section on how to create an "open access" primary care practice viewable on the Institute for Healthcare Improvement website (http://www.ihi.org/IHI/Topics/OfficePractices/Access/Changes/). Essentially, open access results in same day or next day appointments, effectively eliminating the road block that Sam experienced. Throughout the research for this report, a number of Collaborative Clinics and smaller office practices offering "open access" were visited. Clinicians and patients at every clinic were satisfied—leaving one to wonder why open access clinics are not the norm across Nova Scotia.

The use of rural EDS will naturally decrease with better access to primary care. This type of system also provides an opportunity for care providers to teach patients more about self care, prevention, and health promotion—diet, exercise, weight loss—and when to seek access to health-care professionals.

The following table shows data from three Emergency Departments in Nova Scotia for 2009–10. Numbers for each shift are the average TOTAL number of patients seen during those shifts. Severity refers to the severity of the injury or illness, using the Canadian Triage and Acuity Scale (CTAS), where 1 is life/limb-threatening and 5 is minor. This is intended as a general comparison only, as all sites have some variation in how they assign CTAS levels. With CTAS 1 and 2 there is fairly good consistency. There is more variation with 3, and even more variation with CTAS 4 and 5.

Table 1. Summary of visits to one regional and two rural Emergency Departments in 2009–10

Shift:	**Regional ED (29,023 visits)**	**Rural ED (16,890 visits)**	**Rural ED (11,377 visits)**
8 am to 8 pm	55.5	34.9	27.4
8 pm to midnight	13.7	6.9	2.5
Midnight to 8 am	10.3	4.4	1.3
Severity (CTAS):			
1. Life/limb threatening	0.2%	0.1%	0.1%
2. Severe	7.3%	1.3%	1.1%
3. Moderate illness	27.0%	18.4%	10.4%
4. Less urgent	43.4%	53.1%	32.5%
5. Minor	17.1%	27.1%	54.2%
Admit or transfer:			
	7.2%	4.3%	4.9%

It is clear from the data that, even at the regional ED, demand for emergency care is very low during the night. One of the smaller rural sites sees an average of 1.3 patients during an eight-hour shift. Some nights are busier, but on other nights not a single patient seeks attention.

An analysis of two months of patient visit data for one of the smaller sites was also interesting. The overall visit rate for that sample was the same. Between 10 pm and 8 am there were five admissions: three for palliative care and two for pneumonia. There were three transfers related to mental health concerns, abdominal pain, and confusion. During the sample period a single death occurred. Ten per cent of the patients were 16 or younger, while 16 per cent were 75 or older. After being on call for the night, the doctor was unavailable to work in their clinic the next day. The average cost to taxpayers per small ED site is between $350,000 and $780,000 per year—just for the physician night call component. That figure excludes the cost of any nurses or clerks assigned to the ED for the night. In the sample above, there were two patients with severe conditions (one per month) and 26 patients with moderate illness (one every second day). That is approximately $2,150 per patient, even though virtually all of them were discharged. It is impossible to place a cost on "peace of mind." However, for a health-care system often characterized as in 'crisis,' there may be a better use of valuable human and financial resources.

Most rural sites visited stressed the importance of maintaining a 24-hour, seven-days-a-week Emergency Department. As the Provincial Hospital Services Operational Review (PHSOR) report states, "With the possible exception of Obstetrics, Emergency Departments (EDs) are considered the most defining element of a local hospital by the population it serves" (p 37). No one can question that quick access to emergency care is a critical part of a mature health-care system. But providing true emergency care in the right setting is important. On page 39, the PHSOR states that low visit volume may be noteworthy for two reasons:

- Doctors and nurses might not see enough patients to maintain the skill sets needed when a real emergency arises.
- The province currently pays an hourly stipend to physicians providing evening and night coverage in many smaller hospitals. Given the low volumes, that arrangement leads to high costs per visit and raises questions about appropriate resource use.

The report went on to say that closing some small EDs would be a good way to save money—and would ultimately affect very few people. Not surprisingly, there was considerable public concern about that proposal. Nova Scotians feared losing the defining element of their hospital, in some cases after already having lost surgery, obstetrics, and other services over the years. The spirit of so many Nova Scotia communities has been forged by loss—whether fishermen at sea or coal miners underground. Small towns have rich histories and traditions that people in downtown

Halifax may not understand. Factor in the long-established rural-urban tensions—along with the natural animosity towards policies dictated by bureaucrats in far-off Halifax—and the negative reaction in so many towns and villages was not surprising.

The Society of Rural Physicians of Canada, in an April 2009 report titled *Rural Hospital Service Closures*,[17] outlined the folly in other provinces of closing smaller hospitals. Its report reminds us of the challenge of delivering health care to a part of Canada that has 20 per cent of the employed workforce, 31.4 per cent of the population, and 99.8 per cent of the landmass, but only 17 per cent of family physicians and 4 per cent of medical and surgical specialists. Non-urban hospitals are mostly staffed with multi-tasking "generalists"—physicians, nurses, and support staff—with broad skills. This often results in more efficient and cost-effective health-care delivery.

During community consultations it became clear that people rarely need true emergency care. Stand alone, separately staffed EDs seem to make sense when there is a higher volume of sick or injured patients who require the rapid delivery of special emergency services. Instead, most people need access to a broad spectrum of excellent primary care that includes access to emergency care. Only a system redesign can provide that access.

A pair of anecdotes illustrates the potential impact of such changes.

Scene One: *78-year-old Bill awoke at 3 am with severe abdominal pain. His wife Margaret struggled to help him get dressed and helped him into the car. He almost fainted twice. She sped four kilometers down a gravel road to the local Emergency Department. There, she rang the night bell and was met by a nurse who brought Bill in and placed him on a stretcher. He had grown pale and moaned with pain. The nurse obtained some facts from Margaret, helped her remove Bill's coat and sweater, and then took some vital signs. His blood pressure was low, so she called a nurse from the nursing home side of the hospital to assist and asked her to call the doctor, who was at home. They started intravenous fluids. The doctor arrived and, after completing her assessment, decided Bill needed further tests at the regional hospital. She called the hospital switchboard and asked for an on-call surgeon to be paged. The doctor called back and, after hearing about their concerns, agreed to see Bill in the Regional ED. There was suspicion that Bill's aorta was leaking. An ambulance was called and Bill was transported to the Regional ED. Total time until surgical treatment: two hours. Near the end of the trip to the ED, due to prolonged low blood pressure, Bill had a stroke and suffered kidney damage requiring dialysis. As a result, he was unable to return home and was still waiting in an acute care bed. Furthermore, the bed he occupied for three months while he waited for Nursing Home placement could not be used for admitted patients waiting in the Emergency Department.*

Scene Two: *The same Bill awoke suddenly at 3 am with severe abdominal pain. His wife Margaret called HealthLink 811. The nurse listened to the story and was also concerned by the moaning she heard in the background. She linked the call to the EHS Medical Communications Centre, and an ambulance was dispatched. When the paramedics arrived, seven minutes after the call was made, Bill was lying in bed pale and had almost fainted twice. After checking his vital signs, they knew he would require urgent tests and possibly a surgeon (a leaking aortic aneurysm was high on their list of possibilities). So, they started two IVs, connected him to monitors and loaded him in the ambulance. The EHS Medical Communications Centre notified the Regional Hospital of their estimated time of arrival and a radio patch was established with the on-site Emergency Physician. He agreed to notify the surgeon to be ready. Total time to surgical care: one hour thirteen minutes. As they arrived at the Regional, despite the IVs running wide open, Bill's blood pressure dropped again. A rapid ultrasound confirmed a large aneurysm and he was immediately taken to the operating room. He made a full recovery.*

RECOMMENDATION 14:
Make emergency care a seamless part of primary care.

- Provide open access collaborative clinics where possible or smaller practices with same-day/next-day access. This was a frequent message from people who attended the Emergency Department consultations in March and April 2010.
- Provide after-hours and weekend access.
- Attract physicians, nurses, and allied health-care providers by understanding their workplace priorities. An article by Pong and Russell at the Centre for Rural and Northern Health Research[18] makes the following recommendation in this regard:

  There appears to be a growing awareness that rural health workforce problems are complex and must be dealt with using a multi-dimensional approach. There is no magic bullet that can solve all problems for all rural communities once and for all. This is reflected in the emergence of a multi-pronged strategy. In the case of rural physicians, although financial incentives are still very popular and important, we have seen the emergence of other strategies such as enhancement of rural practice, improvement to quality of life, medical education initiatives, etc.

  This sentiment was consistent with the message expressed throughout the Nova Scotia consultations: Although financial incentives are an important part of why a health-care professional joins and stays in a rural practice, other factors—quality of life, a well-organized and collegial collaborative practice, electronic medical records, adequate opportunity for continuing education, positive community support—were all cited as important considerations, especially among younger physicians.

[18]Pong R, Russell N. *A review and synthesis of strategies and policy recommendations on the rural health workforce*. 2003. Centre for Rural and Northern Health Research, Laurentian University. p 31

- During repeated visits it became clear that clinicians and support staff with a mixture of skills are the hallmark of a well-functioning rural facility. Physicians can provide broad-range primary care and emergency care, along with continuing care and care to special groups such as the mentally and physically challenged. RNs can cover the nursing home attached to a clinic and handle in-patients while also being available to assist with emergencies. Paramedics often assist in the hospital. Technicians are cross-trained in radiology and laboratory.
- Whenever possible, encourage all collaborative team members to move under one roof. An ED in an existing hospital, for example, would be ideal. Minor and some major renovations will be necessary to accommodate new office and clinic space. A few sites will even require a new structure to provide a full-service primary care facility.
- Make the Emergency Department a Collaborative Assessment Room for Emergencies (CARE)—a procedures and emergency care area that anyone in the clinic can use to manage a patient in need of its special equipment. Instead of standing alone, this room would be part of the clinic.

The last two points are significant changes from the current status quo. Most physicians work as independent, self-employed entrepreneurs, billing provincial health plans or other payers for insured or other services. In another *Mythbuster*[19] summary article about how doctors are paid, the National Physician Survey demonstrated a decrease in fee-for-service (FFS) income from 50 per cent of the respondents in 1995 to 23 per cent in 2007. It was only 18 per cent among female physicians. Also there was an age trend with a high of 41 per cent FFS among doctors aged 65 or older and a low of 17 per cent among physicians under age 35. A study in 2009 found that there was a higher level of satisfaction among physicians working in non-FFS systems. However, because of the complexity of funding systems, many doctors do not feel well-enough informed of the risks and benefits, and remain suspicious of changing. That also goes for relinquishing their independent practices and moving under one roof. All that being said, there are many examples of robust, highly effective collaborative practices where providers and patients are more satisfied.

The concept of altering the role of the stand-alone ED into part of a collaborative practice is being used already at several sites around Nova Scotia, and is highly effective. Sacred Heart Hospital in Cheticamp is one example of an effective collaborative practice, emergency service, nursing home, and allied health services all under one roof.

[19]http://www.chsrf.ca/mythbusters/html/myth33_e.php

The reality is we have a limited number of experienced hospital-based emergency care providers, a very low number of medical emergencies, and a high need for primary care. What we need is more OPEN ACCESS primary care and not as many open buildings but assured access to emergency care when it is needed 24/7. We can do that well. The following recommendations are NOT about loss; they are about gaining better access to primary care when it is needed by moving more clinicians into daytime work while raising and leveling the quality of emergency care provided across the province.

RECOMMENDATION 15:
District Health Authorities should consider an evolution of select Emergency/Outpatient Departments to a Collaborative Assessment Room for Emergency (CARE) model.

As the data demonstrates, most patients can be seen in an office setting. They simply do not require providers with special resuscitation training or emergency equipment. Ambulatory patients should be streamed to the most appropriate care provider—physician, nurse, nurse practitioner, etc. With few exceptions, CTAS 1 and 2 patients will proceed directly to the community or regional hospital. A patient with, for example, abdominal or chest pain, a suspected fracture, or large laceration would be directed to the CARE. EHS will transport some CTAS 3 and most CTAS 4 to the CARE. A nurse and clinician (MD, NP) would be called from the contiguous clinic area to assess the patient. In this setting, several outcomes are possible. Minor injuries or illness can be assessed and treated and the patient discharged home. In some cases, a period of observation may be required during treatment. Occasionally, the patient will be too ill or injured to stay in the clinic and should be transferred to the community, regional or provincial ED.

Based on visits to all District Health Authorities, several sites could be considered for evolution to a Collaborative CARE model. (See the following pages for a district-by-district review of possible sites.) But before the CARE model can be implemented, the following fundamental system-wide improvements must occur:

1. Provincial and regional hospital patient flow must improve by achieving ED efficiency and more effective admission policies and procedures to reduce and, ultimately, eliminate ED crowding.
2. More communities must have improved access to primary care, with open access for same-day and next-day appointments when needed.
3. EHS ambulance offload delays must be closely approaching a 20-minute standard; unnecessary ambulance transfers must be reduced; and EHS/EMC must have completed a detailed analysis of the impact of altered hours at select facilities and have capacity to respond to anticipated calls.

As of today, some sites are more ready than others to consider alternate delivery models. It is recommended that DHAs identify sites with the most available primary care and supportive Community Health Boards. In all DHAs, physician funding will have to be addressed to ensure it remains relatively stable but is paying for services tied more closely to improved patient outcomes and supporting work when there is patient need.

A tale of two "cities"

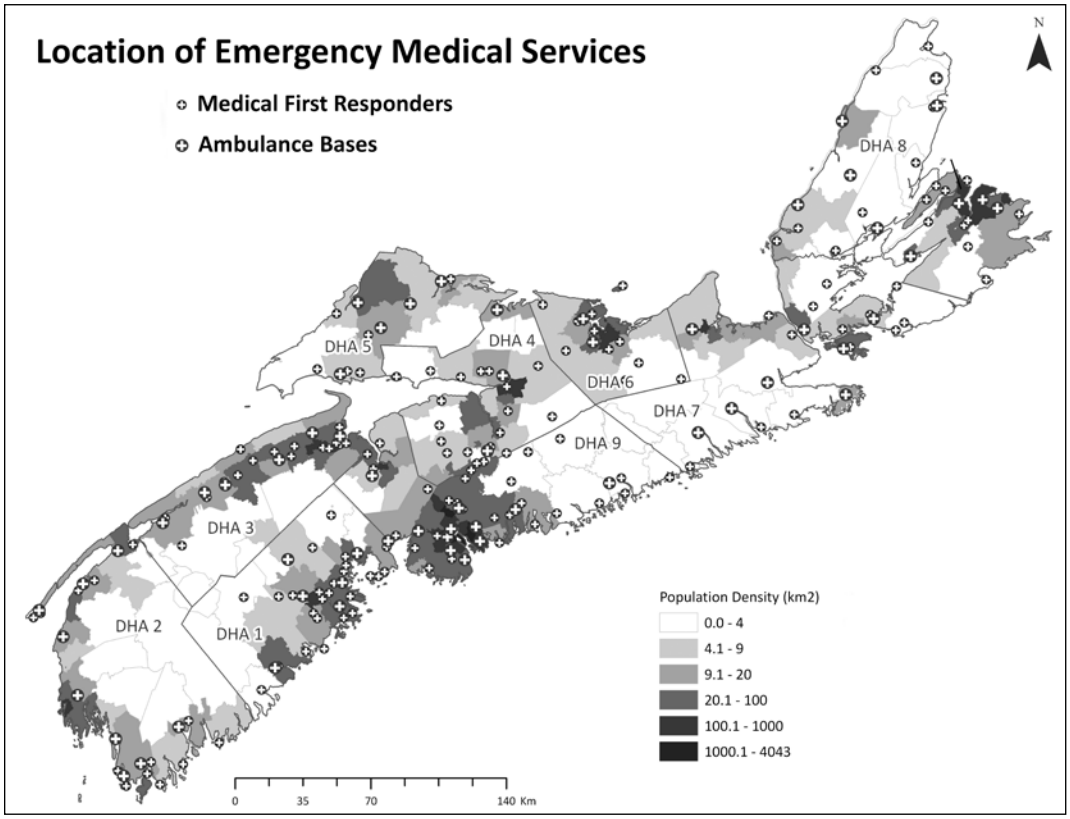
Several years ago, the Fisherman's Memorial Emergency Department could not find enough nursing staff to operate 24 hours/day and were forced to change their hours. The community experienced many of the standard grief reactions to what was seen as a loss of a vital service–denial, anger, bargaining, probably depression but eventually acceptance and hope. As a daytime only service the community GAINED stability and predictability without negative consequences. The ED is positioned to work more closely with an adjoining collaborative practice.

Just over one year ago, Musquodoboit Valley Memorial Hospital could not staff the Emergency Department due to a doctor shortage. All told, 88 per cent of visits occurred between 8 am–8 pm. Just 2.9 per cent came after midnight. ED closures were occurring during the day when most people were expecting the service. The solution, after much public consultation, was to provide an open-access collaborative clinic between 8 am and 5 pm that closes at night during the week and becomes emergency-only 24/7 on the weekends.

In both cases, emergency care has been provided locally when there is greater need. In fact, people say they like the predictable hours of operation and open access. Health-care providers are also more satisfied. Prior to the change, in the evening and night neither facility could offer lab or x-ray services. Any patient that required diagnostic tests had to be transferred out. One of the doctors said that if a sick person arrived after hours, they had to be transferred to Halifax anyway. The extra time spent in their ED would have been better used to get to Halifax sooner.

To be absolutely clear, the collaborative CARE model does not involve any job loss, but instead moves some under-used health-care providers from night shifts into day shifts when patients are looking for care. The idea is to maximize the availability of skilled staff, especially where supply has been a chronic problem.

Nova Scotia already has a well-developed network of emergency care providers.



Source: Business Intelligence, Analytics and Privacy (BIA&P), Health Information Office, Nova Scotia Department of Health, Medical First Responder and Ambulance Bases - Emergency Health Services (EHS), Population - Statistics Canada, 2006 Census, Nova Scotia Department of Finance

Figure 6: Nova Scotia map with population densities and locations of Medical First Responder (MFR) stations and EHS paramedic stations. Although MFRs are primarily trained for fire prevention and fighting, they often provide first response and assistance to EHS paramedics for medical calls. Nova Scotia Department of Health.

Under the province's proposed Emergency Department Standards, over 95 per cent of Nova Scotians would be within a one-hour drive of 24/7 ED access. Every ED would meet the new standards for staff qualifications, skills, equipment and performance—or have in place strategic plans to meet those standards in two years or less. Public consultation, clear communication, and consistency are paramount throughout the process. But as Musquodoboit, Fisherman's Memorial, and several other sites have already demonstrated, facility hours can be safely altered so that limited staff and funding is used in a way that offers potential benefits, such as these:

- healthier communities with improved primary care
- improved staffing levels. Physicians and nurses can spend a greater proportion of their time when they are most needed during the day seeing patients. Better on-call schedules may help attract and retain clinicians.
- increased use of Health Link 811 to provide advice on minor emergency care and, if possible, help booking next-day appointments, if necessary (requires access to clinic appointment systems)
- better utilization of EHS to provide basic care during home assessments, arrange 811 or clinic follow-up, or provide more advanced care while transporting to the most appropriate Emergency Department

Possible Collaborative CARE Sites

The CTAS data in the following pie charts is from 2008–10. This is what the categories mean:

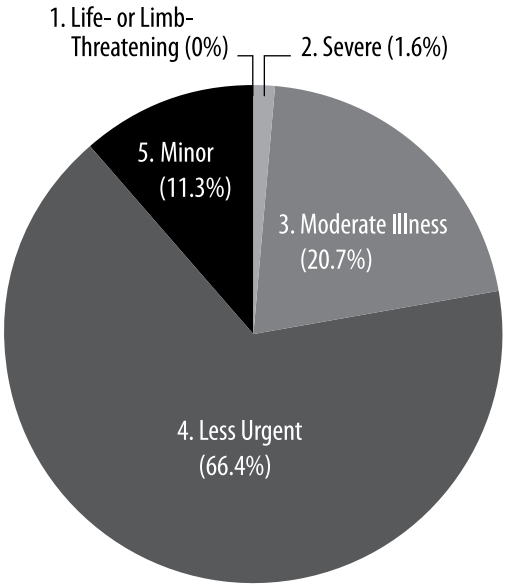
- CTAS 1 is life- or limb-threatening.
- CTAS 2 is severe pain or unstable vital signs.
- CTAS 3 is moderate illness that may require some tests.
- CTAS 4 is a possible bone fracture or large cuts.
- CTAS 5 is minor injury.

The use of CTAS in small and rural EDs is controversial. The number of patient visits is low, and triage (prioritizing) is often unnecessary. Each site applies criteria differently; therefore comparison among sites is not appropriate. The data shown here is included, however, to show the trend of relatively low patient numbers of CTAS 1 to 3 (higher priority) and relatively high numbers of CTAS 4 and 5.

South Shore (DHA 1)

Fishermen's Memorial Hospital is in an ideal position to continue its evolution into full-service collaborative practice with emergency care as part of the service, but without stand-alone staffing. The community's demographic requires open access primary care and reliable chronic disease management. Like all communities in Nova Scotia, it also needs improved mental health services. Fishermen's Memorial can and has been safely closed at night for two years. South Shore Regional Hospital is 16 km away.

Queens General Hospital should function as a 24/7 Community ED, despite being 48 km from South Shore Regional Hospital (SSRH), because of its in-patient capacity and potential for more shared services with SSRH.



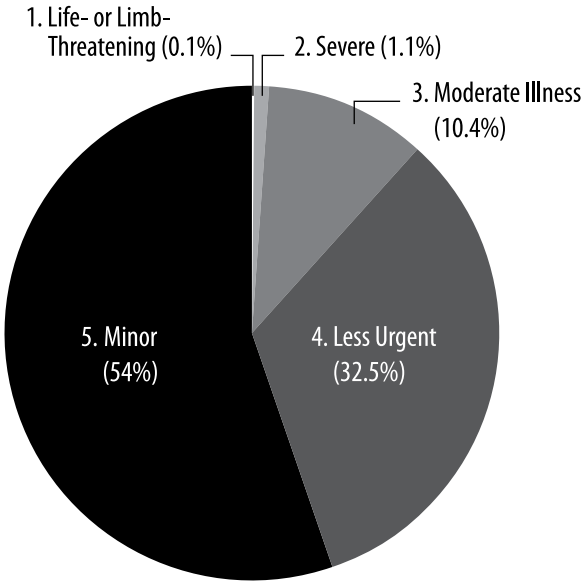
Fishermen's Memorial Hospital

Southwest (DHA 2)

There are no current EDs that could be converted to a CARE model. However, consideration should be given to helping the community of Barrington further develop its capacity for a small Collaborative CARE. It should also be considered for increased EHS presence. Roseway and Digby General Hospitals should function as 24/7 Community EDs. Digby General is closest to residents on Digby Neck.

Annapolis Valley (DHA 3)

Annapolis Community Health Centre has all the necessary ingredients to provide a Collaborative CARE model to the community. Open access could reduce the current six-to-seven-week waiting time for some primary care services to same-day/next-day. That would reduce the demand for emergency care. Ending clinic hours at 8 or 10 pm would allow more physicians to be available during the day. For this to happen, doctors need assurance that the new arrangement would not affect their incomes. The types of patients seen at the centre would change minimally, allowing physicians to maintain their skills. The Centre provides primary care, palliative care, and acute care. Digby General Hospital is 36 km away, while Soldiers Memorial is 54 km away, and Valley Regional Hospital is 106 km away. The ED at Soldiers Memorial Hospital should function as a 24/7 Community ED, due to its geographic location.

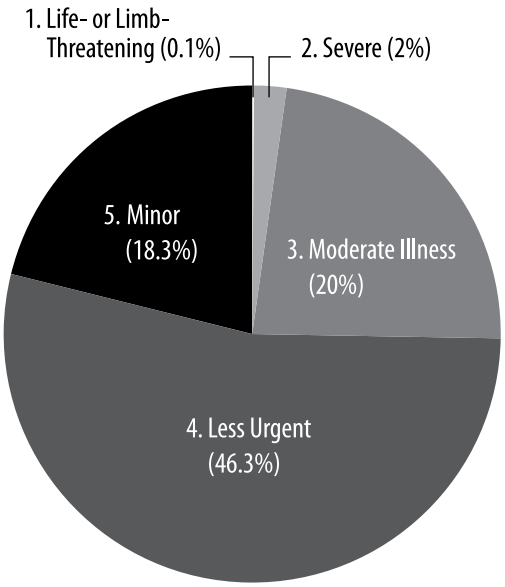


Annapolis Community Health Centre

Colchester East Hants (DHA 4)

The Lillian Fraser Hospital in Tatamagouche is also well positioned to be a very effective Collaborative CARE model for the community. It is purpose-built with room for clinic exam room and office space, and attached emergency space along with space for allied health providers. With open access provided to all residents, the Lillian Fraser could easily provide emergency care to the small number of people who actually need it while providing high quality primary care. The Tim Horton's camp is nearby as is Fox Harb'r resort, Wentworth Ski Resort and the homes of summer residents which also require support services. As with all sites, physician remuneration must be equitable. The centre is 52 km from Colchester Regional Hospital, 70 km from the Aberdeen Regional and 86 km from the Cumberland Regional Hospital.

Note: The North Shore area around Pugwash and Tatamagouche presents a special challenge in terms of meeting the standard of one hour or less driving time to 24/7 emergency care. The North Cumberland Memorial Hospital and Lillian Fraser Memorial Hospital are approximately 34 km apart, and each is 52 km from their respective regional hospitals. Both sites have experienced physician shortages. However, there may be a solution as both districts are working together on this at the time of writing this report. Increased EHS presence is possible if ambulance offload delays in Capital Health are managed and unnecessary inter-hospital transfers are reduced.

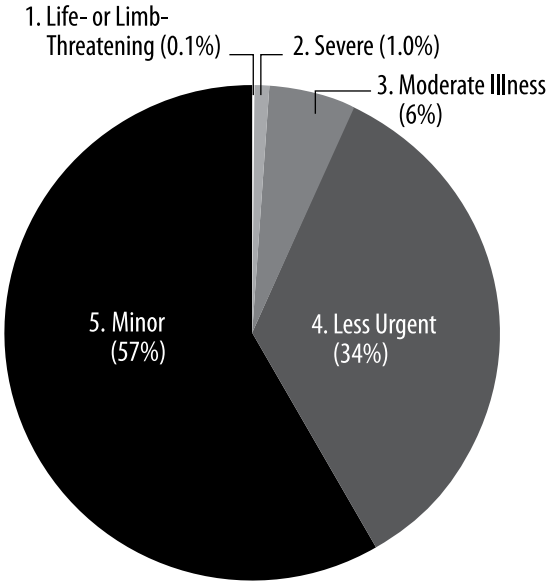


Lillian Fraser Memorial Hospital

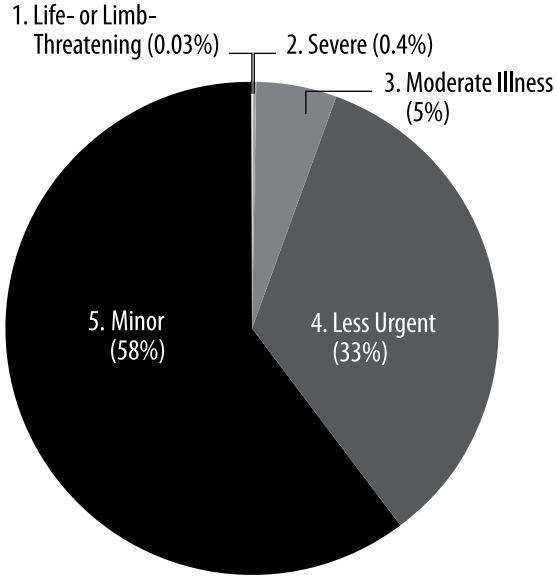
Cumberland (DHA 5)

There are three sites in Cumberland Health Authority that could transition to a Collaborative CARE model: South Cumberland Community Care Centre in Parrsboro; All Saints Hospital in Springhill; and North Cumberland Memorial Hospital in Pugwash. All sites have experienced recent intermittent closures due to staff shortages—often with limited notice. All sites, along with Lillian Fraser in DHA 4, have different physician funding arrangements for ED coverage. This results in competition for local physicians and locums from neighbouring districts—an unsuitable arrangement for future ED stability. South Cumberland Community Centre has a well-functioning collaborative practice which, though lacking in-patient beds, is associated with long-term care beds and palliative care. It could easily transition to the Collaborative CARE model. It is 65 km from Cumberland Regional Hospital and 86 km to Colchester Regional Hospital. It should also be noted that the Bayview Memorial Health Centre in Advocate is 22 km from South Cumberland Community Care Centre and 81 km from Cumberland Regional Hospital.

North Cumberland Memorial Hospital submitted a new role study in 2008. With an older hospital building, a collaborative practice clinic that is too small, and a large nursing home next to the hospital, it has all the necessary ingredients to be a highly functional Collaborative CARE site. However, it needs a capital investment to bring all the functions under one roof. Recently the Minister and Deputy Ministers of Health visited the site and were also impressed with this potential. North Cumberland Memorial is 52 km from Cumberland Regional Hospital.

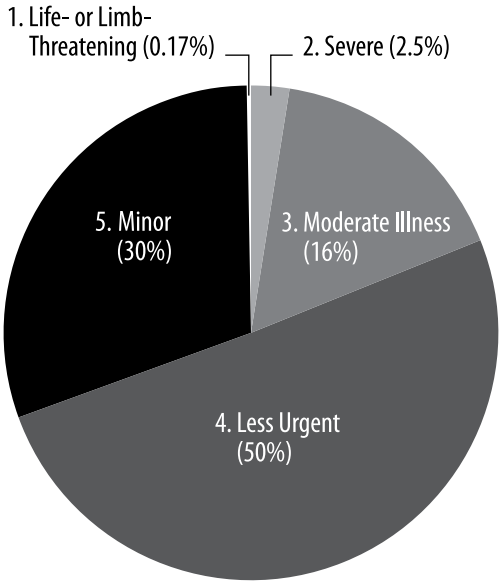


South Cumberland Community Care Centre



North Cumberland Memorial Hospital

All Saints Hospital in Springhill is a well-laid-out facility that could be a highly effective Collaborative CARE. By altering the hours, physicians and nurses could be more available for daytime collaborative practice work. It is 22 km from Cumberland Regional Hospital.



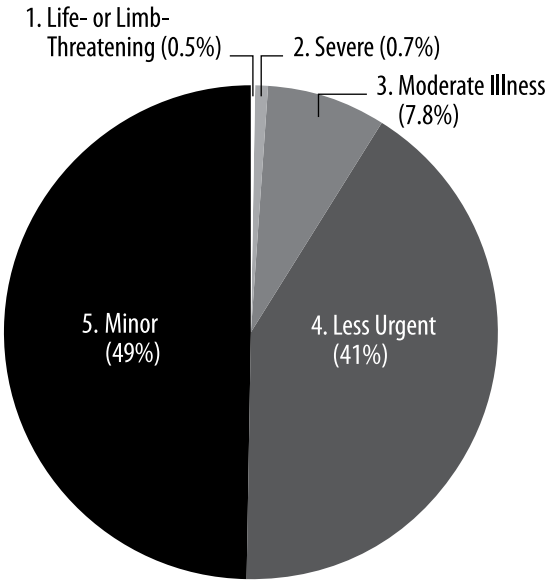
All Saints Springhill Hospital

Pictou County (DHA 6)

There are no current EDs that can covert to a CARE model. However, there are several sites in the district, including the new collaborative practice in New Glasgow, that can provide an open access CARE model for some CTAS 3 and most CTAS 4 and 5 patients currently waiting too long in the Aberdeen ED.

Guysborough Antigonish Strait (DHA 7)

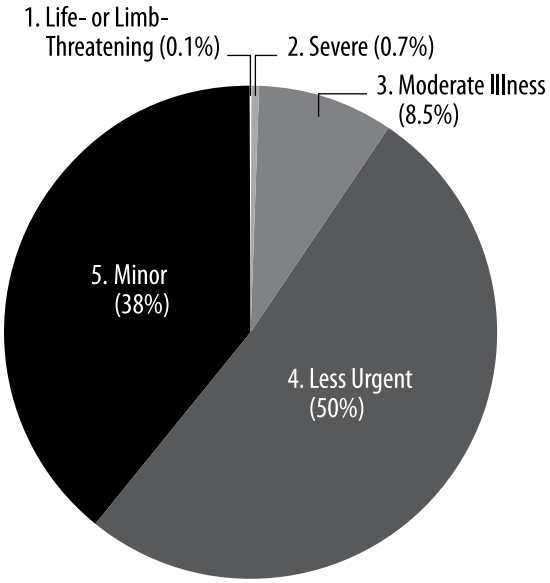
There are several sites in the Guysborough Antigonish Strait Health Authority that could function well in the collaborative CARE model. St. Marys Hospital in Sherbrooke is a beautiful facility that works well. Its Emergency Department experiences low patient volume (3.6 patients per 24 hours). Since it already essentially functions as a small CARE, there is little need for change other than to explore opportunities to give physicians some off-hours relief. Again, rather than significantly affecting income, this would help to attract and retain physicians in the area. St Marys is 61 km from St. Martha's Regional Hospital.



St. Mary's Hospital

Eastern Memorial Hospital in Canso is another site with low ED visits (4.4 patients per 24 hours). It is a very well-run site with an integrated nursing home and creative, multi-tasking staff. The physician's clinic is located across the street. Two doctors share a practice in Canso, each being available 24/7 for two

weeks at a time. The primary health-care needs of the area are high in terms of chronic disease management, mental health, and addictions. A collaborative CARE model would function well in Canso. It is 46 km to Guysborough Memorial Hospital and 101 km from St. Martha's Regional Hospital. The Guysborough Memorial Hospital should function as a 24/7 Community ED due to its more central location. It could serve the needs of Canso after hours as well as the local population.



Eastern Memorial Hospital

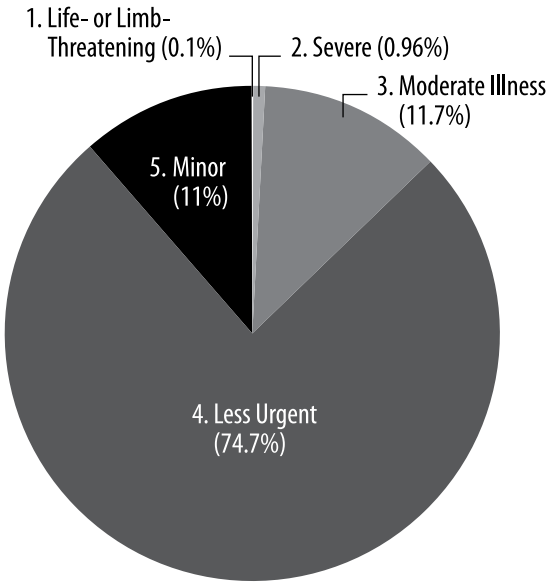
Arichat

The St. Anne Community and Nursing Care Centre operates independently of any DHA. It is most closely affiliated with DHA 7. It has a facility administrator and a very active board. Like all sites of similar size, it is a major employer, with 75 staff providing primary care, acute care, and long-term care. All told, 89 per cent of the visits to the ED were CTAS 4 or 5. There are one to two physicians on staff, although several physicians-in-training have said they wish to go to Arichat. The one unifying concern from the board and facility manager is the possibility of being forced to be part of a DHA. The current independent arrangement seems to work well for the residents on Isle Madame. St Anne appears to be a well-run facility that is meeting the needs of the community. A Collaborative CARE model would fit perfectly within this environment. Arichat is approximately 22 km from Strait Richmond Hospital and 106 km to St Martha's Regional Hospital.

Cape Breton (DHA 8)

The Cape Breton District Health Authority has eight 24/7 EDs for a population of approximately 128,500. This is high when compared, for example, to the seven EDs in Capital Health that serve 404,000 people. The large number of EDs in Cape Breton is due, in part, to the area's demanding geography. But history and other factors also play a role.

The New Waterford Consolidated Hospital appears to have adequate space to consider having all clinicians working under the single roof of a collaborative CARE model. One physician currently has an office on site. When open, the ED sees approximately 45 patients per day. However that number is exacerbated by the



New Waterford Consolidated Hospital

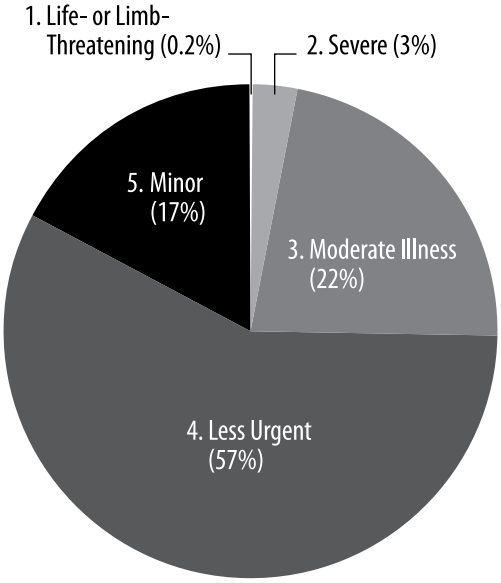
inability of community members to see a family doctor. A collaborative design with open access would dramatically decrease demand for ED care. The Cape Breton Regional Hospital is approximately 21 km away. Glace Bay Hospital is 17 km away.

Northside General Hospital is the busiest of the suggested collaborative CARE sites. However, it appears that its main role is to meet demand for primary care. Several clinicians interviewed at the site felt that it would function well in a different role. This site has also been the victim of frequent closures due to physician and nursing shortages. The population would be well serviced by a multi-disciplinary collaborative primary care model that could better address chronic disease management and provide more health-based education. It is 26 km from the Cape Breton Regional Hospital.

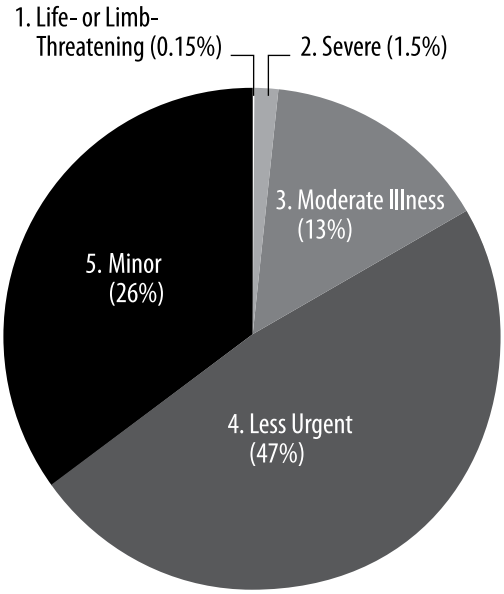
The Victoria County Memorial Hospital in Baddeck, could also function well as a collaborative CARE site. It may require a modest renovation to enable the two doctors and one NP to move into the hospital. Room for another NP or physician is also needed, as well as working areas for allied health ambulatory clinics. An open access small collaborative practice, much like that in Musquodoboit Valley, would serve the residents well. The big influx of summer tourists and increased highway traffic may require a seasonal variation in role and on-call schedule. From there it is approximately 78 km to the Cape Breton Regional Hospital.

Glace Bay Hospital currently has the second largest ED visit rate in Cape Breton and a small ICU. An effective multi-disciplinary collaborative primary care clinic with open access could reduce ED visits. For now it operates complementary to the Cape Breton Regional Hospital and should remain a 24/7 Community ED. It is 21 km to the CBRH and 17 km from New Waterford.

Inverness Consolidated Hospital, Sacred Heart Hospital in Cheticamp, and Buchanan Memorial Hospital in Neil's Harbour are each located in relatively isolated areas along the Cabot Trail. They should remain 24/7 community EDs.



Northside General Hospital



Victoria County Memorial

Capital (DHA 9)

The Capital District Health Authority has seven 24/7 EDs, some of which have experienced closures. Twin Oaks Hospital in Musquodoboit Harbour and Musquodoboit Valley Memorial Hospital (MVMH) are well positioned to be effective Collaborative CARE models. MVMH is already functioning this way with an open-access primary-care model and available emergency care as needed during the day from 8 am to 5 pm on weekdays and 24-hour emergency access on weekends. EHS coverage is viewed as a concern. This is complicated by the long ambulance off-load times at the Dartmouth General Hospital and Halifax Infirmary that result in longer response times for local ambulances. MVMH is approximately 52 km to Colchester Regional Hospital and 70 km to the Dartmouth General Hospital.

Twin Oaks Hospital serves the residents along highways 107 and 7, Musquodoboit Harbour, and Porter's Lake. Twin Oaks has 14 acute care and palliative care/respite beds, and an adjacent nursing home. Physicians' offices are off site, a short drive away. The Porter's Lake area continues to grow. The primary care and continuing care requirements of this whole catchment area and the role of the Twin Oaks ED need a multi-disciplinary group and input from the community. Considering the population size, low rate of night visits, and proximity to the Dartmouth General Hospital (39 km), a reorganization and (possibly) modest renovation of the hospital to get clinicians all under one roof would permit a Collaborative CARE model.

Eastern Shore Memorial Hospital in Sheet Harbour is an isolated facility located 110 km from the Dartmouth General Hospital and 84 km from the Aberdeen Hospital. Despite its relatively low rate of ED visits, it should be a 24/7 community ED.

Hants Community Hospital serves the community of Windsor and must provide coverage for residents located between Halifax and Kentville in the evening and night. It should remain a 24/7 community ED.

Cobequid Community Health Centre (CCHC) is a unique centre in Nova Scotia as it provides a wide range of primary care and specialist care services, as well as urban emergency care. The distribution of CTAS seen at CCHC appears more intense than at some of the regional EDs. (Although CTAS is not intended to be used to compare sites, the trend is likely true.) There have been calls for CCHC to open 24/7. A 2008 consultants' analysis of visit times, CTAS, and after-hours visits to Dartmouth General and the Halifax Infirmary did not support such a decision. However, there may be a reasonable case for extending the hours to 11 pm or midnight.

Again, the community must be educated about the importance of abiding by the closing time. Sometimes just before closing, a line-up of people arrives—many of whom could be seen the next day. But when medical issues arise, emotions run high—particularly around closing time. In order for a system to be sustainable, a balance must be found that is reasonable for all. An Emergency physician colleague once told me he was working "the four to infinity shift," implying that despite the shift officially ending at midnight (two hours after closing at 10 pm) it often went well beyond that. Many doctors, nurses, and support staff simply don't want to endure such an unfair work/life balance. Like everyone, they need a predictable ending to the work day. Consequently, EDs can find it hard to recruit and retain qualified staff.

IWK Health Centre

No change in role is recommended.

RECOMMENDATION 16:
Develop very clear policies around hours of operation, ensuring the priority of patient safety at all times.

Hours of operation for collaborative CARE clinics should be determined in close consultation with people in communities. For instance, does the clinic operate 8 am to 6 pm, or 8–8, or 8 am to 10 pm? Five days per week or seven? Should there be 24-hour on-call on-site emergency on weekends? As many people said during consultations, there cannot be "one cookie cutter approach," as each area is unique. The factors to consider are:

- expectations for evening access
- types of local weekend activities
- influx of summer or winter vacationers
- number of primary care clinicians
- the value clinicians place on lifestyle and sustainability

Once set by the DHA and community at large, the hours of operation MUST BE observed and respected. Health-care workers, like everyone else, have lives outside of their work place and want a clear beginning and end to their work-day. Closing a clinic at the end of the day can sometimes result in emotional conflict if a patient arrives around closing time. The public may feel that all health-care workers (HCW) should be selfless and be available at all times when the need arises. Many HCW may meet that expectation. But such a hope is unsustainable and unfair. Communities will discover that setting clear work limits will be a selling feature to potential physician and nursing recruits who are looking for a work/life balance.

In most collaborative CARE facilities, staff will be on site after hours finishing work from the day or providing for patients in acute-care beds, palliative care, addictions, or long-term care. Onsite emergency care must be provided by Health Link 811, through an on-call arrangement with the collaborative clinic, by going to the nearest 24/7 Emergency Department or by calling 911 EHS. Some communities may elect to have EHS paramedics provide some limited minor procedures after hours. Whatever the arrangement, it must be determined in consultation with EHS and facility managers.

RECOMMENDATION 17:
Consider an innovative on-call system for clinicians.

Physicians know their patients best and may be the most ideal clinician to be available after hours. However, in small communities that sort of responsibility may take a toll on clinicians. Many younger physicians do not want to be on call 24/7 most days of the week. Creative alternatives need to be considered.

A provincial "on-call" service is one way to leverage simple technology. As one example, small hospital and Community Health Centre physicians could 'sign out' to an on-call after-hours physician service. This could be modeled like 811, only the service would be available to nurses working in hospitals and nursing homes. Local physicians could then be free of pagers and cellular phones. Any issues that arise during the night would be identified by the duty nursing staff, who could contact the on-call physician by telephone for advice or orders for in-patient, palliative care, or nursing home patients. Health Link 811 nurses could also use the on-call service for "second opinion" support. Low-tech video conferencing should also be possible. It would help make rural primary care more attractive for newly recruited doctors, and for doctors in towns where they are on-call every two to three days.

RECOMMENDATION 18:
Harness the energy and capacity of communities.

Without exception, emergency care providers at all sites deserve considerable praise for their work in an often very difficult setting. There are some exemplary clinicians, as well as energetic and innovative administrators and leaders. Furthermore, communities around Nova Scotia are very involved in and proud of their health centres. Nova Scotia has many beautiful, close-knit, energetic communities. There are FANTASTIC stories that need to be told of people helping people in all our communities. Health centres, hospitals, municipalities, and DHAs need to regularly collect those stories and share them because they are inspirational and home-grown. As well, they could help to attract health-care professionals.

Municipalities and DHAs need to work closely together regarding recruitment and retention planning for health-care staff. People too often look to the government to supply many of their needs. However, the government should be in the regulation business—not the micro-management business. We need to acknowledge that this generation of health-care providers expects a reasonable income but also wants time for themselves and families, a modern work place, access to decision support and help

when needed, along with more collaborative team-based care. Communities should develop "packages" that help make non-urban practices more attractive—in the same way that some innovative cities and towns pull together to attract new businesses. A big part of that is sharing the wonderful stories of life outside cities and large towns.

RECOMMENDATION 19:
Communicate, communicate, communicate.

History should have taught us that consultation, discussion, and collaboration are necessities for a successful outcome during periods of difficult, but necessary, change. One recent example is the aforementioned shift to open access at Musquodoboit Valley Memorial Hospital. Considerable time was spent engaging the public, hearing their concerns, sharing data, and working with them to develop a safe and improved care facility. The hospital's administration and caregivers continue to be open to feedback from the community.

Recommendations for Emergency Health Services (EHS)

It is beyond the scope of this report to provide a comprehensive review of EHS. Nevertheless, as a vital part of emergency care in Nova Scotia—and a key link between hospital and clinic-based emergency care in this province—an examination of EHS and its role in an emergency care system is warranted. Paramedics are light years beyond the days of funeral-home-based ambulance drivers. Nova Scotia now has a single true system that is integrated and interconnected. A central Communications Centre now tracks ground ambulance activity, supervisors, and Life Flight, along with interfacing with Medical First Responders and police and emergency measures organizations. It is a data-rich, well-run organization. Paramedics can now attain several certifications—Primary Care Paramedic, Advanced Care Paramedic, and Critical Care Paramedic—each with an expanding set of knowledge and skills. Some hospitals have hired paramedics to work on shifts as complementary clinicians with doctors and nurses.

For the most part, however, paramedics still mostly work in the 'pre-hospital' setting, often under difficult conditions. After a car crash or industrial incident, paramedics must deliver patients to busy, overcrowded EDs where staff seem to regard them with ambivalence—"when are you going to stop bringing us patients?"—as if they control the misfortunes or bad decisions of others. The whereabouts and positioning of paramedics and ambulances in Nova Scotia is managed by a computer-aided dispatch (CAD) program that is based on 14 interdependent "system status plans" that automatically fill gaps when paramedics are called to a location or are on a transfer. Ambulances, in fact, often park on a roadside far from their base because it allows

a better response time for a larger geographic area than if they waited back at the hospital.

Paramedic care and ambulance availability are critical to the success of a well-integrated emergency care system. After reviewing data and meeting with numerous paramedics and managers across the province, it is clear that abundant opportunities exist for enhancing the EHS service.

RECOMMENDATION 20:
Improve the ambulance patient offload time to 20 minutes, 90 per cent of the time.

This single step has huge implications. Every year, thousands of hours of paramedic time is consumed waiting in Nova Scotia Emergency Department hallways. The delays also result in an avoidable worsening of patient conditions. There are two elements to speeding up ambulance turn-around times: hospitals have to have available stretchers AND paramedics have to clear the hospital quickly. Here are some ways worth considering to make the process faster:

- Using radio report of incoming ambulance, place patients directly in treatment areas without re-triage when space allows it. Patient hand-over report to hospital staff is an opportunity to confirm the patient's condition.
- Whenever possible, place ambulance stretcher patients on ED stretchers, chairs, or waiting areas (taking into account that some patients who arrive by car are much sicker than some ambulance patients.)
- When the ED is crowded, create an ambulance offload area of temporary stretchers that can be cared for by an assigned hospital staff member. Or, assign one paramedic crew to care for two to three patients while freeing up the other paramedics to clear the hospital. The second option should only be considered rarely: if ED crowding is the problem, it has to be addressed instead of further compromising patient care by doubling up in hallways.
- Once a report from paramedic to hospital staff is complete, hospital staff could notify the EHS Communications Centre that the paramedics are available for another call. There can be significant delays between patient delivery and paramedics becoming available for their next call.

RECOMMENDATION 21:
Develop shuttle services for select hospital transfers to maximize the use of the paramedics' scope of practice.

Although the intent of providing a predictable standard of care for all inter-hospital and clinic-hospital transfers is good, too many people are transported by ambulance without active medical issues which consumes tens of thousands of hours of EHS time per year. Consider the following examples:

Philip was experiencing recurrent episodes of chest pain. After some tests, it was determined by his doctors that he required a special heart test, available only in Halifax. Several days later he made the six hour-trip by ground ambulance. The test was completed and it was found that his heart was normal. He was returned, by ambulance, to the original hospital and discharged as soon as he arrived.

Mary, who was admitted to a small hospital to investigate her abdominal pain, was sent by EHS to the regional hospital on Monday for a test and returned that day. On Wednesday she was sent by EHS for a booked specialist appointment and returned. The next day she went back for another test booked a few weeks before. Each took four hours round-trip.

Patients are frequently transported from Cape Breton and Yarmouth to Halifax for special consultations, tests, or treatments. These occur fairly predictably each week. Some are emergency transfers, but many are semi-elective and are booked long in advance. There has been prolonged discussion—years, in fact—about the use of an airplane or multi-patient bus to transport these patients over the longer distance. Because this is a relatively predictable service and the majority of the patients are not acutely ill, it would be ideal to use a small plane or special ground transport bus that could transport several patients at once, accompanied by paramedics and/or RNs. Such a service could be offered three times a week for Sydney and twice for Yarmouth. It should utilize a dedicated transport team other than the Life Flight emergency/critical care transport teams. A cost analysis is not available for this report. Intuitively it would free up considerable ground ambulance resources that could then be better used around the province for emergency care.

Mini-buses or cars could be used for other transfers with either no medical attendant or a single attendant and non-medically trained driver. With this patient-centred approach, the staff requirements are determined by the need.

RECOMMENDATION 22:
Better coordinate the movement of patients between facilities to make the best use of resources.

The UK's national paramedic/ambulance system has faced the same issues as Nova Scotia. Following is a summary of the vision that is currently being developed. EHS leaders from Nova Scotia have been corresponding with leaders in the UK to share lessons learned.

Vision for emergency and urgent care

Published by the Ambulance Service Network, part of the National Health Service Confederation, United Kingdom (June 2008)

Summary

- A single point of access so that patients are consistently assessed and prioritised whichever number they call, and receive the appropriate response.
- A new single number for urgent care to sit alongside 999 piloted to assess the potential to further simplify access and support more effective coordination of care.
- World-class services nationwide for critically ill patients and those suffering from major trauma.
- A range of urgent care services across primary, secondary and community care available 24/7, including GPs in and out of hours, walk-in and urgent care centres, minor injuries units, social care and mental health services and community nursing teams.
- World class commissioning for emergency and urgent care involving all NHS and social care partners, with patient outcomes and experiences used to measure success.
- Real time information and data about emergency and urgent care services and patients' health records shared across the health and social care system.
- Appropriately trained and skilled ambulance service staff working in multi-disciplinary teams across a variety of settings, taking care to the patient as well as taking the patient to hospital.
- A system of funding that has incentives for services to treat patients in the most appropriate place for their clinical need.

From http://www.secamb.nhs.uk/document-library-2/publications/national-reports/vision-for-urgent-and-emergency-care/.

The full document from the UK's Ambulance Service Network can be accessed at http://www.nhsconfed.org/Publications/Documents/A%20vision%20for%20emergency%20and%20urgent%20care.pdf

Hospital staff need to understand the EHS role. Many hospital units consider EHS a taxi service and call last-minute for a transfer that was scheduled days before. That puts a strain on the system status plan as dispatchers try to respond to those less urgent requests—possibly at the expense of real emergency calls. Some hospital staff counsel patients to go to their local hospital and get a "free" ambulance ride to another hospital courtesy of EHS. Most paramedics have stories about people, with packed bags, walking up to their stretcher and jumping on—after being told by their doctor to come to the local hospital before going to see a specialist in another hospital. This highlights the need to revisit the whole fee structure for ambulance transport—especially for emergency calls.

Recommendations for Seniors' Care

The good news is that Nova Scotia's population is living longer. But that also means more seniors in this province are living with chronic health conditions that periodically require unplanned care. The noisy, rapid-paced, and confusing ED environment can be a challenging setting in which to assess an elderly patient, or family, in crisis.

This report seeks two types of solutions: (1) making the ED easier to navigate for elderly patients who are best served by the ED; and (2) supporting alternatives to ED care.

RECOMMENDATION 23:
All Emergency Departments should analyze their processes, physical layout, and approach through the lens of an elderly, confused, and scared patient.

An excellent report published by Australia's Victoria state government offers simple, practical suggestions for improving the basic care that should be available to elderly patients in EDs. It includes easy-to-follow recommendations that can, and should, be implemented in Emergency Departments in Nova Scotia. See Improving the Patient Experience Program: Improving the environment for older people in Victorian Emergency Departments, available at http://www.health.vic.gov.au/emergency/patient-xp-audit-0509.pdf.

RECOMMENDATION 24:
As continuing care becomes a responsibility of the District Health Authorities(DHAs), all DHAs should support proactive alternatives to emergency and acute care.

People being cared for at home by spouses or middle-aged children still need help. Frequently the only place for them to go is the Emergency Department. They arrive, tired and frustrated, to a busy ED. There the staff finds itself in a quandary: let the patient go home to a setting without the proper safeguards in place; try to access short-term acute care services or home care with its limited resources; or try and get the patient admitted to hospital knowing that it will take hours or days to achieve, during which the elderly, confused patient occupies a stretcher that could be used by others before ultimately moving on to a desperately needed acute care hospital bed. It is a lose-lose situation.

Patients who visit EDs with Ambulatory Care Sensitive Conditions (ACSC) are felt to be a reflection of the success or failure of community-based care (i.e., primary care and chronic disease management. The ACSC are angina, asthma, chronic obstructive pulmonary disease (COPD), diabetes, epilepsy, heart failure and pulmonary edema, and hypertension. In a recent Canadian Institute for Health Information (CIHI) report[20] that looked at seniors' use of EDs in Ontario, nine per cent of all seniors' visits were for ACSCs in 2008–09, versus ten per cent in 2004–05. Thirty per cent were for COPD, followed closely by heart failure and pulmonary edema. If that trend is true, that is a 10 per cent decrease in ED visits that might be attributed to better primary care and chronic disease management in the community.

RECOMMENDATION 25:
People over the age of 75, who are frail and see a primary care clinician, should be assessed using the Comprehensive Geriatric Assessment Tool.

The Comprehensive Geriatric Assessment Tool has been approved by Doctors Nova Scotia. A short abstract from the Annals of Internal Medicine summarizes the benefits of an organized assessment:

> *Comprehensive geriatric assessment is a useful complement to the standard clinical examination of elderly people. It focuses on a systematic evaluation of functional status, dependency, cognitive functions, psychological status, continence, nutritional status and social way of life, administered by a multidisciplinary team. Standardized tests, well-validated in the elderly, are used. Most studies have demonstrated the efficacy of geriatric assessment programs in outpatients, hospitalized patients or in emergency unit patients. Mostly useful in frail elderly patients, geriatric assessment results in a decrease in morbidity and dependency, shorter hospital stays and fewer referrals to nursing homes. By introducing adequate medical and social interventions, comprehensive geriatric assessment, even in very old people, is useful in preventing acute situations leading to emergency referrals.*[21]

[20]Seniors' Use of Emergency Departments in Ontario, 2004-05 to 2008-09. Canadian Institute for Health Information, Feb 2010.
[21]Rainfray, M. et al. "Comprehensive geriatric assessment: a useful tool for prevention of acute situations in the elderly," *Annales de medecine interne* (Oct 2002) 153(6): 397-402. Abstract available from http://www.ncbi.nlm.nih.gov/pubmed/12486389.

There are other options that would prevent such patients from entering the ED in the first place. The Nova Scotia Continuing Care Council has provided some interesting alternatives, described below.

For People at Home

- Provide online or telephone advice and support for caregivers.
- Offer financial support for family members to care for people in their own homes. Insurance, employers, or government-supported programs could pay people to stay home from work to help care for elderly or ill relatives.
- Provide Adult Day Care programs during the working day.
- Offer 24-hour respite care, in which a care provider goes to the home so that caregivers can get away for a short time, or offer respite admissions for up to 30 days in select long-term care facilities.
- Provide more access to home care (a common request given the trend towards earlier discharges for admitted patients), including the following:
  - multi-disciplinary care, such as occupational therapy, physical therapy, social work, and dietician, as well as housekeeping and Meals On Wheels.
  - more incentives for medical follow-up at home
  - better communication among all services through the use of an electronic medical record or other common communication tools.

For Nursing Home Residents

- Greatly improve the placement process for patients requiring long-term care. For now those patients experience unacceptable delays. (In June 2010, for example, there were 5,053 vacant bed days—funded by taxpayers—across 48 facilities.)
- Update the Homes for Special Care Act, which limits the scope of practice of nurse practitioners, nurses, and other providers.
- Provide incentives for physicians to see and treat patients in nursing homes.
- Study the benefits of keeping nursing home residents out of Emergency Departments—while still attaining realistic care goals—by providing intravenous fluids and oxygen, and obtaining plain x-rays by portable machines.
- Create select "stabilization units" around the province for dementia patients who are exhibiting difficult or dangerous behavior. Dementia care specialists could assess and treat such people over a limited time, before returning them to long-term care facilities closer to their homes with specific treatment plans.

- Create flexibility to fund special care units with different staff ratios to care for higher-care residents. This would allow facilities to take patients sooner from acute care beds in hospitals or patients at risk at home who are about to end up in the ED. A behaviourally challenged elderly patient kept in the Emergency Department for days at a time helps no one.
- Expand the availability and role of mobile mental health crisis teams to perhaps include supporting the care of patients in a long-term care facility instead of having them sent to the hospital.

Recommendations for Mental Health Emergencies

Generally, patients with mental health problems are best served outside an Emergency Department. Yet for many people suffering with mental illness the ED can sometimes be the path of least resistance. The problem is that once they enter the ED they have to compete for the attention of emergency staff who are better at dealing with acute illness and injury than managing behavioral, psychiatric, or complex social issues.

For the past six months, 14-year-old Tim was missing school and fighting with his parents. Between outbursts he was withdrawn and stayed in his room. His parents, who both had shift-work jobs, were often too exhausted to deal with him. Tim told a friend that he'd had enough and was going to take his father's rifle and kill his parents and then himself. His friend called a Help-Line who sent the police to Tim's house. Tim admitted his plan to the police, who felt that he required urgent psychiatric assessment under the Involuntary Psychiatric Treatment Act. They took him to the Community Emergency Department where they waited two hours before being told that Tim needed to be assessed by a psychiatrist at the regional hospital. When they arrived there, the psychiatrist was busy. Because of age, he was then referred to the IWK. After a further two-hour wait, he was assessed by the Crisis Team with his father present. Tim was diagnosed with a mixture of behavioral and social issues. Following some intense counseling it was decided he was safe to return home. But follow-up counseling was hard to arrange.

This case highlights how hard it is to manage behavioral and mental health problems. Fortunately a provincial Mental Health Strategy is being developed. Both the Minister and Deputy Minister of Health are determined to see profound changes occur. From an emergency medicine point-of-view here are some steps that could be taken.

RECOMMENDATION 26:
Provide access to more Mobile Crisis Teams in Nova Scotia.

Make Mobile Crisis Teams—now available only in Capital Health—accessible throughout the province. Composed of a social worker and police officer trained in the assessment and management of acute mental health and social/behavioral problems, they have effectively managed problems outside the hospital setting, arranging follow-up, and sending only patients who would benefit from a more detailed assessment or admission to hospital.

- While developing other provincial Mobile Crisis Teams, support the use of the HRM-based team to provide telephone crisis advice to Nova Scotians from 5:00 pm to 9:00 am and on weekends. This type of service could possibly be accessed through 811 Health Link.
- Early identification and management of social and mental health stressors are vital. IWK once offered a Child-Parent Assessment Team, but that program is no longer available. Having a similar resource in several locations across the province would help identify behaviour patterns that might benefit from early intervention.
- Emergency care providers must give patients with mental illness similar methodical assessments as patients with other types of medical problems. Medical assessment guidelines, modified from the Capital Health guidelines, can be found in the Nova Scotia Standards for Mental Health Services: http://www.gov.ns.ca/health/mhs/pubs/Standards_Mental_Health_Services_2009.pdf#item2
- More access to psychiatrists is necessary. Right now access to psychiatrists is variable because those clinicians set their own times. The upshot: no coordination of availability across the province. (In most centres there is no night coverage and the weekend coverage varies.) A provincial plan is needed.
- A provincial plan is also needed for in-patient mental health beds. Emergency physicians can spend hours on the phone calling regional hospitals around Nova Scotia searching for an available psychiatrist with an open bed. This is a poor use of time and resources.
- Institute more community-based follow-up. Once a crisis is averted, it can be weeks or even months before follow-up times are available. According to experts at IWK, it would be possible to train mental health workers and provide ongoing leadership for clinic sites around the province.
- Develop a few centres of expertise around the province for people with Somatization Disorder (emotion-based medical symptoms). There appears to be both an improvement in quality-of-life for patients and a significant argument for

health-care cost savings to support this. Dr. Allan Abbass of the Centre for Emotions and Health appears to be providing an important service to patients to help reduce emergency visits and the risk of harm from unnecessary tests and treatments.

- The Justice Department and Department of Health need to review how police enforce the Mental Health Act. Currently police must wait for long periods of time with patients like Tim or, more commonly, with intoxicated patients who cannot be assessed until the alcohol is metabolized. Having police wait with patients for a formal psychiatry assessment is a poor use of such resources and a threat to public safety, since it renders police officers unavailable for other emergencies.

The Way Forward

This is not a final report following a year's review of emergency, primary, continuing, and mental health care in Nova Scotia—it is a starting point. Primary Health Care, a division within the Department of Health, has already been working closely with District Health Authorities to identify regions in the province that have the greatest need and are the most ready to develop collaborative practices and move to open access. Primary Health Care is planning to phase these changes in throughout the province. That should reduce the dependency on the Emergency Departments for basic primary care, and at the same time improve the overall quality of care. Imagine going from waiting seven weeks to see a family doctor to accessing a primary clinician the same or next day!

The Emergency Department Standards should be adopted by the government. If so, they should help ease regional and provincial hospital crowding. Achieving better patient flow requires some process changes—and the unwavering attention of hospital leadership. Something else that should help is the move to include the management of continuing care (home care and long-term care) within the District Health Authorities to allow better integration of primary, emergency, acute in-hospital, and continuing care as a continuum. Performance profiles, as they relate to emergency care, are currently being developed and will complement the ED Standards in terms of evaluation and monitoring.

It is encouraging to recently learn of the Department of Health's decision that more useful information is needed to guide decision-making. Two major projects—the National Ambulatory Care Reporting System (NACRS) and Emergency Department Information Systems (EDIS)—have recently been accepted and are being planned with phased implementation. These will greatly aid future system improvements and also permit greater accountability and public transparency. That transparency should be shared on an easily accessible web site designed with the average citizen in mind.

However, the biggest change that still must occur is in our attitudes and beliefs. Health care is not free. Being a member of a publicly funded health-care system means we are all 'share holders' in the success or the failure of this fantastic resource. It is not a right but a privilege. By changing our personal habits—eating right, not smoking, exercising more—each of us can prevent unnecessary illness. That, truthfully, would do wonders to improve health outcomes in this province, and at a fraction of the cost of the endlessly increasing disease care route we are stuck on. However, the recent debate about the fast-food deep-fried chicken, bacon, and cheese sandwich shows we have a long way to go. Freedom to make lifestyle choices is a right of the individual, but accessing publicly funded health services when poor choices result in health problems

is a privilege. We need to quickly resolve the conflict between individual rights and choices and the privileges offered by living in an organized society—a messy but necessary discussion.

Emergency care, when it is required, can be safely delivered outside the traditional hospital setting. Medical emergencies need to be managed by those who treat or train for them regularly. The recommendations in this report have one common theme—when an unexpected emergency illness or injury occurs, a system must be in place to get the patient to the most appropriate and definitive care setting in the shortest time possible. That will mean, in some cases, bypassing local facilities that cannot provide the definitive care. My hope is that, instead of reacting to proposed changes, people will obtain information, get involved in debates, make informed decisions, and participate in the change process. We have all the necessary pieces in place to make this work really well. Get involved with your Community Health Boards and District Health Authorities to help shape the future.

Respectfully Submitted October 2010
John Ross MD FRCPC
Emergency Physician
Professor, Department of Emergency Medicine, Dalhousie University
Provincial Advisor on Emergency Care, Department of Health, Nova Scotia

The author would like to acknowledge the help of writer John DeMont.

Appendix 1: Envisioning Patient-Centred Care

In his 2009 report, *Patient-Centred Care: An Introduction to What It Is and How to Achieve It*, Steven Lewis summarized the results of a series of focus groups, conducted by The Change Foundation in Ontario, in which patients were asking how they envisioned patient-centred care:

1. Comprehensive care: all of their needs, not just some, should be addressed.
2. Coordination of care: someone is in charge and there is someone to go to who knows you and will help you navigate the system
3. Timeliness: patients should get the care when they need it. When there is a sequence of services required, the intervals should be short
4. Functioning e-health: provide information once, then ensure that it is accessible to those who need it. Then give patients access to records and the opportunity to add to them.
5. Clear reliable communication: listen, explain, clarify, ensure that the provider team members are on the same page. There needs to be consistency of messages as well as access to phone or Internet consultations.
6. Convenience: minimize the need to go to different physical locations for services; open access; same day scheduling; no unnecessary barriers or steps to seeing the right provider
7. Respect—for patient's time and intelligence; for the validity of their stories; for their feedback about quality and effectiveness; for their environment and family care-giving partners.
8. Empathy and understanding: for their circumstance, fears, hopes and psychological state.
9. Time: to express their needs and to be heard effectively
10. Continuity and stability: to know and be known and minimize the number of different care providers.
11. Fairness: the amount and timeliness of service must be commensurate with need.

Glossary of Terms

ACP Advanced care paramedic

ACSC Ambulatory Care Sensitive Conditions

ALC Alternate level of care

CAD Computer-aided dispatch

CARE Collaborative Assessment Room for Emergencies

CCP Critical-care paramedics

CHB Community Health Board

CIHI Canadian Institute for Health Information

COPD Chronic obstructive pulmonary disease (emphysema)

CTAS Canadian Triage and Acuity Scale:
1. Life- or limb-threatening
2. Serious (heart attack, severe pain)
3. Moderate illness (abdominal pain and vomiting)
4. Less urgent (bladder infection, cut)
5. Minor (ankle twist, ear ache)

DHA District Health Authority

ED Emergency Department

EDIS Emergency Department Information System

EHS Emergency Health Services (Paramedics)

FFS Fee for service

FRCPC Fellow of the Royal College of Physicians and Surgeons of Canada

IHI Institute for Health Care Improvement

LHIN Local Health Integration Network

LPN Licensed practical nurse

MD Medical doctor

MFR Medical first responder

MMSE Mini mental status exam

NACRS National Ambulatory Care Reporting System

PCC Patient-centred care

PHSOR Provincial Hospital Services Operational Review

POC Point of care

Primary care Health and disease care provided to individuals and families by primary care clinicians, such as family physicians, nurse practitioners, family practice nurses, physicians' assistants, or extended-role paramedics. It involves health promotion, disease prevention, acute episodic care, continuing care of chronic diseases, education, and advocacy.

Primary health care A holistic consideration of health, incorporating the 12 determinants of health: income and social status; employment; education; social environments; physical environments; healthy child development; personal health practices and coping skills; health services; social support networks, biology and genetic endowment; gender; and culture.

RN Registered nurse

References

General

Drucker, Peter. *Managing the Non-Profit Organization*. Oxford: Butterworth-Heinemann, 1990.

Authored Reports

Lalonde, Marc. *A New Perspective on the Health of Canadians: A Working Document*. Government of Canada, 1974. Available from http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/1974-lalonde/index-eng.php.

Lewis, Steven. *Patient-Centred Care: An Introduction to What It Is and How to Achieve it – A discussion paper for the Saskatchewan Ministry of Health*. Saskatoon: Government of Saskatchewan, 2009. Available at http://www.health.gov.sk.ca/Default.aspx?DN=49372758-a388-4e95-8fe2-043c18362458.

Pong R, Russell N. *A review and synthesis of strategies and policy recommendations on the rural health workforce*. Centre for Rural and Northern Health Research, Laurentian University, 2003. Available from http://www.cranhr.ca/pdf/TORC_Ruralhealthworkforcesynthesis-finaldraft-May.pdf.

Ross, John. *Emergency Care in Nova Scotia: Interim Report*. Nova Scotia Department of Health: April 2010. Available from http://www.gov.ns.ca/health/emergencycarereport/default.asp.

Watson, Diane et al. *Supply, Availability and Use of Family Practitioners in Winnipeg*. Manitoba Centre for Health Policy, University of Manitoba: Winnipeg, 2003. Available at http://mchp-appserv.cpe.umanitoba.ca/reference/famphys.pdf.

Unauthored Reports

Annual Accountability Report on Emergency Department Closures. Nova Scotia Department of Health: March 2010. Available from http://www.gov.ns.ca/health/reports/pubs/Accountability-Report-on-Emergency-Department.pdf.

Changing Nova Scotia's Healthcare System: Creating Sustainability through Transformation. Dec. 2007. Available from http://www.gov.ns.ca/health/reports/pubs/Provincial_Health_Services_Operational_Review_Report.pdf.

Ideas and Opportunities for Bending the Health Care Cost Curve – Advice for the Government of Ontario. The Ontario Association of Community Care Access Centres; The Ontario Federation of Community Mental Health and Addiction Programs; The Ontario Hospital Association: Toronto, April 2010. Available at http://www.ccac-ont.ca/Upload/on/General/Bending%20the%20Health%20Care%20Cost%20Curve%20(Final%20Report%20-%20April%2013,%202010).pdf.

Improving the Patient Experience. Victorian State Government Department of Human Services, Australia, May 2009. Available from http://www.health.vic.gov.au/emergency/patient-xp-audit-0509.pdf.

Liberating the NHS: Transparency in outcomes: a framework for the NHS. Department of Health: London, 2010. Available at http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_117591.pdf.

Primary Health Care Renewal: Action for Healthier Nova Scotians: A report of the Nova Scotia Advisory Committee on Primary Health Care Renewal. Nova Scotia Department of Health, May 2003. Available From http://www.gov.ns.ca/health/reports/pubs/Primary_Health_Care_Renewal_Report_May_2003.pdf.

Rural Hospital Service Closures. Society of Rural Physicians of Canada, April 2009. Available from http://www.srpc.ca/PDF/H_closures_2009.pdf.

Seniors' Use of Emergency Departments in Ontario, 2004-05 to 2008-09. Canadian Institute for Health Information, Feb 2010. Available from http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=media_20100218_e.

Transparency in outcomes - a framework for the NHS Department of Health: London, 2010. Available at http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_117583.

Vision for emergency and urgent care. London: The Ambulance Service Network, 2008. Available from http://www.nhsconfed.org/Publications/Documents/A%20vision%20for%20emergency%20and%20urgent%20care.pdf.

Articles

Hanna, A. "Patient-Centred Care," *Ontario Medical Review* (June 2010): 34-49. Available from https://www1.oma.org/Resources/Documents/Patient-CentredCare,2010.pdf.

Starfield B, Shi L, Macinko J. "Contribution of Primary Care to health systems and health" *The Milbank Quarterly* (2005); 83 (3): 457-502. Available from http://www.ncbi.nlm.nih.gov/pubmed/16202000.

Rainfray, M. et al. "Comprehensive geriatric assessment: a useful tool for prevention of acute situations in the elderly," *Annales de medecine interne* (Oct 2002) 153(6): 397-402. Available from http://www.ncbi.nlm.nih.gov/pubmed/12486389.

Web-based information

Canadian Health Services Research Foundation. "Myth: Emergency Room Overcrowding is Caused by Non-Urgent Cases." Oct. 2009. Accessed autumn 2010. http://www.chsrf.ca/mythbusters/html/myth31_e.php.

Canadian Health Services Research Foundation. "Myth: Most physicians prefer fee-for-service payments." Jan. 2010. Accessed autumn 2010. http://www.chsrf.ca/mythbusters/html/myth33_e.php.

Institute for Healthcare Improvement. "Changes: Primary Care Access." http://www.ihi.org/IHI/Topics/OfficePractices/Access/Changes/.

Nova Scotia Department of Health. "Annual Statistical Tables: 12 months ending March 31, 2009." Available from http://www.gov.ns.ca/health/reports/pubs/DOH_Annual_Stat_Report_MSI_2008_09.pdf.

Nova Scotia Department of Health. "Primary Health Care: Collaborative Teams." Accessed autumn 2010. http://www.gov.ns.ca/health/primaryhealthcare/collaborative_teams.asp/.

Ontario Ministry of Health and Long-term Care. "Emergency Room Wait Times - Emergency Room Targets." Available from http://www.health.gov.on.ca/en/pro/programs/waittimes/edrs/targets.aspx.