

Improving Access to Emergency Services: A System Commitment



The Report of the Hospital Emergency
Department and Ambulance Effectiveness
Working Group

Submitted to the Honourable George Smitherman,
Minister of Health and Long-Term Care

Summer 2005

September 16, 2005

The Honourable George Smitherman
Minister of Health and Long-Term Care
Government of Ontario
10th Floor, Hepburn Block
80 Grosvenor Street
Toronto, ON M7A 2C4

Dear Minister Smitherman:

It is with pleasure and anticipation that the Hospital Emergency Department and Ambulance Effectiveness (HED&AE) Working Group presents its report to you. As part of our mandate, the group has reviewed recommendations of other task forces and committees, best practices from Ontario, Canada and abroad, and available published research. We are confident that the submitted report reflects best evidence and if implemented in its entirety will result in significant and sustainable reduction in ambulance offload delays and emergency department overcrowding, as well as system transformation to improve patient care and experience in ambulances and hospitals.

While the body of the report and its 15 recommendations are organized according to the patient's journey through the emergency health care system, the following three themes emerge:

- 1. System Commitment** – Commitment from all stakeholders is the fundamental requirement for improvement in emergency department overcrowding and ambulance offload delays. Many previous initiatives have failed because they addressed only the emergency department component of the problem. Hospitals and communities must recognize that emergency department overcrowding is a symptom of systemic issues and must be a high priority for change. Moreover, integration with other initiatives in the transformation agenda such as Primary Care Reform and the Wait Time Strategy will help to ensure sustainability of the improvements.
- 2. Accountability** – Stakeholders must be accountable to each other and to the citizens of Ontario for emergency patient care. The design and collection of key performance indicators will allow tracking of progress. Implementation, by the ministry, of incentives and disincentives for hospitals and ambulance services will guide the evolution of the system improvements contained herein.
- 3. Capacity** – Resource requirements generated by admissions to the hospitals from emergency departments can be predicted daily, seasonally and regionally. Based on objective modelling methodologies, capacity should be defined and expanded through efficiencies, rescheduling of other services and innovative solutions; and finally, with addition of acute care beds only under circumstances in which all other means have been exhausted. Further, expanded capacity can be created in the community consistent with the government's agenda to allow patients to stay in their community for care.

Emergency department overcrowding and resultant ambulance offload delay are national issues. The government of Ontario has recently provided national leadership in addressing wait times, improving the supply of physicians and nurses and improving community care. The establishment of the HED&AE Working Group demonstrates your understanding of the issues and commitment to finding solutions. Implementation of its recommendations will unequivocally and explicitly show ongoing leadership in Canadian health care reform and, most importantly, allow our patients to receive the right care in the right place at the right time.

We respectfully submit this report.

Sincerely,



Brian Schwartz

On behalf of the Hospital Emergency Department and Ambulance Effectiveness Working Group:

Dan Cass

Michael Christian

Peter Dundas

Bruce Farr

Louise LeBlanc

Lorraine Ladha

Chris Mazza

Mary Kardos Burton

Gary Bragagnolo

Narendra Shah

Marnie Weber

Rosalind Smith

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Executive Summary

Why was this Report Commissioned?

Although ambulance offload delay in Ontario Emergency Departments is a relatively new phenomenon, emergency department (ED) overcrowding has been a provincial and national issue for about 20 years.

In February 2005, responding to issues raised by stakeholders such as Emergency Medical Service (EMS) and municipal officials in Ottawa and Toronto, Health Minister George Smitherman established the Hospital Emergency Department and Ambulance Effectiveness (HED&AE) Working Group to advise the Ontario Ministry of Health and Long-Term Care (MOHLTC) on ambulance offload times in EDs.

What is the Purpose of the Hospital Emergency Department and Ambulance Effectiveness Report?

This report from the Working Group contains recommendations which, if implemented, will allow ambulances to “return to the street” in the short term, and reduce ED pressures in the longer term. In conjunction with other strategic initiatives such as the Wait Time Strategy, Primary Care Reform, and provincial critical care and transport medicine developments, there are opportunities to reduce the number of patients arriving by ambulance to EDs, maximize patient flow-through to provide access to appropriate hospital resources and, most importantly, improve the quality of the patient experience in the ED by providing timely and efficient access to care and services.

What Guided the Working Group Deliberations?

In order of priority the Working Group focused the recommendations on:

1. The needs of the patient,
2. Integrating the skills of health care providers effectively, and
3. Effective and efficient utilization of resources.

Also guiding the Working Group were principles related to the need for systemic solutions, for patients to receive optimal care in the right environment, and for patients to receive consistent standards of care and safety across the system.

What is the Lead Cause of Delays in Ambulance Wait Time in EDs?

The principal cause of Ambulance Offload Time (AOT) delay is **lack of capacity** to treat hospital in-patients, leading to prolonged Emergency Department Length of Stay (ED LOS) and ED overcrowding.^{1,2,3,4} Over the years, patients who would have been better cared for in alternate settings remained in acute care beds. As a result of hospital restructuring and financial constraints, acute care beds were reduced without the necessary community supports. This led to the care of in-patients in EDs, followed by ED overcrowding and consequent AOT delays leading to delayed ambulance response to 911 calls in the community.

What can we Learn from Others?

Best practices are a key part of this report and will enable the appropriate stakeholders to improve practice and achieve benchmarks contained in the recommendations. Among these are:

- Equitable and medically appropriate distribution of those patients requiring ED care
- Timely access to diagnostic imaging, laboratory testing and specialty consultation and disposition
- Timely transfer to an in-patient unit, other facility or home

¹ Zahn C. University Health Network Presentation to the HED&AE Working Group, March 7, 2005.

² Tyberg J. Toronto Emergency Access Committee Presentation to the HED&AE Working Group, March 7, 2005.

³ Schull M. Institute for Clinical Evaluative Sciences Presentation to the HED&AE Working Group, March 21, 2005.

⁴ CAEP/NENA Joint Position Statement: *Access to Acute Care in the Setting of Emergency Department Overcrowding*, March 2003.

What did the Working Group Recommend?

Both short-term and long-term solutions are required. Over the next few months ambulance offload delays **must** be significantly reduced as the system is currently approaching a breaking point in some areas of the province. In order to sustain improvement, implementation of the long-term recommendations is critical.

The recommendations are categorized into four groups:

1. Recommendations for the pre-hospital environment (Pre-Emergency Department), largely the responsibility of Emergency Medical Services and Primary Care groups
2. Recommendations for the ED, including standards for patient assessment, diagnostics, consultation and disposition
3. Recommendations to improve patient flow out of the ED to definitive care or follow-up (Post-Emergency Department), including timely transfer to in-patient units and other hospitals when necessary, and access to services that are not acute
4. Oversight and accountability, including key performance indicators, benchmarks and recommendations for stakeholder accountability for achievement of the benchmarks.

While all of the group's recommendations are important and should be considered as a whole, the following are mission critical for success in improving AOT and ED LOS:

Mission Critical Recommendations:

That benchmarks for the following Key Performance Indicators (KPIs) of Ambulance Offload Delay and Emergency Department Overcrowding become part of the hospital accountability framework:

- **Time from patient/ambulance arrival to patient placed on ED stretcher (Ambulance Offload Time – AOT) or in clinical area (patient waiting time)**
- **Time from patient on ED stretcher to admission to in-patient unit or discharge (ED Length of Stay – ED LOS)**

Further, that the MOHLTC and the Ontario Hospital Association (OHA) ensure that these indicators become part of the Hospital Report for Emergency Care. (Recommendation 4.2)

Emergency Department Length of Stay (ED LOS) is currently defined as patient registration to disposition. The median and 90th percentiles for ED LOS in Ontario are 2.0 hours and 6.6 hours respectively.⁵ In the Toronto Central and Greater Toronto Area Local Health Integration Network (LHIN) districts, the 90th percentiles for ED LOS are over 11 and 8 hours, respectively.⁶ ED LOS is broken down by Canadian Triage and Acuity Score (CTAS) and ambulance versus “walk-in” patients in Appendix C. Reducing ED LOS by 10-20%, particularly in areas in which ED LOS are prolonged, would free up sufficient hours to accommodate timely care of emergency patients.

It is recommended that a benchmark of ED LOS of six hours (90th percentile) be implemented over a two to three year period. It is recognized that hospitals all face different challenges in addressing ED LOS and that there is not an “even playing field”. Therefore, **the Working Group recommends that hospitals improve their ED LOS by 10% every six months until the benchmark is reached.**

Accountability and commitment at the hospital CEO and Board of Directors levels are keys to achieving these benchmarks. ED LOS is a hospital system, not an ED issue, and must be addressed with specific deliverables and incentives in order to be successful.

That progress toward these benchmarks must be linked with incentives, and that the MOHLTC work with OHA, the Joint Planning Policy Committee (JPPC), hospitals and EMS to determine the feasibility of integrating ED performance and ambulance offloading measures into ministry accountability agreements, funding arrangements and other relevant methodology. (Recommendation 4.3)

⁵ Schull M. Institute for Clinical Evaluative Sciences Presentation to the HED&AE Working Group, March 21, 2005.

⁶ IBID

That a predictive, time series model be developed to accurately predict in-patient resource requirements generated by ED admissions, and adjustments, with funding if necessary, be made on the basis of its conclusions. Further, that networks reassess the roles of each hospital in addressing the needs of patients in their communities who require emergency care, and communicate this to EMS.

Hospitals must optimize time for transfer of ED patients to in-patient units by improving patient flow, decreasing in-patient length of stay and implementing an Emergency Department Full Capacity Protocol for selected patients admitted without an in-patient bed if necessary. (Recommendation 3.1)

Hospitals should examine the types and volume of in-patient admissions generated by their EDs, and structure elective admissions accordingly to optimize bed utilization and patient flow. Specifically, General Internal Medicine bed capacity must be maintained or expanded, with funding if necessary, to accommodate ED admissions.

Mathematical models may be used to predict hospital resource use generated by admissions through the ED. Time series modelling techniques can predict utilization by season⁷, day of the week and hour of the day, in order to objectively determine what in-patient resources are required at a given hospital for a given period of time.

Hospital protocols and practices regarding patient discharge planning, physicians writing discharge orders, patients vacating their beds when discharged and hospital staff ensuring timely availability of the resource for the next patient should be re-evaluated and enforced.

An *Emergency Department Full Capacity Protocol*⁸, instituted in parts of New York State, has not only improved patient flow to in-patient units, it has improved patient care. This should be implemented in selected circumstances to ensure that the right patient is in the right place for optimal care.

That an ED and Ambulance Quality Implementation Team be struck immediately to assist the MOHLTC in the implementation of these recommendations, and to:

- **Evaluate compliance with benchmarks and access to ED services and EMS,**
- **Following one year of monitoring, and in conjunction with the Joint Planning Policy Committee (JPPC), determine the extent to which relevant measures of performance could be incorporated into the 06/07 hospital accountability agreement, and**
- **Recommend appropriate corrective action. (Recommendation 4.6)**

The MOHLTC will demonstrate its commitment to the AOT and ED LOS initiative by establishing and funding an Implementation Team made up of expert individuals involved in the provision of EMS and ED services, interfacility transport, hospital senior management and in-patient care, the Institute for Clinical Evaluative Sciences, CritiCall (if involved in data collection) and government to oversee collection of and review data, clarify actions, assess benchmark compliance and ED access, and provide advice to the MOHLTC on further action to ensure success of the ED and Ambulance offload initiatives. Reporting to the ADM, Acute Services, this group will monitor the impact of solutions, and ensure formal and frequent communication with stakeholders on outcomes and demonstrated best practices, and may also assist hospitals with implementation of best practices in achieving their targets.

⁷ Upshur R et al. *Simplicity within complexity: Seasonality and predictability of hospital admissions in the province of Ontario 1988-2001, a population-based analysis*. BMC Health Services Research 2005; 5: 13. Accessed at: <http://www.biomedcentral.com/1472-6963/5/13>

⁸ Vecillio P. *Emergency Department Full Capacity Protocol*. Stony Brook University Hospital and Medical Center Administrative Policies and Procedures, 2001. Accessed at: <http://www.viccellio.com/fullcapacity.htm>

What we Hope to Achieve

Because EMS and ED care is so commonplace (5 million ED visits per year) and so visible, it is a marker for health care reform in Ontario. Improving access to and quality of EMS and Emergency services will engender **trust and confidence** in the entire transformation process and Ontario's health care system.

A systemic, significant and sustained commitment by all providers is required to generate improvement in patient response, outcome and satisfaction as well as better health care provider morale, and efficiencies to our health care system in Ontario. As shown in the United Kingdom⁹, tangible, wholesale and measurable improvements are possible.

The keys to sustainable change are commitment and accountability. Commitment by EMS, hospitals, community providers and government. Accountability to peers, providers, government and above all, the citizens of Ontario who are our patients and deserve the right care in the right place by the right provider at the right time.

The HED&AE Working Group would like to acknowledge the excellent and tireless efforts of previous and existing groups as well as the dedication of the fine professionals who work in the Province's EDs and EMS systems every day. It is their efforts that make Ontario's health care system among the best in the world, and that will assist us in the transition to a more streamlined, effective and optimal health care system in the future.

⁹ Alberti G. *Transforming Emergency Care in England*. COI Communications, Department of Health, United Kingdom, October 2004.
Accessed at: www.dh.gov.uk/publications

Hospital Emergency Department and Ambulance Effectiveness Working Group Recommendations

1. Pre-Emergency Department Recommendations

- #1.1. That the safety and effectiveness of ambulance transport of selected patients to destinations other than Emergency Departments (EDs), including Urgent Care Facilities, be immediately evaluated in up to three centres in Toronto and Ottawa with appropriate monitoring for safety.

Further, it is recommended that assessment and release of selected patients by paramedics to community follow-up in conjunction with primary care reform be evaluated.

- #1.2. That enhanced communication to Ontario citizens regarding the use of and access to Telehealth Ontario be evaluated along with the safety and effectiveness of Central Ambulance Communication Centre referral of selected “low acuity” callers in Toronto to Telehealth.

Further, that promotion of access to an integrated health information and education system be evaluated and undertaken.

- #1.3. That the Ministry of Health and Long-Term Care (MOHLTC) support the development, implementation and evaluation of outreach teams in long-term care homes (LTCHs) to support enhanced care in the community and focus ED care on those patients who require acute interventions.

- #1.4. That the software used by Toronto Central Ambulance Communications Centre to assist with patient distribution decisions be evaluated for use by Central Ambulance Communication Centres throughout the province.

2. Emergency Department Recommendations

- #2.1. That hospitals, with input from the local community and EMS, follow a consistent set of internal procedures to address surges in ED volumes prior to requesting mutual aid or ambulance consideration.

- #2.2. That the MOHLTC Guidelines for EDs be updated using best practices outlined in Appendix A, and disseminated.

3. Post-Emergency Department Recommendations

- #3.1. That a predictive, time series model be developed to accurately predict in-patient resource requirements generated by ED admissions, and adjustments, with funding if necessary, be made on the basis of its conclusions. Further, that networks reassess the roles of each hospital in addressing the needs of patients in their communities who require emergency care and communicate this to Emergency Medical Services (EMS).

Hospitals must optimize time for transfer of ED patients to in-patient units by improving patient flow, decreasing in-patient length of stay and implementing an Emergency Department Full Capacity Protocol for selected patients admitted without an in-patient bed if necessary.

- #3.2. That the MOHLTC fully support and expedite the implementation of provincial reform of interfacility medical transport.

- #3.3. That the MOHLTC continue its support of enhanced community care through Community Care Access Centres (CCACs), and assess other community supports on a regional basis, including rehabilitation and complex continuing care to optimize the right care in the right environment.

4. Oversight and Accountability Recommendations

- #4.1. That the MOHLTC ensure that optimization of ED processes of care is a strategic priority, and ensure that its policies are aligned accordingly. Further, that hospitals become aware, through communication from the MOHLTC, of the expectation that the provision of timely access to emergency services in their EDs is a high priority, and that resource allocation decisions must be made to support this.

That hospitals evaluate the best practices in Appendix A and use those most relevant to their needs in improving emergency patient care and flow-through to appropriate in-patient units.

- #4.2. That benchmarks for the following Key Performance Indicators (KPIs) of Ambulance Offload Delay and Emergency Department Overcrowding become part of the hospital accountability framework:

Key Performance Indicator	Benchmark
Time from patient/ambulance arrival to patient placed on ED stretcher (Ambulance Offload Time – AOT) or in clinical area (patient waiting time)	30 minutes (90th percentile)
Time from patient on ED stretcher to admission to in-patient unit or discharge (ED Length of Stay – ED LOS)	6 hours (90th percentile)

Further that:

- The MOHLTC and the Ontario Hospital Association (OHA) ensure that these indicators become part of the Hospital Report for Emergency Care
 - Time from patient on ED stretcher to ambulance back in service be implemented as a key indicator for EMS efficiency
 - Hospitals monitor acute occupancy rates
 - Benchmarks be established and monitored for the time from ED physician request for consultation to consultation completed
- #4.3. That progress toward these benchmarks be linked with incentives, and that the MOHLTC work with OHA, the Joint Planning Policy Committee (JPPC), hospitals and EMS to determine the feasibility of integrating ED performance and ambulance offloading measures into Ministry accountability agreements, funding arrangements and other relevant methodology.
- #4.4. That the MOHLTC, hospitals, EMS services and CritiCall work together to develop, fund and implement data collection systems to ensure validity and reliability of indicators, and that the National Ambulatory Care Reporting System (NACRS) and Canadian Institute of Health Information (CIHI) datasets be refined to reflect time intervals noted in Recommendation 4.2.
- #4.5. That agreements with respect to patient distribution, bypass, transfer of care and mutual aid be signed between EMS operators and receiving hospitals.
- #4.6. That an Emergency Department and Ambulance Quality Implementation Team be struck immediately to assist the MOHLTC in the implementation of these recommendations, and to:
- Evaluate compliance with benchmarks and access to ED services and EMS,
 - Following one year of monitoring, and in conjunction with the JPPC, determine the extent to which relevant measures of performance could be incorporated into the 06/07 hospital accountability agreement, and
 - Recommend appropriate corrective action.

Hospital Emergency Department and Ambulance Effectiveness Working Group Report

Introduction

Although ambulance offload delay in Ontario Emergency Departments is a relatively new phenomenon, emergency department (ED) overcrowding has been a provincial and national issue for about 20 years. Manifest as delays to assessment of patients, ambulance diversion during the 1990s and most recently offload delays resulting in delayed response times to 911 calls, ED overcrowding is a symptom of a lack of an integrated response and gaps in our health care system. These include a shortage of comprehensive primary care for ongoing or low acuity illness, too few in-patient resources for patients with acute medical problems, overextended critical care resources and not enough rehabilitation and home services for patients occupying acute care beds.

Task forces, working groups, committees, consultant reports and internal audits have provided numerous recommendations to improve patient flow, capacity and efficiencies in Ontario's EDs. Despite the implementation of some of these recommendations the problem is worsening, perhaps due to demographics, but also due, according to authorities¹⁰, to a lack of commitment to a systemic and integrated response to the problem. A systemic commitment by Emergency Medical Services (EMS), hospitals, community health care providers and government is needed to develop a practical set of solutions with a clear implementation plan, in order to direct the right level of emergency, acute and ongoing care to each and every identified ill and injured patient in Ontario. **Complete focus and commitment is required throughout each organization, not solely within select departments.**

As shown in the United Kingdom¹¹, tangible, wholesale and measurable improvements are possible with this commitment. Within two years of establishing a benchmark of a four hour ED length of stay, compliance with this standard improved from 77% to 96%. An outside observer of the UK initiative noted that while there has been no huge increase in bed numbers, capacity has improved. Despite no significant decrease in occupancy rates, patients are admitted to in-patient units more quickly. Emphasis in hospitals appears to have shifted to discharge rather than admission. Accountability for compliance with the 4-hour rule lies with the Chief Executive Officer (CEO) of the hospital, with specific consequences for lack of improvement in this key performance indicator. This attitude has also diffused through to in-patient wards, where undeclared vacant beds are in some jurisdictions a disciplinary offence for staff. Beds are declared available at the earliest opportunity, discharge lounges have been established in hospitals, community support has improved to accentuate early discharge, and "discharge teams" are prevalent.¹² Moreover, processes of care in the ED, such as timely specialty consultation and laboratory and diagnostic imaging availability, contributed to these improvements.

In February 2005, responding to issues raised by stakeholders such as EMS services and municipal officials in Ottawa and the Greater Toronto Area (GTA), Ontario's Health and Long-Term Care Minister George Smitherman established the Hospital Emergency Department and Ambulance Effectiveness (HED&AE) Working Group. The group was tasked to advise the Ontario Ministry of Health and Long-Term Care (MOHLTC) regarding the issue of ambulance offload times in EDs (Appendix F). The Working Group reviewed historical recommendations from other committees, task forces and groups as well as published evidence and best practices (Appendix L). After its initial meeting, written submissions were solicited and presentations from key stakeholders scheduled (Appendices G and H). The group met weekly for five weeks and after deliberation unanimously agreed on the content and format of its recommendations to Minister Smitherman.

¹⁰ Toronto Emergency Steering Committee. *Keeping Ambulances on the Road – Additional Strategies to Reduce Ambulance Backlog*. June 2001.

¹¹ Alberti G. *Transforming Emergency Care in England*. COI Communications, Department of Health, United Kingdom, October 2004. Accessed at: www.dh.gov.uk/publications

¹² Ryan J. ED Overcrowding. *Can J Emerg Med*: Vol.6, pp. 395-6, Nov. 2004.

This report contains recommendations which, if implemented, will improve the quality of the patient's experience, allow ambulances to "return to the street" in the short term, and reduce ED pressures in the longer term. In conjunction with other strategic initiatives such as wait times reduction, primary care reform, and provincial critical care and medical transportation changes, there are opportunities to reduce the number of patients arriving by ambulance to EDs. In addition, opportunities exist to maximize patient flow-through to improve the quality of the patient experience in the ED by providing timely and efficient access to care and services.

The best practices contained herein follow an approach established in the recent Ontario Critical Care Steering Committee Report, categorizing solutions in three phases: (i) Pre-ED (reducing inflow of patients) (ii) ED (interface of EMS and ED care); and (iii) Post-ED (disposition of patients home, to an in-patient unit or another facility).¹³ The concept of a patient-focused journey through the emergency care system is outlined in Appendix B, and issues surrounding both effective and efficient care are identified. The Critical Care Steering Committee's vision of "timely access to the appropriate level of high quality critical care services ... the right care provided to the right patient at the right time" is remarkably similar to the focus of the HED&AE Working Group. Further, because EMS and ED care is so commonplace (about 5 million ED visits per year) and so visible, it is a marker for health care reform in Ontario. Indeed, recent media reports have focused public attention on this issue. Improving access to and quality of EMS and Emergency services will engender **trust and confidence** in the entire health reform process and in Ontario's health care system. While it could not be expected that the HED&AE Working Group would be able to address all aspects of this complex multidimensional problem within the allocated timelines, its recommendations serve as a starting point for further action as part of, and integrated with, the government's health reform plan.

Guiding Principles

In reviewing the submissions (Appendices G and H) and during its deliberations, a number of guiding principles evolved which ensure the recommendations are focused on (in order of priority):

- A. the needs of the patient,
- B. integrating the skills of health care providers effectively, and
- C. effective and efficient utilization of resources.

Principle 1 – Systemic Problems Require Systemic Solutions

- Ambulance offload delay and ED overcrowding are reflections of system issues, and cannot be addressed in isolation
- Improving the overall functioning of hospital patient flow is the top priority in the management of ED patients and must be treated as such by Hospital Boards, administrations, medical staff and employees
- System changes require objective and scientific analysis of root causes and solutions
- A team approach by ambulance and hospital staff as well as community and primary health providers to patients experiencing a medical emergency must be advanced to replace the current fragmentation of care

Areas of responsibility and expertise of each organization must be acknowledged and maximized. Ambulance services are responsible for patient transportation while hospitals are responsible for caring for patients in their facilities.

Principle 2 – Optimal Care in the Right Environment

- Patients are the hospital's responsibility upon arrival in the ED
- It is best for the patient to be received by triage on arrival in the ED
- EMS do their best work on the street
- ED personnel do their best work in the Emergency Department
- Patients who do not require emergency services are best cared for in non-emergency settings¹⁴

¹³Trypuc J et al. Report of the Ontario Critical Care Steering Committee (Draft), March 15, 2005.

¹⁴Leblanc L. *The Scarborough Hospital Philosophy*. Presentation to the HED&AE Working Group, March 7, 2005.

Principle 3 – Common Care Standards

- Patients deserve the same standards of care, dignity, compassion, comfort and safety regardless of where they are in the hospital
- Policies and practices that are considered unsafe in one area of the hospital (for example, in in-patient units) are also unsafe in the ED¹⁵

Discussion

The principal cause of Ambulance Offload Time (AOT) delay is a **lack of capacity** to treat hospital in-patients, leading to prolonged Emergency Department Length of Stay (ED LOS) and ED overcrowding.^{16,17,18,19} Over the years, patients who would have been better cared for in alternate settings remained in acute care beds. As a result of hospital restructuring and financial constraints, acute care beds were reduced without the necessary community supports in place. This led to the care of in-patients in EDs, followed by ED overcrowding and consequent AOT delays.

At this point, the “safety valve” of the health care system has reached a critical point, and patients are cared for by paramedics in the ED, resulting in 911 callers experiencing delayed response. Due to this “domino” effect, many of these patients do not receive the appropriate level of care.

Patients held in EDs for long periods of time are cared for in less than optimal circumstances. As hospital-based and community practices have evolved, health care workers and institutions have tended to protect their own environments to be able to provide the best care possible within each of them, at the expense of the continuum of patient care. We must re-establish a patient-focused continuum of emergency care by integrating the patient’s journey through the health care system.

Recommendations

The Working Group examined a number of strategies and best practices to improve system performance and concluded that no subset of recommendations would apply universally. Therefore, our recommendations consist of strategies that should be implemented by the MOHLTC, hospitals, EMS providers and other key components of the health care system to ensure an integrated, systems-based approach to the issue. Since ambulance offload delay is one indicator of pressures within the system, leadership from the MOHLTC is required to send a message that **systemic change** is necessary in attitude, priority and ownership in developing an integrated response.

Best practices are a key part of this report. They will enable the appropriate stakeholders to improve practice and achieve benchmarks contained in the recommendations. In particular, hospitals **must evaluate best practices and use those most relevant to their needs** in improving emergency patient care and flow-through to appropriate in-patient units.

Both short-term and long-term solutions are required. In the next few months, ambulance offload delays must be significantly reduced, particularly in some areas of the province as the system in those jurisdictions is currently at a critical point. However short-term actions will not result in sustained improvement; therefore implementation of the long-term recommendations are critical to restoring the public’s confidence and trust in the health care system.

The recommendations are grouped into three categories, similar to those contained in the Report of the Ontario Critical Care Steering Committee.²⁰ A fourth group of recommendations is added to reflect accountability and involvement of all relevant sectors of the health system. **The recommendations in group four form a critical success component of the report**, as without leadership and accountability from all players the other key recommendations and best practices will not be implemented consistently and effectively.

¹⁵ Vancouver Coastal Health. *ED Outflow Solutions*, October 2004.

¹⁶ Zahn C. University Health Network Presentation to the HED&AE Working Group, March 7, 2005.

¹⁷ Tyberg J. Toronto Emergency Access Committee Presentation to the HED&AE Working Group, March 7, 2005.

¹⁸ Schull M. Institute for Clinical Evaluative Sciences Presentation to the HED&AE Working Group, March 21, 2005.

¹⁹ Affleck A. Canadian Association of Emergency Physicians presentation to the HED&AE Working Group, March 21, 2005.

²⁰ Trypuc J et al. Report of the Ontario Critical Care Steering Committee (Draft), March 15, 2005.

1. Pre-Emergency Department

Best Practices:

- Redirection of selected patients evaluated by paramedics to non-Emergency Department (ED) environments or to the ED by alternate means
- Redirection of patients calling 911 who may be better served by Telehealth and/or primary health care workers and facilities
- Providing access to medical evaluation and/or diagnostic services for patients in Long-Term Care Homes (LTCHs) who would otherwise be sent by ambulance to EDs
- Equitable and medically appropriate distribution of those patients requiring ED care to EDs

Recommendation #1.1

That the safety and effectiveness of ambulance transport of selected patients to destinations other than EDs, including Urgent Care Facilities, be immediately evaluated in up to three centres in Toronto and Ottawa with appropriate monitoring for safety.

The Hay Report of 2004 identified 877,000 Canadian Triage and Acuity Scale (CTAS) 5 (16.2% of all) ED patients in 2002/03, and estimated that 50% of them may not require ED care.²¹

In Toronto, over 30,000 patients per year delivered to hospitals by EMS were categorized as CTAS 4 and 5 (see Appendix D), some of whom could be triaged away from EDs if resources were available to assess and treat them.

It is recommended that an initiative be developed and implemented by EMS services and Base Hospitals in Toronto, York, Peel and Ottawa, supported by the Ministry of Health and Long-Term Care (MOHLTC), which would evaluate the safety, efficacy and satisfaction of transporting selected CTAS 4 and 5 patients to local Urgent Care Facilities (UCFs). This recommendation is contingent on adequate standards and resources within these facilities to care for these patients, appropriate data collection, and quality assurance measures taken by the EMS operator and the base hospital. A Quality Implementation Team composed of stakeholders will monitor this project and advise the MOHLTC (Recommendation #4.6).

While it is widely acknowledged that low acuity patients are not a significant burden on ED resources, the offload delays posed by those who arrive by ambulance may be more substantial. Furthermore, the care of these patients may be better and more expeditiously served in a lower acuity facility, so long as the MOHLTC is reassured by the Quality Implementation Team that this is a safe practice.

Further, it is recommended that assessment and release of selected patients by paramedics to community follow-up in conjunction with primary care reform be evaluated.

The implementation of Family Health Teams may provide an opportunity to evaluate patient care by a primary care practitioner outside of an ED following evaluation by paramedics with an expanded scope of practice. This can form a more comprehensive Pre-ED initiative once the teams have been implemented.

²¹The Hay Group. *Health Reform and Sustainability*. Working Draft, May 2004.

Recommendation #1.2

That enhanced communication to Ontario citizens regarding the use of and access to Telehealth Ontario be evaluated along with the safety and effectiveness of Central Ambulance Communication Centre referral of selected “low acuity” callers in Toronto to Telehealth. Further, that promotion of access to an integrated health information and education system be evaluated and undertaken.

Telehealth Ontario provides a comprehensive service to over one million callers per year. It is possible that some 911 callers may be better served by Telehealth, either by calling this service directly or by a link with the Central Ambulance Communication Centre (CACC). This link currently exists in Toronto. Selected 911 callers may be screened and transferred from the dispatcher to Telehealth. A “safety net” for patients exists in that Telehealth can re-route the caller back to the CACC if it is discovered during the telephone assessment that an ambulance is indeed necessary. While an early evaluation in Toronto in 2003-2004 identified only about 100 referred callers per month, there were no available resources to track and follow up higher numbers of patients.

As in Recommendation #1.1, while this subset of patients does not pose a large burden on the ED system, there is an opportunity to reduce ambulance utilization in those who in actuality require health information or non-ED primary care. The key is to correctly identify these patients; hence this initiative must be supported to ensure appropriate follow-up and evaluation in its initial stages.

This initiative also provides an opportunity to evaluate and promote innovative modes of public access to quality health information. For example, educational/awareness activities and a three-digit access number to integrated Telehealth resources including Telehealth Ontario and the Poison Control Centre will enhance patient empowerment, seamlessness of care, system integration and a reduction in unnecessary ED and EMS utilization.

Recommendation #1.3

That the MOHLTC support the development, implementation and evaluation of outreach teams in Long-Term Care Homes (LTCHs) to support enhanced care in the community and focus ED care on those patients who require acute interventions.

Patients from LTCHs use both ED and EMS resources (forming a significant component of long ED LOS and ambulance offload delay patients in some areas) and often could be better served with medical care of urgent problems in their place of residence. A preliminary study of ED visits of individuals transferred by LTCHs conducted by the MOHLTC revealed that resident transfer patterns to hospital EDs varied significantly by originating LTCH.²²

A number of groups have addressed the issue of care in LTCHs and reviewed the nature of the transfers in more detail.²³ Recommendations include:

- the development of a common assessment tool for LTCHs which would assist in care plans for patients,
- on-site medical and psychiatric assessment availability,
- the use of complex continuing care sites for providing the acute aspects of care in LTCHs, and
- the creation of partnerships among LTCHs and area hospitals to allow clients with medically necessary needs, such as diagnostic testing or hospital admission to bypass ED sites.

A notable recommendation is the creation of a “mobile triage team”. The team may include a nurse practitioner, paramedic, physician assistant and/or other health care providers. It would determine whether the patient could be cared for in the LTCH (with enhanced training of nursing staff in such procedures as intravenous fluids, suctioning, bladder catheter insertion, Gastric tube, etc.), whether the patient could be assessed at a Diagnostic or Urgent Care facility, or whether transfer to hospital is indicated. While this initiative also requires a system commitment in terms of provider training, family and physician education and participation, and integration with Primary Care Reform, a similar model of outreach teams in the Critical Care environment has demonstrated both better care and more appropriate use of resources.²⁴

The MOHLTC should support further evaluation of resident transfers from LTCHs to EDs.

²² Ferley H, Glick J. *Resident Transfers from Long-Term Care Homes to Hospital Emergency Departments*. MOHLTC Toronto Regional Office, February 2005.

²³ IBID

²⁴ Trypuc J et al. Report of the Ontario Critical Care Steering Committee (Draft), March 15, 2005, p. 42.

Recommendation #1.4

That the software used by Toronto Central Ambulance Communications Centre to assist with patient distribution decisions be evaluated for use by Central Ambulance Communications Centres throughout the province.

In October 2004, the Toronto Central Ambulance Communications Centre (CACC), with agreement from local ED Medical Directors and Patient Care Managers, implemented a patient distribution system (known as “SHIELD”) which focuses on equitable patient distribution to EDs. While EMS and ED volumes are difficult to predict on a minute to minute basis, over the long term they are very predictable and therefore it is possible to negotiate equitable distribution of patients to EDs. The system ensures that CTAS 1 and 2 patients are delivered to the closest hospital, that triage bypass agreements are honoured, and that patients are repatriated to their “home” hospital to the extent possible governed by geographic and acuity considerations. Unfortunately, because CACCs outside the City of Toronto do not participate in this process, hospitals that receive patients from adjacent EMS services or from out of region, by land or air ambulance due to the need for specialized care, are sometimes doubly affected by ambulance volumes.

While the patient distribution process does not address total volumes, it does serve to “smooth out” the ambulance load on EDs from all sectors and modes of transport. This system should be implemented across the GTA CACCs initially and then, if effective and agreed upon, throughout the province.

2. Emergency Department

Best Practices:

- Processes at triage to ensure that patients are placed onto ED stretchers more efficiently and cared for by ED personnel more effectively
- Agreements on transfer of care from EMS to hospital providers
- Processes such as care pathways to streamline ED assessment, diagnostics and decision-making. This would include empowerment of ED nurses to initiate selected care pathways prior to MD assessment (i.e., x-ray)
- Timely access to diagnostic imaging and laboratory testing
- Timely specialty consultation and disposition, including its availability in an out-patient environment for patients who require urgent assessment but can be safely discharged home in the interim
- Separate ED observation and “short stay” areas

Recommendation #2.1

That hospitals, with input from the local community and EMS, follow a consistent set of internal procedures to address surges in ED volumes prior to requesting mutual aid or ambulance consideration.

The Critical Care Steering Committee defined three stages in demand surge, and noted that a minor surge is “an acute increase in demand for critical care services – ranging from 15-20% – that is localized to an individual hospital”. Local hospitals are responsible for responding to minor surges, and a “process checklist should also be formally assessed to help address the surge situation”. A moderate surge in critical care is “a larger increase in demand for critical care services that impacts on a Local Health Integration Network (LHIN)... (the LHIN) will respond to moderate surges, and be held accountable for overseeing the surge response”.²⁵

Similar definitions may be used in ED overcrowding and EMS offload delay. At a minimum, once a threshold is reached a process checklist should be used by hospitals to deal with minor surges in order to maintain access by ambulances and the community (Appendix I).

²⁵ IBID, p47.

Recommendation #2.2

That the MOHLTC Guidelines for Emergency Departments be updated using best practices outlined in Appendix A, and disseminated.

The last official version of this document was published and implemented in 1989. Since then a number of draft documents (most recently in 2001) have been produced, resulting in differing practices and expectations for hospital EDs. A consistent standard which can be monitored and enforced is required. Selected best practices for EDs outlined in Appendix A should be incorporated into the updated Guidelines.

3. Post-Emergency Department

Best Practices:

- Timely transfer to in-patient units (relates to hospital flow-through, critical care resources, length of stay, time of discharge, transfer of discharged patients to complex continuing care and rehabilitation facilities)
- Timely transfer to other acute care facilities for higher level and/or specialized care
- Timely return to sending facility or home environment
- Access to services that are not acute such as Community Care Access Centres (CCACs) and palliative care
- Access to social work and other allied health professions during “off-hours” to more emergently place patients that do not require acute care in-patient services
- Access to in-hospital and community-based mental health services

Recommendation #3.1

That a predictive, time series model be developed to accurately predict in-patient resource requirements generated by ED admissions, and adjustments, with funding if necessary, be made on the basis of its conclusions. Further, that networks reassess the roles of each hospital in addressing the needs of patients in their communities who require emergency care and communicate this to EMS.

Hospitals must optimize time for transfer of ED patients to in-patient units by improving patient flow, decreasing in-patient length of stay and implementing an Emergency Department Full Capacity Protocol for selected patients admitted without an in-patient bed if necessary.

Hospitals should examine the types and volume of in-patient admissions generated by their EDs and structure elective admissions accordingly to optimize bed utilization and patient flow. Specifically, General Internal Medicine bed capacity must be maintained or expanded, with funding if necessary, to accommodate ED admissions.

Mathematical models may be used to predict hospital resource use generated by admissions through the ED. Time series modelling techniques can predict utilization by season²⁶, day of the week and hour of the day in order to objectively determine what in-patient resources are required at a given hospital for a given period of time.

There are varying hospital protocols and practices regarding patient discharge planning, physicians writing discharge orders, patients vacating their beds when discharged and hospital staff ensuring timely availability of the bed for the next patient. While many hospitals have policies in this regard, they are not always monitored and enforced. Hospital administrations and Medical Advisory Committees should re-examine these policies and ensure compliance in order to achieve the benchmarks noted in Recommendation #4.2, as ED overcrowding is directly attributable to many of these factors.

An *Emergency Department Full Capacity Protocol*²⁷, instituted in parts of New York State, has not only improved patient flow, it has improved patient care, following the principles of Optimal Care in the Right Environment and Common Care Standards. Moreover, it has resulted in decreased length of stay, presumably by expediting diagnostic and therapeutic measures with the patient in the right clinical ward. Appendix J outlines this policy.

²⁶ Upshur R et al. *Simplicity within complexity: Seasonality and predictability of hospital admissions in the province of Ontario 1988-2001, a population-based analysis*. BMC Health Services Research 2005; 5: 13. Accessed at: <http://www.biomedcentral.com/1472-6963/5/13>

²⁷ Vecillio P. *Emergency Department Full Capacity Protocol*. Stonybrook University Hospital and Medical Center Administrative Policies and Procedures, 2001. Accessed at: <http://www.viccellio.com/fullcapacity.htm>

Recommendation #3.2

That the MOHLTC fully support and expedite the implementation of provincial reform of interfacility medical transport.

A provincial interfacility transport system, integrated between land and air ambulance, and medically triaged (“the right patient in the right vehicle with the right level of care”) will provide patient transfer between acute facilities, and repatriation to home or facilities that are not acute care. This may include regulation and inclusion of private non-ambulance patient transport providers for appropriate patients not requiring the administration of controlled acts. This system is essential in moving patients to definitive care safely and expeditiously, thereby creating capacity in the sending in-patient units and EDs as well as keeping EMS resources available for 911 calls within their communities.

Recommendation #3.3

That the MOHLTC continue its support of enhanced community care through Community Care Access Centres, and assess other community supports on a regional basis, including rehabilitation and complex continuing care to optimize the right care in the right environment.

Although community and long-term care capacity has improved in Ontario due to recent initiatives, particularly in nursing homes, currently 5 to 10% of patients in acute care hospitals do not require acute care services. Augmentation of Community Care Access Centres was acknowledged as a significant step in improving access. Enhancements in rehabilitation and complex continuing care sectors were identified by stakeholders as high priorities to provide these patients with the right care by the right provider in the right environment, thereby further freeing up acute care beds for ED patients. It has been shown that providing care to patients in the right environment (non-acute patients at the appropriate level of long-term or community care, acute patients in in-patient units rather than the ED, and emergency patients in the ED rather than on EMS stretchers) improves outcome and length of stay, resulting in a quality improvement cycle.

4. Oversight and Accountability Recommendations

Recommendation #4.1

That the MOHLTC ensure that optimization of ED processes of care is a strategic priority, and ensure that its policies are aligned accordingly. Further, that hospitals become aware, through communication from the MOHLTC, of the expectation that the provision of timely access to emergency services in their EDs is a high priority, and that resource allocation decisions must be made to support this.

In the Working Group’s view, the reason that previous solutions have not succeeded in improving AOT and ED LOS is a lack of sustained commitment from both hospitals and governments over the years. While it is recognized that hospitals have multiple priorities, access to emergency services remains a barometer of the health care system. Moreover, it has been shown in the United Kingdom²⁸ and New York State²⁹ that improvements to address ED processes of care directly result in overall system improvements.

It has become increasingly clear that ED LOS may be related to the government’s Wait Time Strategy. On the one hand, improving access to the five key services (MRI and CT scans, cancer care, cataract surgery, joint replacements and particularly cardiac interventions) as well as improving access to critical care may decrease the load on EMS and ED services. However, it is also possible that resource allocation to these services could result in a reduction of resources dedicated to EDs or to in-patient beds such as those in General Internal Medicine, which do not directly support the areas of focus of the health reform agenda. Therefore, an opportunity must be found to explore synergies between the recommendations of the HED&AE Working Group and the current Wait Time Strategies.

²⁸ Alberti G. *Transforming Emergency Care in England*. COI Communications, Department of Health, United Kingdom, October 2004. Accessed at: www.dh.gov.uk/publications

²⁹ Vecillio P. Personal communication, April 1, 2005.

The MOHLTC, in conjunction with the Ontario Hospital Association (OHA), should, as soon as possible, communicate to hospitals and the public that timely access to emergency services, including EMS and EDs, is a high priority, and that best practices must be instituted hospital-wide, supported by hospital resource decisions. The MOHLTC should provide financial support, if warranted, to ensure successful implementation of this priority.

It is recommended that hospitals evaluate the best practices in Appendix A and use those most relevant to their needs in improving emergency patient care and flow-through to appropriate in-patient units.

Recommendation #4.2

That benchmarks for the following Key Performance Indicators of Ambulance Offload Delay and Emergency Department Overcrowding become part of the hospital accountability framework:

Key Performance Indicator	Benchmark
Time from patient/ambulance arrival to patient placed on ED stretcher (Ambulance Offload Time – AOT) or in clinical area (patient waiting time)	30 minutes (90 th percentile)
Time from patient on ED stretcher to admission to in-patient unit or discharge (ED Length of Stay – ED LOS)	6 hours (90 th percentile)

Further, that the MOHLTC and the Ontario Hospital Association (OHA) ensure that these indicators become part of the Hospital Report for Emergency Care.

In recognition of the value in monitoring other indicators, it is recommended that:

- **Time from patient on ED stretcher to ambulance back in service be implemented as a key indicator for EMS efficiency, and**
- **Hospitals monitor acute occupancy rates.**

The Working Group discussed a large number of potential key indicators. From a functional point of view two are the most important from the patient’s standpoint: ED LOS (to reduce ED overcrowding and improve ED access) and time on the ambulance stretcher (to reduce EMS offload times and improve EMS access).

ED LOS may be broken down into several components:

- a) Arrival in ED
- b) Time of triage
- c) Time of transfer of care for ambulance patients (i.e., patient moved from ambulance stretcher to hospital stretcher/treatment area/waiting room)
- d) Time of assessment by ED physician
- e) Time of and type of referral for any out of department imaging
- f) Time of and type of referral to medical/surgical specialist or other (social work, CCAC) consultation
- g) Time of completion of consultation (opinion, treatment or orders provided)
- h) Time of admission/discharge order
- i) Time of transfer to ward or departure from ED

Intervals between these times may be benchmarked and monitored so that hospitals can achieve the performance targets. Of these, the time interval between f) and g) is a key indicator of medical staff performance within the system.

It is recommended that benchmarks be established and monitored for the time from ED physician request for consultation to consultation completed.

ED-LOS is currently defined as patient registration to disposition. The median and 90th percentiles for ED LOS in Ontario are 2.0 hours and 6.6 hours respectively.³⁰ In the Toronto Central and Greater Toronto Area Local Health Integration Network (LHIN) districts, the 90th percentiles for ED LOS are greater than 11 and 8 hours, respectively.³¹ ED LOS is broken down by CTAS and ambulance versus “walk-in” patients in Appendix C. Reducing ED LOS, particularly in areas in which ED LOS is prolonged, would free up sufficient hours to accommodate timely care of emergency patients.

It is recommended that a benchmark of ED LOS of six hours (90th percentile) be implemented over a two-three year period. It is recognized that hospitals all face different challenges in addressing ED LOS and that there is not an “even playing field”. Therefore, **the Working Group recommends that hospitals improve their ED LOS by 10% every six months until the benchmark is reached.**

Best practices addressing various components of the patient’s journey through the ED are summarized in Appendices A and B. As noted in Recommendation #4.1, hospitals must evaluate all components and address those that have the most impact in improving the “bottom line” of patient time in the ED without compromising patient quality of care.

AOTs are variable throughout the province, and are notably long in the City of Toronto.³² However, other communities are experiencing similar problems³³ that must be addressed with a provincial solution. While at present AOT is defined as the time of ambulance arrival until the ambulance is back in service, in order to measure ED effectiveness, **it is recommended that this definition be amended to the time of ambulance arrival until the time the patient has been removed from the EMS stretcher and transfer of care has occurred from paramedic to hospital staff.**

AOT must be improved immediately. To this end, **it is recommended that a benchmark AOT of 30 minutes (90th percentile) be implemented.** The best practices listed in Appendix A will assist hospitals and EMS in accomplishing this objective. The Working Group recommends that hospitals improve their AOT by 10% per month from baseline until the benchmark is reached.

EMS times in hospital after the patient has been taken off the EMS stretcher must be measured and addressed by EMS operators.

Recommendation #4.3

That progress toward these benchmarks be linked with incentives.

Hospitals and EMS have indicated that it is important for performance toward the improvement of ED LOS and AOT to be linked to incentives and disincentives. While it is recognized that it is perhaps complex to establish new program-specific funding streams for EDs, MOHLTC direct funding or indirect support through the direction of existing incentives toward emergency patient flow is nevertheless a key lever for both improving performance and sustaining gains made by individual hospitals and EMS services.

It is therefore recommended that the MOHLTC work with OHA, the Joint Planning Policy Committee (JPPC), hospitals and EMS to determine the feasibility of integrating ED performance and ambulance offloading measures into Ministry accountability agreements, funding arrangements and other relevant methodology.

In addition this work may include a review of the opportunity for incentives/recoveries funding to accelerate the pace of change in order to achieve a more efficient and effective hospital/EMS system in all communities across Ontario.

³⁰ Schull M. Institute for Clinical Evaluative Sciences Presentation to the HED&AE Working Group, March 21, 2005.

³¹ IBID

³² Farr B, Craig A. Presentation to Toronto Emergency Access Committee, November 2004.

³³ DiMonte A, Kanellakos S. City of Ottawa Presentation to the HED&AE Working Group February 28, 2005.

Recommendation #4.4

That the MOHLTC, hospitals, EMS services and CritiCall work together to develop, fund and implement data collection systems to ensure validity and reliability of indicators.

Currently EMS collects data on hospital arrival to patient transfer to ED times. Many hospitals have ED information systems that document triage and registration times. However, there exists no integrated system that collects accurate data essential to the tracking of benchmarks. In its written submission, the Ontario CritiCall Program proposes the use of card readers in EDs to track ambulance arrival, stretcher allocation and ambulance back in service times (Appendix K).³⁴ These data points would be captured by the Registry and shared with hospitals, EMS operators, the MOHLTC and municipalities. At an estimated cost of \$20,000 for development and \$2,500 per participating hospital, this would provide a central, accurate dataset from which to assess Key Performance Indicators (KPIs). However, this project may result in duplication of existing data in some systems. While it would be preferable to integrate the datasets of EMS and hospitals, given the differing systems used and the time needed to assess and implement such a change, it is the Working Group's opinion that the CritiCall proposal is practical and time sensitive.

The National Ambulatory Care Reporting System (NACRS) houses a dataset on ED LOS, defined as patient registration to patient disposition. While the former time point is consistent, the latter may have different definitions in different facilities. For example, it may mean the decision to discharge or admit, actual time of admission orders written, or time the patient physically leaves the ED for a hospital bed, transfer to another facility or to go home. A consistent end point, preferably the time the patient actually leaves the ED, is the most relevant time to be recorded.

It is recommended that the NACRS and Canadian Institute of Health Information (CIHI) datasets be refined to reflect time intervals noted in Recommendation 4.2. Intervals from admission orders to allocation of an in-patient bed, and from bed allocation to actual departure from the ED, are important indicators of individual hospital performance, and serve as target areas to improve overall benchmark attainment.

Recommendation #4.5

That agreements with respect to patient distribution, bypass transfer of care and mutual aid be signed between EMS operators and receiving hospitals.

It is incumbent upon EMS and hospitals to work together and have formal agreements to which they can be accountable to each other and the MOHLTC. One such agreement was presented by the City of Ottawa.³⁵ A generic version is included as Appendix E. This serves as a standard of practice and behaviour, and as a template for local Emergency Networks to monitor cooperation and address compliance issues.

This may be expanded to provide a methodology for mutual aid among hospitals when surge capacity is required. A formalized process for requesting mutual aid within Regions or LHINs, as applicable, should be instituted. In this manner each hospital's and the hospital and EMS community's response to surges in demand may be monitored and enforced.

³⁴ Moneta S. The Ontario CritiCall Program. Written submission to the HED&AE Working Group, March 9, 2005.

³⁵ DiMonte A, Kanellakos S. City of Ottawa Presentation to the HED&AE Working Group, February 28, 2005.

Recommendation #4.6

That an ED and Ambulance Quality Implementation Team be struck immediately to assist the MOHLTC in the implementation of these recommendations.

With the submission of these recommendations, the HED&AE working group has completed its mandate.

The MOHLTC will demonstrate its commitment to the AOT and ED LOS initiative by establishing and funding an Implementation Team/Advisory Group. It would be made up of expert individuals involved in the provision of EMS and ED services, interfacility transport, hospital senior management and in-patient care, the Institute for Clinical Evaluative Sciences, CritiCall (if involved in data collection) and government. The team will oversee collection of and review data, clarify actions, assess benchmark compliance and ED access, and provide advice to the MOHLTC on further action to ensure success of the ED LOS and Ambulance offload initiatives. Reporting to the Assistant Deputy Minister, Acute Services, this group will monitor the impact of solutions, and ensure formal and frequent communication with stakeholders on outcomes and demonstrated best practices, and may also assist hospitals with implementation of best practices in achieving their targets.

Once implementation is completed, the team will become an Advisory Group to the Ministry, with the following tasks:

- **Evaluate compliance with benchmarks and access to ED services and EMS,**
- **Following one year of monitoring, and in conjunction with the JPPC, determine the extent to which relevant measures of performance could be incorporated into the 06/07 hospital accountability agreement, and**
- **Recommend appropriate corrective action.**

It is suggested that the Emergency Department and Ambulance Quality Advisory Group serve as a subcommittee of or be otherwise linked to Ontario Quality Health Council under the Commitment to the Future of Medicare Act, 2004. This will ensure consistency in the application of quality benchmarking across the health care sector.

Conclusions

Ambulance offload delays and ED overcrowding are systemic problems that require systemic solutions. Both short- and long-term solutions are required. Over the last decade much attention and energy has focused on this major health care issue, with myriad recommendations and few concrete initiatives. In Ontario we have an opportunity to follow these recommendations with specific actions. By establishing the HED&AE with a mandate to examine strategies to identify actions that minimize ambulance in-hospital time, and recommend performance indicators for our emergency system, the Minister of Health and Long-Term Care has designated that now is the time for change.

The keys to sustainable change are system commitment and accountability: commitment by EMS, hospitals, community providers and government; accountability to peers, providers, government, and above all, the citizens of Ontario who are our patients and deserve the right care in the right place by the right provider at the right time.

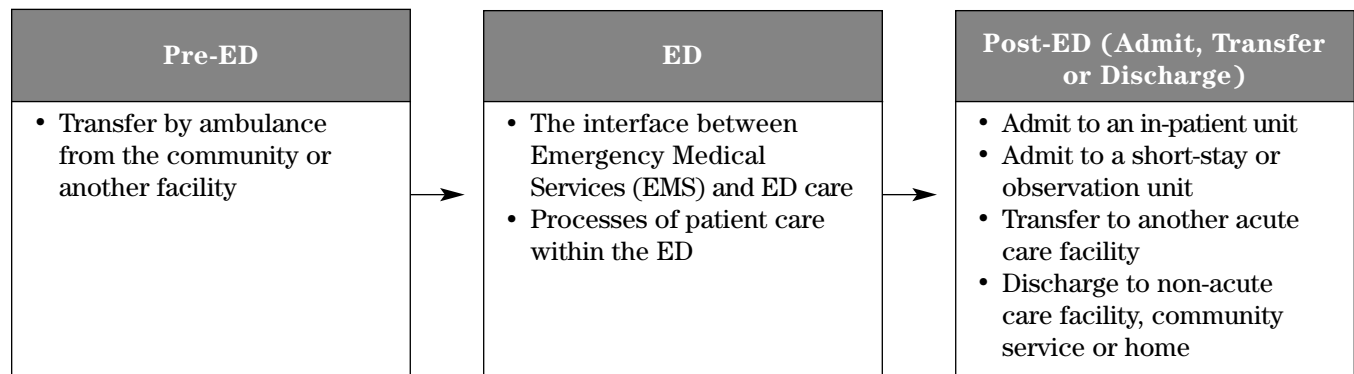
Existing best practices must be reinforced and new best practices initiated. Hospitals must immediately evaluate their AOTs and take steps to improve toward a 30 minute standard. ED LOS must be addressed in the medium- to long-term. A significant and long-term commitment by all stakeholders, with relatively few financial resources, will result in improvements in patient response, outcome and satisfaction as well as better health care provider morale, and efficiencies to our health care system in Ontario.

In closing, the HED&AE Working Group would like to acknowledge the excellent and tireless efforts of previous and existing groups such as the Emergency Care Networks of many areas of the province as well as the dedication of the fine professionals who work in the Province's EDs and EMS systems every day. It is their efforts that make Ontario's health care system among the best in the world, and that will assist us in the transition to a more streamlined, effective and optimal health care system in the future.

Appendix A

Overview of Best Practices to Address Ambulance Offload Delay and Emergency Department (ED) Overcrowding

The Emergency Patient's Journey



- Canadian Triage and Acuity Score (CTAS) 4/5 patients to Urgent Care Facility (UCFs) or release to primary care
- Alternate options to 911 callers
- Support Medical Outreach Teams and increased diagnostic and therapeutic options in non-acute care facilities
- Patient distribution policies across GTA & the province

- Processes at triage to ensure efficient offload of EMS patients
- Transfer of Care agreements
- Benchmarks and standards for ambulance offload times with accountability
- EMS waiting area nurse to care for EMS patients
- CTAS 4/5 ambulatory patients to waiting rooms
- Benchmarks and time standards for consultation and decision-making from consulting staff with accountability
- Processes of care for specific patient complaints to include point of care testing & rapid diagnostics
- Timely access to diagnostic imaging and laboratory testing

- Separate ED observation and “short stay” areas
- Integrated & timely inter-facility and patient transfer system
- Access to social work & allied health professionals off hours to improve crisis placements from the ED
- Benchmarks & standards for admitted patients to units with accountability
- Increase Complex Continuing Care and Rehabilitation resources
- Increased ratios of General Internal Medicine (GIM) beds
- Timely referrals to out-patient services
- See Post-ED Priority Actions (pp. 22-23)
- Full Capacity Protocol (see appendix J): selected ED overcapacity patients to inpatient units

Post-Emergency Department Priority Actions³⁶

Each hospital and emergency network needs to prioritize changes in practice in the light of local analysis of patient pathways and delays. The following changes are considered fundamental to the improvement of patient care and should be given priority.

- Hospitals and emergency networks should determine optimal patient flows for their locality and implement appropriate systems to achieve these. Planning across networks will avoid unnecessary duplication and should be based on patients' access and their clinical needs, not on traditional boundaries.
- Balance the daily demand for beds (all admissions) with the daily capacity for beds (discharges). It is impossible to plan either the emergency or elective flow if the variation in capacity (i.e., daily discharges) is more variable than the admissions.
- Ensure all patients, elective and emergency, have a clear plan for their length of stay and expected date of discharge. The system has to be designed so that the variability in the numbers discharged is reduced – the main reasons for this at present are the availability of diagnostics and the frequency of discharge rounds.
- Plan staffing levels to reflect arrival times of patient and case mix.
- Avoid delays in patients being seen by admitting teams and avoid duplication between emergency assessment and admitting teams.
- Plan for senior clinical decision-makers to be available to see patients in a timely manner to make admission and discharge decisions.
- Introduce systems and processes to reduce delays and inconsistencies in diagnostics. Most investigations for in-patients should be available on the day the request is made.
- Assess and reduce any variability in discharges, then plan elective workload to balance emergency activity.
- Put in place appropriate forecasting and planning for managing capacity and demand.
- Ensure staff are aware of emergency care performance, including patient experience and key performance indicators.
- Patients to be involved in all aspects, including planning and performance management.

Analysis

Analysis of the following factors has enabled organizations to focus on key areas for improvement and can also form part of a regular network-wide report. Changes to reduce the variability of a system are vital in order to achieve sustainable change.

1. Discharges
 - By time of day
 - By day of week
2. Elective and emergency daily admissions analysis
 - By time of day
 - By day of week
3. Demand profiles
 - By patient type
 - By time of day
 - By day of week
4. Length of stay – time of discharge
 - By specialty, consultant and unit
 - By day of week admitted

Analyze whether admitted patients who have stayed in the ED for more than 24 hours have a higher length of stay, and address correctable factors.

³⁶ Adapted from: Reducing delays for A & E patients – checklist. Department of Health, United Kingdom, January 2004. Accessed at: <http://www.dh.gov.uk/assetRoot/04/07/61/66/04076166.PDF>

Discharge

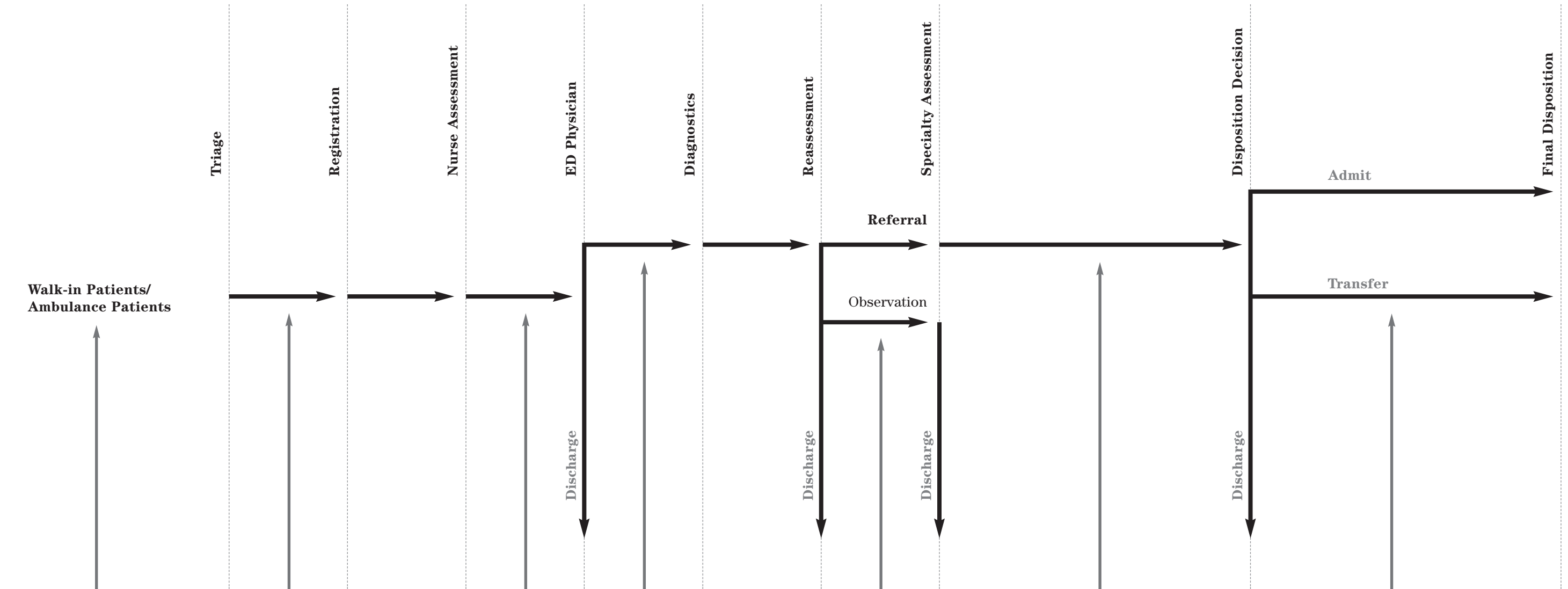
1. Ensure early discharge planning from time of admissions.
2. Carry out early, daily discharge rounds on all patients.
3. Institute nurse and allied health professional-initiated discharge systems.
4. Seven days a week discharge.
5. Shift the discharge time to earlier in the day so that discharge numbers each hour reflect admissions. Most planned discharges should leave the unit by midday.
6. Ensure delays awaiting prescriptions are minimized.
7. Introduce a discharge lounge and use it effectively.
8. Develop strong links with Community Care Access Centres (CCACs) and social services with identified mechanisms to deal proactively with potential delays and provide appropriate escalation when required.
9. Review transport arrangements and consider use of contracted services seven days a week.

Bed Management

1. Adopt anticipatory bed management style. Identify beds for the next 24 hours of admissions using predictors of emergency caseload based on historical data.
2. It is good practice for all patients to have a predicted date of discharge, determined within 24 hours of admission, and which is reviewed daily.
3. Have in place an executive lead for bed management strategy.
4. Ensure clinically-led bed management, with staff having the necessary authority and support to make decisions.
5. Inform the bed management team of required admission as soon as a need is recognized, including from the initial assessment nurse.
6. Establish real-time bed status for emergencies, electives, planned and actual discharges.
7. Put in place an escalation policy with pre-agreed triggers and actions for each level of escalation. Triggers should be early, including some that are based on predicted activity in the next 24 hours.
8. Establish region- or Local Health Integration Network (LHIN) wide bed management, linking acute unit and community resources, in order to pool the total bed resource in the health care community.

Appendix B

Process of Care in the Emergency Department



- Pre-ED Strategies:
 - alternate destination
 - 911 to Telehealth
 - LTCH outreach
 - see Appendix A

- EMS Waiting Area Nurse

- Care Maps
- Medical Directives

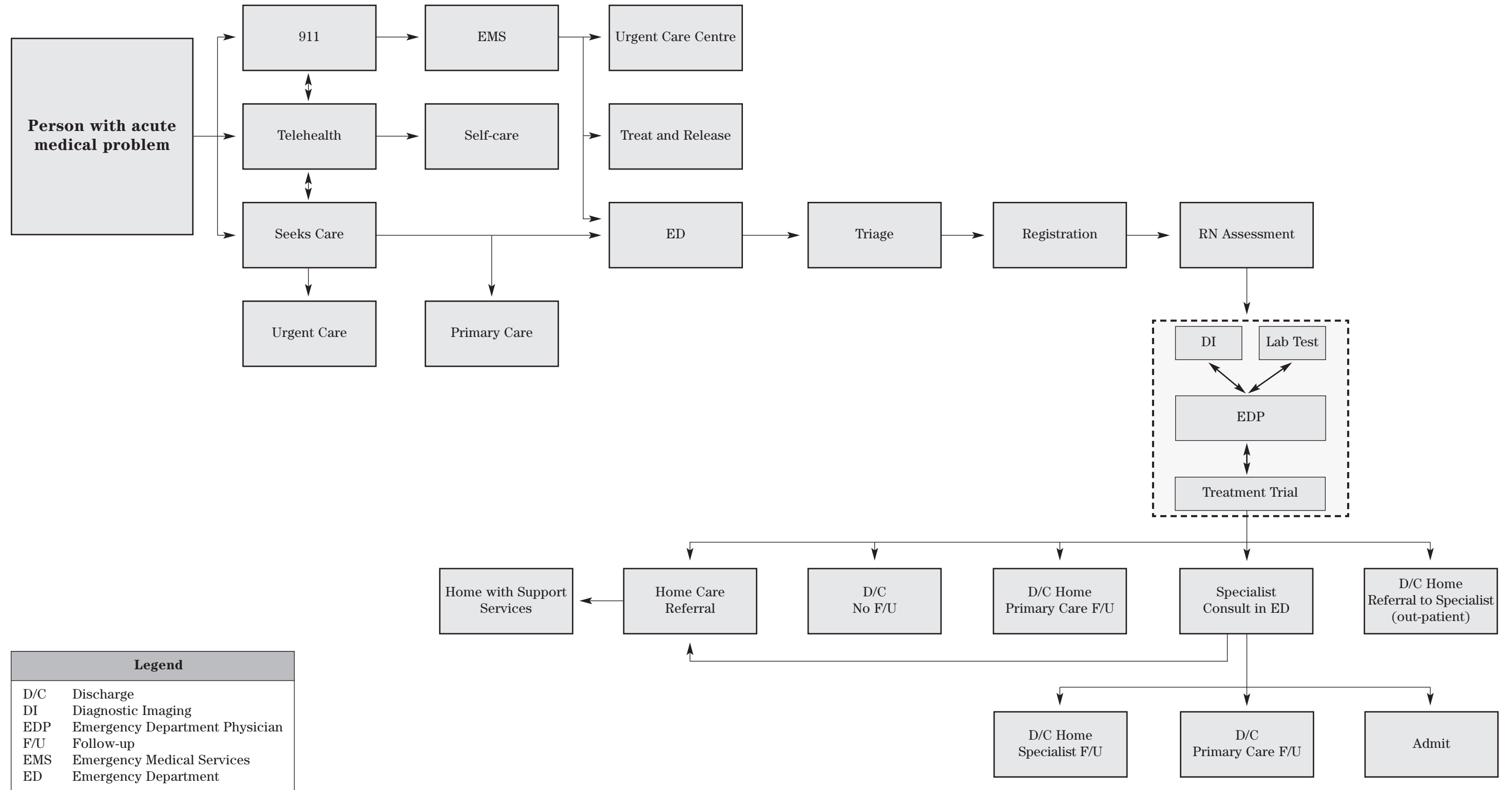
- Point of Care Testing
- ED Priority for Lab/Imaging

- Benchmarks for Consultant Assessment
- Out-patient Follow up
- Community Services
- Crisis Placements

- Crisis Placements
- Benchmarks for Disposition Decisions

- Post-ED Strategies:
 - early discharges
 - quick bed turnaround
 - Complex Continuing Care (CCC) + Rehab beds
 - General Internal Medicine (GIM) beds
- Full Capacity Protocol
- Reform of Transfer System

Community Patient Care



Appendix C

Ontario ED Length of Stay

Basic Ontario ED facts

	Arrival by Ambulance
All Patients	12%
CTAS 3	18%
	Total ED visits, 2003-2004: 4,827,973

Ontario ED length of stay: Walk-in vs. ambulance arrival

	All Patients	Walk-ins	Ambulance
Median LOS*	2.0h	1.9h	3.9h
90th Percentile LOS	6.6h	5.8h	10.9h

ED length of stay by acuity

CTAS	Walk-ins 90th Percentile LOS	Ambulance 90th Percentile LOS
1	8.8h	8.6h
2	9.5h	12.0h
3	7.7h	11.3h
4	4.4h	8.9h
5	3.1h	7.0h

Triage level	Ambulance: Yes/No	Number of Patients	% of Total
Resuscitation	No	4,816	0.1
Emergent	No	254,751	6.1
Urgent	No	1,345,585	32.1
Less Urgent	No	1,918,858	45.8
Non-Urgent	No	662,898	15.8
Total	No	4,186,908	100.0
Resuscitation	Yes	17,469	3.0
Emergent	Yes	130,830	22.6
Urgent	Yes	305,341	52.8
Less Urgent	Yes	107,581	18.6
Non-Urgent	Yes	17,379	3.0
Total	Yes	578,600	100.0

Source: Schull, M., Presentation to HED&AE Working Group: *ED Waiting Times in Ontario*, March 21, 2005.

* LOS - Length of Stay

Appendix D

Canadian Triage and Acuity Scale

Definitions

Level 1 Resuscitation

Conditions that are threats to life or limb (or imminent risk of deterioration) requiring **immediate** aggressive interventions (e.g., cardiorespiratory arrest, major trauma, shock, unconsciousness, severe respiratory distress).

Level 2 Emergent

Conditions that are a potential threat to life or function, requiring **rapid** medical intervention or delegated acts (e.g., altered mental state, severe head injury, chest pain with suggested cardiac etiology, stroke).

Level 3 Urgent

Conditions that could potentially progress to a serious problem requiring emergency intervention. May be associated with significant discomfort or affecting ability to function at work or activities of daily living (e.g., mild/moderate asthma, GI bleed, moderate trauma, acute pain: moderate to severe).

Level 4 Less urgent

Conditions that related to patient age, distress, or potential for deterioration or complications would benefit from intervention or reassurance within 1 – 2 hours (e.g., moderate abdominal pain, minor headache, minor trauma, corneal foreign body).

Level 5 Non-urgent

Conditions that may be acute but non-urgent as well as conditions which may be part of a chronic problem with or without evidence of deterioration. The investigation interventions for some of these illnesses or injuries could be delayed or even referred to other areas of the hospital or health care system (e.g., sore throat without fever, mild diarrhea without vomiting, chronic problems).

*CJEM: Canadian Emergency Department Triage and Acuity Scale
October 1999 Vol.1 No.3 (supplement)*

Appendix E

Transfer of Care Agreement

*Adapted from: Ottawa Emergency Services Operations Committee
April 8, 2005*

Partners

EMS
Local Hospitals
Base Hospital Program

Purpose

The purpose of this guideline is to clarify the transfer of the responsibility of care for a patient when Paramedics bring a patient into a Hospital Emergency Department (ED).

There are many factors affecting the transfer of care such as the patient condition, and ambulance and hospital resources available. This guideline is intended for the use of Paramedics and hospital ED staff, working together to provide continuous patient care. It reflects the principle that patient care, whether pre- or in-hospital, is the paramount consideration at all times.

Goals

1. Transfer responsibility for the patient from Paramedics to hospital ED staff in a safe, responsible and expedient manner.
2. Clear Paramedics for other emergency calls as soon as possible after their arrival in the ED.

Procedures

1. Prior to Arrival in the ED

Paramedics will classify the patient's CTAS level and transmit this information to the Central Ambulance Communication Centre (CACC) Communications Officer who will enter it on the CritiCall CTAS screen **or EMS distribution screen**. Paramedics will be directed to an ED by the Communications Officer of the CACC (ref. Patient Priority and the Ambulance Act).

Paramedics will notify the receiving hospital for CTAS 1 & 2 patients as soon as possible (i.e., when leaving the scene or while en route) advising of the patient's condition and estimated time of arrival. This will allow the ED time to prepare.

Paramedics will provide patient care in accordance with Basic Life Support (BLS) and/or Advanced Life Support (ALS) Patient Care Standards, and Base Hospital Program Medical Directives.

2. Hospital Triage

CTAS 1 or 2 patients will be immediately directed to a treatment area. Triage time will be in accordance with national CTAS guidelines.

For CTAS 3-5 patients Paramedics will proceed to Triage and provide a clear, concise verbal report to the Triage Nurse including:

- Age and sex of patient
- Patient presentation at scene
- Chief complaint and CTAS level as determined by Paramedics and transport time and/or upgraded
- Incident history
- Relevant medical history – brief
- Relevant medications
- Drug allergies and/or other potential reactions that require consideration
- Clinical assessment findings
- Treatment and response to treatment
- Present condition with current vitals
- Family considerations for patient (i.e., family on the way, calling)

The time of the Paramedic's verbal report to Triage will be documented on the Ambulance Call Report (ACR).

At this point, immediate transfer from the paramedic stretcher is the goal. The Triage Nurse will provide an estimate of the time required to off load the patient. If any delay is anticipated, the Paramedic will advise CACC immediately of the pending delay and the Triage Nurse will advise the nursing supervisor. *Any CTAS 3-5 patient on a paramedic stretcher has priority for an ED stretcher and waiting space over an equivalently coded patient that is sitting in the ED waiting room.* The responsible nurse at the receiving hospital makes the final decision as to the disposition of the patient.

If the patient's condition deteriorates post-triage, Paramedics will notify the Triage Nurse immediately. The Paramedic and Triage Nurse will re-evaluate the status of the patient and take appropriate action.

CTAS 4 or 5 patients may be placed into a wheelchair and left with the Triage Nurse following a verbal report if they meet agreed upon criteria for such placement (this may include normal vital signs, Glasgow Coma Score of 15, no requirement for ongoing monitoring).

3. Transfer of Care

Hospital ED staff are required to assume responsibility for patient care as quickly as possible. When the patient is transferred to the hospital bed, the attending Paramedic will deliver a verbal report to the attending Nurse. The Paramedic will also complete the Ambulance Call Report (ACR). It is essential to leave a copy of the ACR with the ED team prior to departure, except when the paramedic is reassigned by CACC.

Reassignment events MUST be documented on the ACR. If reassignment occurs before the ACR is complete, all efforts will be made to transmit it to the receiving hospital in a timely manner (i.e., by fax).

Note: Paramedics will be considered "available" for another call by CACC once the patient is off the Paramedic Service stretcher. When the ambulance is readied, the Paramedic must advise CACC.

Appendix F

Hospital Emergency Department and Ambulance Effectiveness Working Group

Terms of Reference (Winter 2005)

1.0 Authority

Minister of Health and Long-Term Care through the Assistant Deputy Minister, Acute Services Division.

2.0 Purpose

To identify and recommend to the Ministry of Health and Long-Term Care, practices that work in hospitals and ambulances to manage the off-loading of patients and the transfer of patient care responsibility in the emergency department from ambulance service paramedics to the hospital. The working group liaises with ministry, hospital, ambulance, physicians, nurses and other individuals and agencies as necessary to fulfill this mandate.

3.0 Frequency of Meetings

The Working Group will meet at the call of the Chair or the Minister as frequently as is necessary to complete the mandate. It is expected that the final report will be completed no later than March 31, 2005.

4.0 Duties, Functions and Responsibilities

The Working Group will:

- a) Examine and adopt strategies used in selected hospitals in order to identify actions that minimize ambulance in-hospital time;
- b) Examine factors contributing to poor ambulance in-hospital time in selected hospitals and provide recommendations on additional implementable strategies to improve performance;
- c) Use findings to make recommendations to the Minister to develop guidelines or amend existing guidelines for hospitals and ambulances;
- d) Review existing key indicators for the emergency system and recommend new performance indicators, as appropriate.

5.0 Membership

- Chair, Dr. Brian Schwartz, Sunnybrook Base Hospital Program
- Bruce Farr, Chief, Toronto Emergency Medical Services
- Dr. Dan Cass, Chief Emergency Services, St. Michael's Hospital
- Louise LeBlanc, Emergency Nursing Director, The Scarborough Hospital
- Dr. Michael Christian, Internist (infectious disease & critical care fellow, McMaster University), previous paramedic
- Peter Dundas, Director, Ambulance and Emergency Programs, Regional Municipality of Peel
- Rosalind Smith, Representative, Ontario Hospital Association
- Dr. Chris Mazza, CEO, Ontario Air Ambulance

MOHLTC Representatives

- Mary Kardos Burton, ADM, Acute Services Division
- Narendra Shah, Regional Director (A), Central West Region, Health Care Programs
- Marnie Weber, Region Director, Health Care Programs, Toronto Region
- Gary Bragagnolo, Senior Field Manager, GTA, EHSB

6.0 Timing

Timelines	Deliverables
Week 1	Working Group completes review of all relevant materials and consultations as needed.
Week 2, 3, 4	Emergency Department reviews completed in three weeks and reported to individual hospitals and ministry.
Week 5 – 6	Working Group prepares report of findings and recommends to the Minister the key priorities and how to operationalize them.
Week 7	Ministry and Ontario Hospital Association to communicate expectations and performance targets to hospitals.

7.0 Financial Support

Working group members will be reimbursed for their travel and related expenses in accordance with government policy.

Appendix G

List of Presenters

1. Canadian Association of Emergency Physicians (CAEP) – Dr. Andrew Affleck, President.
2. City of Ottawa – Steve Kanellakos, Deputy City Manager, Community & Protective Services & Anthony DiMonte, Chief, Ottawa Paramedic Service Community and Protective Services.
3. Emergency Department Nursing Group – Bruce Adkins, Clinical Director, Grand River Hospital.
4. Institute for Clinical Evaluative Sciences (ICES) – Dr. Michael Schull.
5. Ontario Paramedic Association (OPA) – Ian McClelland, Director, Ontario Paramedic Association Chair, Transfer of Care Committee & Elaine Irwin, Director.
6. Toronto Emergency Access Committee (TEAC) – Dr. Jeffrey Tyberg, co-Chair and Louise LeBlanc.
7. University Health Network (UHN) – Dr. Catherine Zahn, VP and COO Toronto Western Hospital.

Appendix H

List of Written Submissions

1. ED Overcrowding: Issues, Solutions – Dr. Marion Lyver (submitted by Tony Campeau, EHSB, MOHLTC).
2. Emergency Nurses Association of Ontario (ENAO) – President, Ted Sellers.
3. Grand River Emergency Services Network – Chair, Tamara Stefanitis.
4. Halton-Peel Emergency Services Network – Chair, Peter Dundas.
5. Hamilton Emergency Services Network – Coordinator, Elizabeth Krausz.
6. Humber River Regional Hospital – Chief Operating Officer, Barbara E. Collins.
7. Mount Sinai Hospital – Director, Schwartz/Reisman Emergency Centre, Dr. Howard Ovens.
8. Niagara Emergency Services Network – Coordinator, Karen Cudmore.
9. Niagara Region Ambulance Communication Service – Associate Director, Guillermo Fuentes.
10. Ontario CritiCall Program – Provincial Director, Shelley Moneta.
11. Ottawa and Eastern Ontario Emergency Services Committee (OEOESC) – Chair, Dr. Louise McNaughton-Filion.
12. Peterborough Regional Health Centre – Vice President and Chief Nursing Officer, Wendy Fucile.
13. Resident Transfers from Long-Term Care Homes to Hospital Emergency Departments – Co-chairs, Helen Ferley and Jordan Glick.
14. Southeastern Ontario (SEO) – Kingston General Hospital (KGH) – Regional Services Planning Consultant, Ken Beckett.
15. St. Joseph’s Health Centre, Toronto – Program Director (Emergency Department), Janet MacLean.
16. Toronto Central West Emergency Network Strategy Committee – Chair, Janice Dusek.
17. Windsor – County of Essex Code 7 Land Ambulance Committee – Co-Chairs, Brian Bildfell and Patricia Somers.

Appendix I

Emergency Department Surge Checklist

1. Determine the threshold for activating Emergency Department (ED) surge procedures in your hospital/ community/LHIN, for example:
 - a. ED LOS of admitted patients > 8 hours
 - b. Number of admitted patients in ED > 20% of ED capacity
 - c. Times to consultation > 2 hours
 - d. ED waiting times to be seen by physician > 2 hours
 - e. Ambulance offload time > 1 hour
 - f. Number of ambulances in ED > 2
2. Activate ED surge procedures:
 - a. If admitted patients:
 - i. Ensure all available beds (including those occupied by discharged patients) are ready for incoming admissions from the ED
 - ii. Call ward and critical care physicians-on-call to expedite early discharges
 - iii. Send selected patients to in-patient wards as per ED Full Capacity Protocol (Appendix J)
 - iv. Assess patients for transfer to other facilities (Criticall)
 - v. Assess admitted patients for potential discharge to community services utilizing Community Care Access Centre (CCAC) and out-patient follow-up
 - b. If waiting for diagnostics or consultations:
 - i. Assess whether patients can access these services safely on an out-patient basis and arrange
 - ii. Advise Laboratory to do callout for staff
 - iii. Advise Medical Director to ensure rapid specialist evaluation
 - c. If ED volume of patients:
 - i. Call in on-call staff
 - ii. Access back-up stretchers and equipment
 - iii. Open out-patient clinics for ED patients if available

Appendix J

In-Patient Placement of Patients Admitted from Emergency Department

Adapted from: Stony Brook University Hospital and Medical Center, State University of New York

Subject: Emergency Department Full Capacity Protocol		
Responsible Department, Division or Committee: Medical Director's Office		
Effective Date Original Policy:	Effective Date Revised Policy:	Supersedes Policy Number:
	Last Review Date:	Dated:

Subject: Emergency Department Full Capacity Protocol

Scope: Emergency Department, Admitting Department, Physicians, Nursing Department, Administrative Personnel, Acute Care Units as listed

Purpose: To facilitate the admission of adult patients held in the Emergency Department awaiting Acute Unit Bed Assignment.

Policy: When an adult patient requires admission to an Acute Care Unit from the Emergency Department and that area cannot accommodate that patient because of lack of sufficient beds, the patient will be admitted to the next most appropriate bed. In the event appropriate hospital bed utilization has been maximized, and the number of admitted patients holding in the Emergency Department has prohibited the evaluation and treatment of incoming patients to the Emergency Department in a timely fashion, admitted Emergency Department patients already awaiting in-patient acute care bed assignments will be admitted to those Acute Care Units.

The Bed Utilization Coordinator will facilitate this policy. When unavailable during the day the Associate Director of Nursing (ADN) on call to the Nursing Staffing Office in collaboration with the Staffing Coordinator will assume responsibility and assign Full Capacity Protocol beds in conjunction with the Bed Control Supervisor. On nights and weekends the ADN on duty shall serve this role.

The placement of patients according to this protocol will be implemented by the Bed Utilization Coordinator only after the Emergency Department Attending Physician, the Charge Nurse and the Bed Utilization Coordinator have declared the need to implement the Emergency Department Full Capacity Protocol and approval to do so has been granted by the Chief Medical Officer, the Chief Operating Officer or the Chief Executive Officer or their designees. The decision of patient placement by the Bed Utilization Coordinator after discussion with the Emergency Department Attending Physician (if indicated) shall be binding.

If full capacity bed placement on an acute care unit has been maximized (2 per unit) and the Emergency Department is still at full capacity the Chief Executive Officer, Chief Operating Officer and the Medical Director will be notified and make decisions on implementation regarding deferral of elective and urgent cases.

Definitions: Emergency Department Full Capacity Protocol identifies "full capacity" when 100% of the main department is occupied with patients and admitted (ED) patients have been awaiting in-house placement for two (2) hours.

All unoccupied acute floor beds should be utilized where nurse competency permits such placement; if necessary and appropriate "hall beds" may be used temporarily.

A. Patient Priorities for Full Capacity Protocol Acute Care Unit Placement:

1. Non Telemetry patients with little or no co-morbidity will be first considered.
2. Non Telemetry patients with minimal to moderate risk factor co-morbidity will be the second patient population to be considered.
3. Patients admitted on or for Telemetry monitoring with little or no co-morbidity and with minimal index of suspicion for a cardiac event will be the last patient population to be considered.
4. Adults 18, 19 and 20 may be considered for a Pediatric Unit if a bed is available.

Telemetry patients will be assigned to acute care units only after approval of the Emergency Department Attending Physician and it has been confirmed that the receiving in-patient unit has a Telemetry box and central monitoring.

B. Exception:

1. If Full Capacity Protocol placement on an acute care unit has been maximized, and the ICU is full, and there are one or more ICU patients waiting in the Emergency Department, the acute care unit must accommodate a patient transferred from the ICU.

Procedure

A. Full Capacity Protocol Placement During Weekday Shift:

1. The Emergency Department Attending Physician, Charge Nurse and the Bed Utilization Coordinator will declare full capacity.
2. The Bed Utilization Coordinator will request approval to implement the ED Full Capacity Protocol from the Chief Executive Officer, the Chief Operating Officer or the Chief Medical Officer.
3. Once approval is granted the Bed Utilization Coordinator will notify the Directors of Patient Care of the need to implement the ED Full Capacity Protocol.
4. Nursing Staffing Office will notify the respective units that the ED Full Capacity Protocol is in effect and of the need to prepare for additional patients.
5. ED Full Capacity patients admitted to in-patient units will be placed as much as possible according to service. Each unit will receive one additional patient. After all applicable units have received one patient a second patient may be assigned. No unit will have more than two ED Full Capacity patients.
6. Full Capacity Patients admitted to in-patient units will be prioritized over the Emergency Department for admission to the first available bed on any unit where nursing competencies meet patient needs. Patients need not be admitted to the unit on which they are boarding.

B. Procedure on the Evening/Night/Weekend Shifts:

1. The Emergency Department Attending Physician and Charge Nurse will notify the ADN on duty that ED Full Capacity is being invoked.
2. The ADN will request approval to implement the ED Full Capacity Protocol from the Chief Executive Officer, the Chief Operating Officer or the Medical Director on call.
3. The Nursing Staff Office will notify all Medical, Surgical and Cardiac Units that the Emergency Department is on Full Capacity Protocol and to expect additional patients.
4. The ADN will notify the Bed Control Supervisor to begin placing ED Full Capacity patients on the designated acute floors and will intervene for any placement.

C. Exclusions:

1. Patients requiring the Intermediate Care Unit or the Intensive Care Unit.
2. Patients requiring Isolation or Negative Pressure room placement.
3. Patients requiring minimal oxygen (less than 4 L via Nasal Cannula) will arrive to the unit bed assigned with a full tank of O₂. (Any equipment exchange will be prearranged prior to transporting the patient.)

D. Procedure for Discontinuation:

All ED Full Capacity placements have been maximized (2 per unit).

The Emergency Department no longer requires the Full Capacity Protocol.

Emergency Department Attending, Charge Nurse and Bed Utilization Coordinator agree to stand down from the Protocol.

The Bed Utilization Coordinator/designee will notify the Nursing Staffing Office. The Nursing Staffing Office will notify all units.

Appendix K

The Ontario CritiCall Program 1-800-668-HELP

A partnership of Ontario's emergency patient referral services

Hamilton Health Science Corporation
Henderson Hospital Site
711 Concession Street
Hamilton, Ontario L8V 1C3

Shelley Moneta
(905) 575-6260
email: moneta@hhsc.ca

March 9, 2005

Farhad Khurshid
Coordinator, Corporate Projects and Initiatives
Corporate Support Group
Emergency Health Services Branch
Ministry of Health and Long-Term Care
5700 Yonge Street, 6th Floor
North York, ON M2M 4K5

Re: Ontario CritiCall Program

Dear Mr. Khurshid:

The following is a proposal from the Ontario CritiCall Program, in support of the work of the Hospital Emergency Department and Ambulance Effectiveness Working Group.

Actions:

The Ontario Resource Registry, managed and developed by the Ontario CritiCall Program, is used by hospitals across Ontario to update emergency department resource data. Last year, the Bed Registry was updated nearly two million times by stakeholders across Ontario. Information captured includes ambulance arrivals by CTAS level, data on "admit to no bed" ED patients, availability of specialty care services, ICU status, ED status and contact information for oncall physicians.

The Bed Registry can also notify stakeholders when exceptional events occur. The Registry now automatically generates these alerts for concurrent closure of critical care units, or when various hospital clinical units are approaching capacity.

We propose the development of a three level EMS Alert strategy, based on number of vehicles available to respond within a city. The alert could be initiated by the CACC (requiring only one keystroke), and will use the CritiCall Bed Registry. The system will generate an automatic, concurrent page or email alert to hospital, municipal and Ministry stakeholders when available ambulances reach pre-determined thresholds. Notifying stakeholders of these challenges will help initiate a system response; supporting communication across the continuum. Data collected will also validate stresses in the system and will support regional objectives for information sharing.

Through the use of card readers carried by paramedics, the Bed Registry could also track the arrival, bed allocation and departure time of ambulance vehicles into Emergency Departments. This aggregate data could be displayed on the bed registry screens, providing a regional view of resource data. Hamilton EMS and the Hamilton Emergency Services Network have already expressed their interest in working together on a pilot strategy to validate this proposal.

Expected Outcome:

These initiatives promote:

- increased collaboration and communication
- Increase accountability of all partners
- Provide reliable statistical data
- Build relationships
- Increase customer service
- Alert all stakeholders when challenges arise
- Allow for proactive planning by all partners
- Support pro-active planning strategies

Costs/Risks:

Stakeholders need to commit to system success and ensure their active participation

Resource Registry costs to initiate vehicle alert system – nil

Resource Registry costs to install networked card readers – approximately \$2500 per hospital

Resource Registry costs to collect, manage and report on vehicle arrivals and departure data –

Development cost – approximately \$20,000

Key Success Factors:

Off-loading is a provincial issue; provincial systems can be leveraged to support stakeholder communications

Policies are developed, finalized, and implemented with all partners

Communication and collaboration continues with all partners

Performance Indicators:

- Data generated by card reader system can provide useful benchmark data for all stakeholders
- Measurements will be reliable and consistent
- Data available online will track arrival time, allocation time and departure time for all vehicles

Accountability:

CritiCall will work with stakeholders to facilitate information sharing among stakeholders. Ambulance communication centres will initiate the alert when appropriate, based on established protocols; hospital stakeholders will initiate management strategies to support ED and prehospital care providers in ensuring vehicle availability. Paramedics will ensure that they support information management needs by participating in the strategy.

Thank you for the opportunity to contribute to the deliberations of the Provincial Working Group. CritiCall would be happy to present a prototype of this strategy to the committee at your convenience.

Sincerely,



Shelley Moneta
Provincial Director
Ontario CritiCall Program

Appendix L

Reference Documents

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2. Emergency Department Contributors to Ambulance Diversion: A Quantitative Analysis, Schull (Annals of Emergency Medicine), 2003.
3. Emergency Department Crowding and Thrombolysis Delays in Acute Myocardial Infarction, Schull (Annals of Emergency Medicine), 2004.
4. Vancouver Coastal Health – Improving ED Outflow Action Plan, October 2004.
5. *Emergency Department Full Capacity Protocol*, Stony Brook University Hospital & Medical Center, State University of New York, February 2001.
6. Report of Offload Strategy Working Group (OSWG) to MOHLTC, September 2003.
7. Hamilton Emergency Services Network (HESN) documents:
 - Destination Determination Guidelines, March 2004
 - Key/Critical Indicators (ED specific)
 - Orientation Manual, 2004/5
 - Overview of the HESN, Jan 2004
8. Emergency Medical Services Chiefs of Canada Conference Call Slide Presentation: ED Backlogs, What have we learned so far?
9. A Matter of Hospital Resources – An Emergency Care Action Plan, Ontario Hospital Association, August 2000.
10. OHA Region 3 Emergency Services Working Group Final Report, April 1998.

