Leading Practices in Emergency Department Patient Experience

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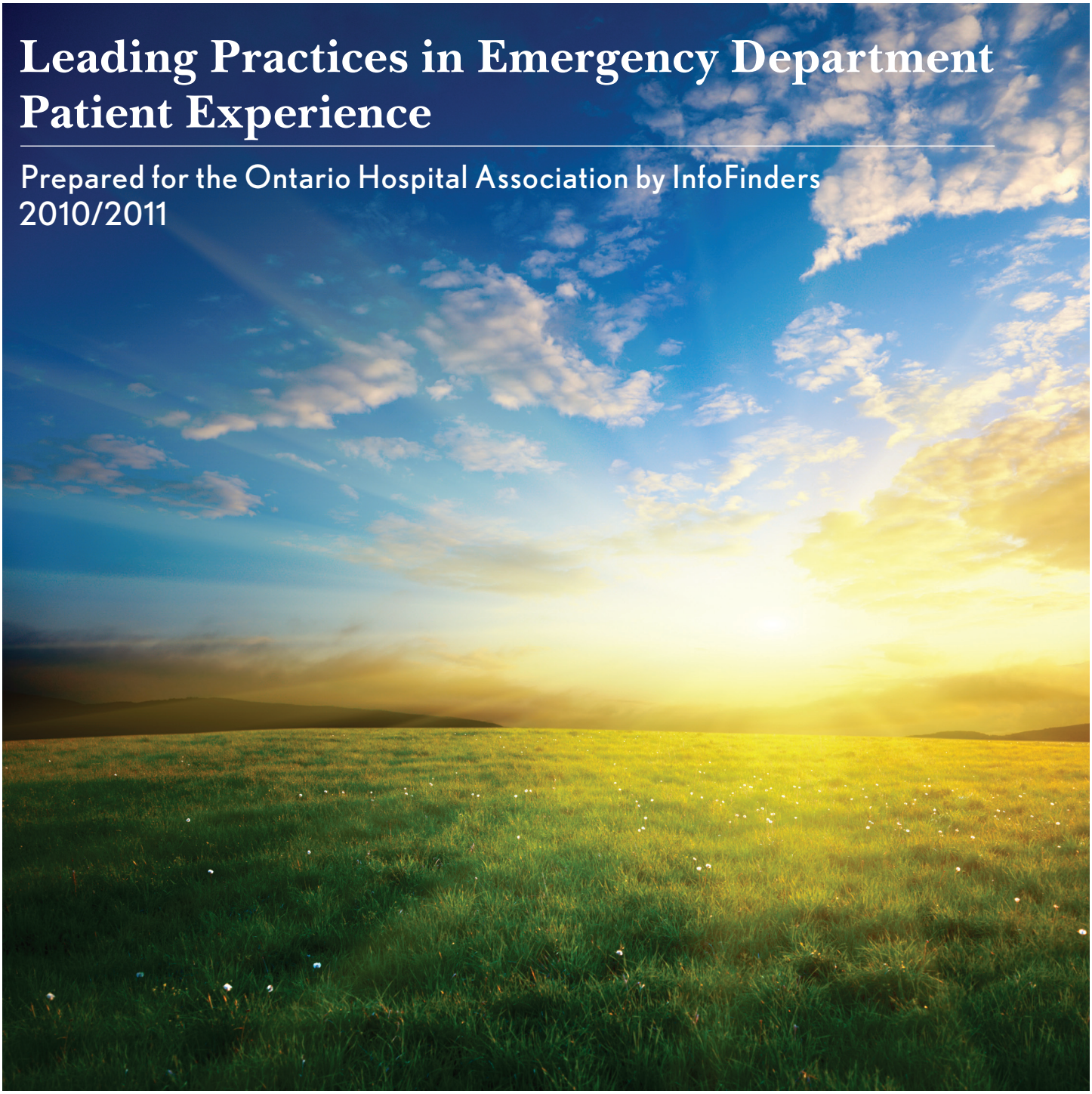

ONTARIO HOSPITAL ASSOCIATION

Table of Contents

INTRODUCTION 4

CONTEXT 5

PURPOSE AND SCOPE 6

WHAT IS HAPPENING IN SIMILAR JURISDICTIONS AROUND THE WORLD 7

WHAT WE KNOW ABOUT PATIENT SATISFACTION 10

KEY INFORMANT INTERVIEWS 12

LEADING PRACTICES 14

1. IMPROVING PATIENT ACCESS 14
   - *A. Efficient intake processes minimize the time required for a patient to see a physician.* 14
   - *B. Patients move smoothly through the Emergency Department system avoiding delays, redundancies and duplications in care.* 16
   - *C. Examine ancillary cycle times and improve as necessary.* 18
2. IMPROVING THE WAITING EXPERIENCES FOR ED PATIENTS AND FAMILIES 19
   - *A. The ED needs to be easy to navigate and user-friendly.* 19
   - *B. Patient expectations are aligned with actual wait times and anticipated delays.* 19
   - *C. The ED consistently communicates with patients and families and tracks progress.* 20
   - *D. Family/support persons are welcomed, encouraged to be present during examination and treatment as far as the facility permits.* 21
   - *E. ED patients receive timely pain management, avoiding delays such as those related to diagnostic testing or consultation.* 22
3. PROVIDING AN ENVIRONMENT AND CARE THAT IS RESPONSIVE TO PEOPLE'S NEEDS 23
   - *A. The Emergency Department is a safe, clean, comfortable and welcoming place.* 23
   - *B. There is patient-friendly and clear directional information to identify hospital facilities such as location of the ED, parking and amenities such as bathroom facilities.* 24
   - *C. The facility design provides room for privacy and controls for noise.* 24
4. IMPROVING PROVIDER COMMUNICATION AND CUSTOMER SERVICE SKILLS 25
   - *A. From the time of arrival, the emergency department staff anticipates common patient desires and needs.* 25
   - *B. ED staff demonstrates a culture of caring and compassion through deliberate actions that emphasize the importance of caring for all patients as if they were family members.* 25
   - *C. Patients are informed clearly about their care and treatment decision.* 26
5. IMPROVING COMMUNICATION AND EDUCATION 26
   - *A. Follow-up initiatives are offered to smooth transition from hospital to home.* 26
   - *B. Instructions, including those relating to appropriate follow-up care are given verbally and in writing to the patient and/or family member prior to discharge.* 27
   - *C. Interpreter services are available* 27

CRITICAL SUCCESS FACTORS 29

SUSTAINING CHANGE 31

CONCLUSION 33

REFERENCES 34

ADDITIONAL RESOURCES 48

Appendices

APPENDIX 1 TEMPLATE INTERVIEW 49
APPENDIX 2 SUMMARY OF INTERVIEWS 51
APPENDIX 3 CRITICAL SUCCESS FACTORS 66

Introduction

This report is intended to provide background to assist in advancing the development of a performance improvement strategy for patient satisfaction in Emergency Departments. This work was commissioned by the Ontario Hospital Association (OHA) and the Emergency Room Patient Satisfaction Performance Improvement Advisory Committee (ER PIAC).

InfoFinders conducted a comprehensive, worldwide search of electronic databases and the Internet on the topic of patient satisfaction in Emergency Departments (EDs), searching English-language literature from 2003 to 2010. Subject/MESH headings or keywords, depending upon the database's indexing system, were used to retrieve citations. Hundreds of citations were found from these searches, and citation abstracts were screened for relevance. The bibliographies of many articles were checked for further references, and related articles were checked from the PubMed database.

Most literature originated from Canada, the United States (US), the United Kingdom (UK), and Australia/New Zealand which are the main geographic areas using standardized patient satisfaction instruments. Some literature was also found from other European countries (France, Spain, Italy and Sweden) as well as Hong Kong and Singapore. Results include scholarly evidence from research studies, systematic reviews, a variety of surveys of patient preferences and satisfaction with care in EDs as well as descriptive articles relating to implementation, success stories and commentaries that identified issues of concern. Study quality was modest with the majority of articles reflecting observational work performed at a single institution.

Context

Since fall 2009, Ontario Pay-for-Results hospitals have been required to measure patient satisfaction in Emergency Departments (EDs). The measurement of patient satisfaction provides information on the effectiveness and quality of care determined by wait times, staff interactions, symptom control, perceived quality of medical service and overall communication.[1]

With the introduction of Ontario's Wait Time Strategy, more focus shifted to the patient and a number of initiatives were implemented to move towards a more patient-centred model of care. Various other initiatives are currently addressing the efficiency and performance of hospital EDs across the province in an attempt to improve patient satisfaction and reduce wait times. Work is also underway to address overcrowding in EDs and to improve patient flow. In addition, the *Excellent Care for All Act, 2010* is intended to make health care providers and executives accountable for improving patient care by fostering a culture of continuous quality improvement where the needs of patients come first.

Measuring patient satisfaction provides a voice for patients and is an important indicator that provides information on the effectiveness and quality of care.[2] Patients can report great patient satisfaction even though poor clinical care was received and vice versa. Quality of care includes three aspects: clinical outcomes, service delivery and cost effectiveness. Service quality delivery is the patient's perspective on the quality of their experience that needs and expectations were met.[3]

There are several benefits to improving patient satisfaction. Studies support the idea that satisfied patients may be more likely to follow prescribed treatments and discharge instructions and less likely to file complaints and lawsuits.[4] Additionally, research indicates that patient satisfaction is related to employee satisfaction, improved morale and staff retention.[5] Since nursing staff play a central role in patient care and hospital administration, creating healthy work environments often changes the organizational culture and results in improved patient satisfaction.[6]

[1] Eitel et al., 2008
[2] Pitrou et al., 2009
[3] Graff, Stevens. Spaite & Foody, 2002; Welch, 2010
[4] Boudreaux & O'Hea, 2004; Ng et al., 2009
[5] Dougherty, 2005; Boudreaux, Cruz & Baumann, 2006; Welch, 2010
[6] Robert Wood Foundation, Transforming hospital culture, 2008

Purpose and Scope

This paper begins with a review of the factors influencing patient satisfaction, and also identifies leading practices that can be used in the Emergency Department. The leading practices are supported by evidence from the literature and key informant interviews. The paper also provides a portfolio of promising strategies to help Emergency Departments address patient satisfaction issues more effectively. Each hospital can identify critical issues and processes and choose strategies to support local needs. Thus, every attempt has been made to provide a wide variety of innovative strategies with references to assist in improving the patient experience.

Many of these strategies are rooted in the ED performance improvement literature. Dissemination of results of the many individual level process innovations is occurring at conferences, through learning communities/collaboratives, through websites and descriptive reports. However, there are few randomized controlled trials with most research evidence of moderate quality, and not tested outside the original hospital. However, such practices often generate ideas for improvements in other hospitals or work units.

What is Happening in Similar Jurisdictions around the World

Increasingly, jurisdictions are focused on improving the patient experience. Emergency Department timeliness of care is a common concern in countries around the world with reports everywhere of increased volumes and long wait times for patients. As a result of increasing pressures upon hospitals around the world, many jurisdictions now publish patient satisfaction survey results. Summarized below are Emergency Department activities about patient satisfaction in jurisdictions most similar to Ontario, namely, the National Health Service in the United Kingdom (UK), Australia, the United States (US) and other Canadian provinces. In Australia and the National Health Service (NHS) in the UK, similar centralized and government driven processes sparked the changes to emergency care.

In the UK, quality of care is linked to increased throughput, achieved through process reengineering. The improvements are the result of a whole system approach using lean management principles adapted from the manufacturing sector to address demand issues in hospitals.[7] In 2001, a key government policy document, *Reforming Emergency Care,* outlined a ten year strategy to drive changes in emergency care. The strategy aimed to think about services from the patient's perspective and offer high quality, timely care for all patients. The initiative included several key components including financial incentives, accountability measures and additional investments such as access to after-hours alternatives to EDs. Success has been attributed to linking clinicians and evidence, involvement of professional regulatory bodies (Royal Colleges) and the formation of Emergency Services Collaboratives established to encourage sharing of innovations to increase patient satisfaction.[8]

Among the organizational changes that can reduce ED waiting times and improve the patient's experience is a system of care known as "See and Treat". It derives from the key principle that the first clinician to see the patient is able to assess, treat and discharge that patient safely. Acutely ill patients and those requiring complex care are streamed to a separate area for care, patients with minor complaints are assessed in order of arrival and treated and triage of the more minor cases is unnecessary. Dedicated and sufficient staff is required to prevent a lineup from developing. Interestingly, this innovation was introduced without evidence from any national evaluation but quickly proved its value and was accepted by staff and has been adapted across the world.[9] Also in the UK, hospitals provide observation units which have completely eliminated the access block problem.[10]

Dramatic reductions in ED wait times were achieved following the adoption in 2001 of a national target of four hours or less total wait time for 98% of ED patients.[11] At the start

[7] Banerjee, Mbamalu, & Hinchley, 2008
[8] Cooke, 2005
[9] Parker, 2004; Lamont, 2005; Cooke et al., 2005
[10] Interview, Dr. Matthew Cooke, NHS, 2010
[11] Alberti, K.G. (2004). Transforming Emergency Care in England. London: National Health Service.

of the initiative, 80% of NHS trusts met the target. Recent results show the benchmarks are met and sustained.[12] Critics comment that the singular focus to achieve wait time targets has improved patient processing, but there are concerns about the quality of patient care, distorted clinical priorities and the manipulation of data to attain the target. Consequently the focus is changing from meeting short-term targets to concentrating on the outcome of treatments given to patients. However, there is overwhelming evidence of patient and provider satisfaction.[13] Evaluation is shifting to include both quantitative and qualitative indicators, i.e. clinical indicators combined with patient satisfaction measurements. Government audit/inspection is replacing quarterly patient satisfaction surveys with frequency based upon the results. Hospitals are required to post web narratives of what the ED has done to improve the service experience, making the CEO accountable for this information and greatly increasing truthfulness and transparency. There is a move to broaden from the patient experience to the service experience that includes staff satisfaction and patient satisfaction.

In winter 2003, Flinders Medical Centre in South Australia initiated a *Redesigning Hospital Care* program. Using lean thinking to redesign hospital processes across the whole spectrum of clinical care, Flinders successfully addressed the increasing demand for emergency services and elective surgery in the hospital. Similar to the UK, Australia has set a four hour National Access Target which means that ED patients are admitted, referred for treatment or discharged within four hours, where clinically appropriate, with a progressive implementation starting in January, 2011. This program has inspired hospitals and health care organizations in all Australian states to improve the patient experience.

In the US, accreditation requirements have sparked changes to the patient experience. The Joint Commission requires hospitals to demonstrate that ED patient flow is tracked in addition to clinical outcomes.[14] Since mid 2007, completing and reporting data from the *Hospital Consumer Assessment of Healthcare Providers and Systems* (HCAHPS), a national standardized publicly reported survey of patients' perspectives of hospital care is tied to receiving government funding. Additionally, since late 2008, the *National Quality Forum* has endorsed ten quality and performance ED measures, split between clinical and operational measures.[15] A variety of patient satisfaction initiatives are being trialed by individual hospitals and hospital systems. Collaboratives such as the *Emergency Department Benchmarking Alliance* and the *Association of Emergency Physicians* are providing leadership to improve the quality of care, address issues of patient flow and improve patient satisfaction.

In Canada, several provinces (British Columbia, Alberta, Saskatchewan and Ontario) measure patient satisfaction using standardized approaches. The NRC Picker Canada (NRCC) survey is used to evaluate the patient experience in Ontario hospitals. British

[12] Department of Health, Total Time Spent in A&E, NHS Organizations in England 2009-10 January to March (Q$)
[13] Schull, 2005; Castle, 2010; Banerjee, Mbamalu & Hinchley, 2008
[14] Sentinel event alert: Delays in treatment, 2002
[15] Welch & Davidson, 2010

Columbia is also using an adapted version of the NRCC survey. The *Health Quality Council of Alberta* has developed its own patient satisfaction survey.

In answer to the patient satisfaction survey results, Ontario and British Columbia, in particular, are making changes to EDs in an attempt to improve the quality of care and patient satisfaction scores. There is ample Canadian research and media coverage on overcrowding, wait times and solutions to patient flow. Respondents are not satisfied with ED care and identify lengthy wait times, poor physician-patient interaction and a lack of quality care as the main factors shaping patient dissatisfaction.[16]

In Ontario, the provincial health ministry has funded two waves of performance improvement projects for ED wait times and patient satisfaction. Results are shared on the internet and through collaborative networks. In British Columbia, Evidence 2 Excellence (E2E) is an interesting online practice community established to improve clinical and operational outcomes in EDs across British Columbia (BC). This provincial multidisciplinary collaborative, in partnership with the BC Ministry of Health Services, the University of British Columbia's eHealth Strategy Office, BC Patient Safety and Quality Council, along with improvement experts[17] is the leading provider of BC-based ED improvement.

[16] Wellstood, Wilson & Eyles, 2005
[17] BC Emergency Community, 2010

What We Know About Patient Satisfaction

Factors that affect patient flow have been extensively studied. Examining ED processes and making modifications can have dramatic effects upon wait times and thus patient satisfaction. In particular, many hospitals are experimenting with various intake procedures in an effort to decrease overcrowding, leading to improvements in patient satisfaction.

Patient satisfaction is becoming increasingly important as an indicator of the quality of care provided by health care providers. Quality health care has been defined as care that meets or exceeds the patient's needs and expectations. Patient satisfaction is directly related to patient expectations.[18] Understanding patients' expectations and motivations for seeking medical care in the ED is an important part of maximizing patient satisfaction, and is an area of increasing importance to clinicians, managers, and researchers. Patients who receive the care they expect are more satisfied.[19] Patient satisfaction surveys enable organizational leaders to have some clear insights into the inner workings of their ED. Quality improvement is the process used to enhance the delivery of health care services provided to ED consumers in order to best meet their needs and expectations.

What are the key drivers of patient satisfaction? Although different studies vary in the order of importance of the various factors, a recent American clinical review[20] identified that the following elements seem to matter most:

- Empathy/attitude;
- Timeliness of care (waiting time);
- Technical competence of care providers: MDs, RNs;
- Pain management; and
- Information dispensation

Studies show that the quality of interpersonal interactions is a very important predictor of patient satisfaction. Patients evaluate satisfaction with care according to their experiences, judging their care by the way they are treated as a person, not by the medical treatment they received. Often patients receive the impression that hospital staff are too busy to help or to properly answer questions. Feedback tells us that patients can feel emotionally ignored by health providers. If service quality is the essence of patient satisfaction, caring and comforting behaviors exhibited by health care providers play a significant role in creating patient and family satisfaction in the emergency department. Unfortunately, caring behaviors may become invisible to patients in the midst of the multitude of technologies that focus on curing, rather than caring, for patients.

Another factor shaping patient satisfaction is the quality of the health care providers, particularly the physicians and nurses. Perceived technical skill correlates well with

[18] Graff et al., 2002; Messner, Reck & Curci, 2005; Toma, Triner & McNutt, 2009
[19] Meade, 2008
[20] Welch, 2010

positive perceptions of staff.[21] However, bedside manner appears to be the most important. Patients want their caregivers to listen without interruptions, to answer questions and explain the treatment, and to demonstrate courtesy and professional attitudes. Interestingly, professional/expert perceptions about what constitutes good quality ED care do not always agree with patient perceptions. While patients want good clinical outcomes, they have to trust clinicians to continuously review and improve their clinical and technical skills. [22] The art of caring correlates with patient satisfaction, emphasizing that speed cannot compensate for rudeness, disrespect or an uncaring attitude.[23]

However, patients do want to be seen and treated quickly. Increases in wait times heighten patient anxiety and decrease self control.[24] For the patient in pain or discomfort, the wait seems even longer. Pain relief correlates with patient satisfaction.[25] As perceptions of wait times increase, anxiety increases and satisfaction with care decreases.[26] Perception is the reality for patients and if patients feel the wait is shorter than expected, patient satisfaction increases. Encouraging support from family members and friends also helps patients relax and perceive the wait as shorter. Additionally, providing information about delays and wait times and frequent staff communication can influence the experience of waiting.[27]

Other factors influencing patient satisfaction with ED care include the cleanliness and comfort of the waiting room, the privacy afforded by the ED physical facility and noise levels.[28] Language barriers also may affect patient satisfaction with care.

"It is common in the practice of emergency medicine for hospital and emergency department (ED) administrators to encourage providers to improve patient satisfaction because of excessive complaints or disappointing patient satisfaction survey results. Most ED providers realize, however, that patient satisfaction is a complex phenomenon and is difficult to change, even in the best of circumstances. Many EDs are overcrowded and resources are exhausted, making it seem unlikely that appreciable improvements in patient satisfaction can be achieved without major facility renovations, an increase in the number of beds, or a significant increase in staffing. Generally speaking, these are not solutions that are feasible in most hospitals or health care systems." [29] However, process or system changes using a quality improvement approach can help improve ED functioning and hence, patient satisfaction.

[21] Topacoglu et al., 2004
[22] Taylor & Benger, 2004; Muntlin, 2006
[23] Welch, 2010
[24] Topacoglu et al., 2004; Taylor & Benger, 2003; Welch, 2010
[25] Boudreaux, Cruz & Baumann, 2004; Taylor & Benger, 2004; Welch, 2010
[26] Maister, 1984
[27] Nairn et al., 2004; Meyer, Cecka & Turkovich, 2006;
[28] Welch & Davidson, 2010
[29] Boudreaux, Cruz & Baumann, 2006

Key Informant Interviews

An interview template (Appendix 1) was developed with input from the OHA and the ER PIAC. The hospitals contacted were selected from the literature based on success stories of ED patient satisfaction improvement or were recommended as good sources for ideas from other professionals.

Hospitals varied in size, ranging from 125 to 880 beds with Emergency Department visits ranging from 12,000 to 100,300. The key informant interviews with Emergency Department innovators from Australia, the UK, the US and Canada were used to fill in gaps and to provide detailed supplementary information. Thirty-two agencies were contacted for interview and 15 interviews were scheduled. A summary of the 15 completed interviews is provided in Appendix 2.

Three main reasons accounted for the change initiatives to improve patient satisfaction:

- Improve patient satisfaction/ patient experiences;
- Optimize patient flow, quality and safety; and
- Improve wait times

In general, the interviews validated and supported the literature and the wide variety of strategies. Often, the change initiatives included multiple strategies, commonly consisting of process changes to improve patient flow and reduce wait times. A summary chart of the various undertakings can be found in Appendix 2. A variety of quality improvement methodology is described e.g. rapid cycle/PDSA, LEAN. In some cases, physical plant restructuring was required. Timelines for projects varied from six months to a year, with most hospitals stating incremental changes occurred in an ongoing time frame with regular monitoring and modifications. All hospitals reported successfully improving patient satisfaction scores. Interestingly, despite the literature frequently listing the need for additional resources or reallocations to resources, few hospitals had quantified costs. Some mentioned the need to add additional staff to fast track areas since physicians were able to assess, diagnose and write orders faster than staff could complete the work with patients. Registered Nurses (RNs) and technical staff were sometimes added, thus incurring added operating costs. Often, computer terminals and other technological changes were added. A few hospitals mentioned turnover costs since some staff left shortly after the changes were initiated.

Sustainability, however, proved more challenging, once again validating descriptions in the literature. All hospitals noted that change requires ongoing reinforcement. Upon analysis, the hospitals most skilled with the execution of change management were most successful in embedding or institutionalizing changes to improve patient satisfaction. Hospitals encouraged sustainability by regular data mining, sharing performance indicators regularly with staff and assigning a staff member to be in charge of the ongoing sustainability efforts. Several hospitals used external consultants to help with implementing and sustaining change and/or mentioned the addition of performance standards and changes to performance management systems and orientation of new staff. Many hospitals said the ongoing costs have been absorbed into day-to-day operating costs. Most were unable to quantify exact costs that often involved the ongoing statistical collection and analysis of data.

Participants offered plenty of advice for other hospitals. Probably the most common piece of advice was the value of regular communication with stakeholders and ongoing education and training for staff and physicians. All commented on the length of time needed for successful changes. Several hospitals faced considerable staff and physician resistance and emphasized the importance of physician engagement and front-line staff and physician buy-in to the changes required. Many hospitals also used incentives in order to increase accountability for changes and to reward and recognize the hard work that change requires.

Leading Practices

Each leading practice is purposefully broad and intended to be universal. Since no two hospitals are exactly the same, it follows that presenting a wide range of strategies will provide choices for organizations to try and refine for local circumstances. The strategies are intended to stimulate further thinking and development.

Five cornerstone issues for patient satisfaction provide an organizational structure for the leading practices:

- Improving patient access;
- Improving the waiting experiences for ED patients and families;
- Providing an environment and care that is responsive to people's needs;
- Improving provider communication and customer service skills; and
- Improving communication and education.

1. IMPROVING PATIENT ACCESS

A. Efficient intake processes minimize the time required for a patient to see a physician.

Evidence: Timeliness of care begins with efficient intake of patients into the ED. "Patients expect that on their arrival in the ED a qualified individual will immediately determine their emergent needs using a triage process. In most hospitals, this is often a nurse who meets the patient in the waiting room and does an initial assessment. Unfortunately traditional waiting-room triage can produce a patient flow bottleneck." [30] Ensuring the most rapid possible contact with a physician satisfies the desires of ED patients, promotes efficiency of care and shortens length of stay. Triage is simply the intake process driving the patient along the continuum of care. The priority for the ED intake process is moving the patient to an area where evaluation and care may proceed. The speed of assessment is more important than the overall wait.[31] Moving patients quickly to treatment demonstrates respect for patient time and increases patient satisfaction.[32]

Strategies: Many EDs are exploring the use of a variety of alternative intake models to process patients in the ED. The following list provides a summary of the ideas, models and innovations compiled by the American Emergency Department Benchmarking Alliance.

- Traditional triage process: often characterized as inefficient with many repetitive steps adding little value for the patient. Processes occur in series not in parallel thus making door-to-physician time longer. [33] Recent changes that can improve the

[30] Graber, 2005
[31] Welch, 2010; Nairn et al., 2004
[32] Welch & Davidson, 2010; Göransson & von Rosen, 2010; Graber, 2005
[33] Welch & Davidson, 2010; Wiler et al., 2010

traditional triage process include use of advanced triage protocols/medical directives/standardized order sets[34] and may result in decreases to length of stay (LOS), decreases in time to treatment, increased patient comfort, improved throughput and increased patient and employee satisfaction.

- Nurse practitioner in triage: increased throughput times, waits and the number of patients who leave without being seen (LWBS)[35]
- Physician at triage: decreased LOS, decreased LWBS rates, and increased staff satisfaction. (Approximately one third of patients can be rapidly discharged using few or no resources.) Placing a provider in triage may be a solution to expedite patient care.[36]
- Team at triage: A dedicated physician, RN and clerical staff work together at the bedside to triage the patient. Tasks are completed in parallel processes not in series (e.g. registration, diagnosis and completion of lab work occur simultaneously by different healthcare providers).[37] Benefits: decreases LWBS rate, increases patient satisfaction since treatment begins immediately, patients provide information once.[38] This system enables some patients to be discharged from triage, thus conserving rooms.
- No triage/ "pull to full"/ straight back triage / immediate bedding / "quick" or bedside registration: As long as there is a bed in the department, patients are brought straight into the Emergency Department to a patient care space (stretcher or chair) and, using bedside registration with mobile computers, care of the patient begins. This system can reduce patient waits, decrease overall LOS, reduce LWBS rates and increase patient satisfaction.[39]
- A form of patient segmentation known by various names: Abbreviated triage process/quick triage/"see and treat"/fast track/streaming/minor treatment/rapid assessment: Patients are directed into one of several patient streams based upon likelihood of admission and/or complexity. Many hospitals are experimenting with various ways to segment patients according to department volumes and in accordance with local needs.[40] Commonly, the intake process is shortened to 90 seconds or less and information collection is simplified (single phrase chief complaint, allergies, pain scale, vital signs). Usually high volume, these patients (some CTAS 3s, 4s and 5s) are not acutely ill nor require a stretcher. This system can have a positive effect on the time to see the physician and initiation of diagnostic tests and treatment that impact upon patient satisfaction.[41] Hospitals often use this system at peak times of day only. Some hospitals have introduced Rapid Assessment Zones for CTAS 3 patients.

[34] Bowman & Gertz, 2006; Jensen & Crane, 2008; Interview, Northern Lights Regional Health Centre, Fort McMurray, Alberta, 2010; Interview, St. Paul's Hospital, Vancouver, 2010; Hunter, 2010
[35] Carter & Chochinov, 2007; Steiner et al., 2009
[36] Terris et al., 2004; Patel & Vinson, 2005; Holroyd et al., 2007
[37] Karpiel, 2004
[38] Travers & Lee, 2006; Interview, Vanderbilt University Medical Center, 2010
[39] Sedlak & Roberts, 2004; Sherrod & Brown, 2005; Morgan, 2007; RWF Straight back triage – William Beaumont Hospital, 2008; Interview, Vanderbilt University Medical Center, 2010
[40] Kelly et al., 2007
[41] Sherrod & Brown, 2005; Cronin & Wright, 2005; Cooke et al., 2005; Morgan, 2007; Ben-Tovim, 2008; Jacobsen, 2008; Interview, VIHA Vancouver Island, 2010

- Triage to the diagnostic waiting room: Low acuity patients are treated in a vertical position using recliners or chairs, not stretchers and are assessed in a multifunctional triage bay before being sent to a large waiting area accompanied by support persons. Patient waiting time is filled with a variety of available resources (Televisions, laptop portals, DVDs, snacks, games, phones). In some instances, patients may self monitor for test results freeing clinical staff for other tasks.[42]
- Intake kiosks/self service kiosks/e-triage: Triage RN completes initial quick assessment and streams low acuity patients through a kiosk to swipe a health card and enter pertinent health information into the computer system. Benefits: increases patient flow and patient satisfaction.[43]

B. Patients move smoothly through the Emergency Department system avoiding delays, redundancies and duplications in care.

Evidence: Patients are frustrated by the number of steps in the waiting room experience, the length of the wait and the lack of information about what's going to happen. Process redundancies, repetitions and delays lead to long wait times. Well designed processes can improve wait times by making the patient journey simpler and better coordinated.[44] Flow is created by eliminating queues, stops and improving process flexibility and reliability. Improving efficiency and throughput in the ED has multiple benefits: increasing patient satisfaction, enhancing revenue and reducing ambulance diversion.[45]

Strategies: Organizations must test and implement changes to existing processes in order to improve the flow of patients through the acute care setting. The organizations that have been most successful in improving patient flow have made changes in key areas. However, unless inpatient capacity is improved, the ED process changes alone will not provide beds for admitted ED patients.[46] Ideas/innovations worth considering:

- Identify opportunities for process change. Analyze delays and constraints within the system, and guide the re-engineering of patient assessment and management pathways, e.g. process mapping.[47]
- Choose an appropriate intake model that fits the process map to optimize the tasks in the interval from patient arrival to seeing a health care provider
- Arrange shift start times to correspond to high demand hours of the day. The way patients arrive presents random variability that cannot be controlled, reduced or eliminated, but it can be predicted.[48]

[42] Morgan, 2007; Court, 2008; Diagnostic Treatment Unit, 2009; Interview, Banner Health System, Arizona, 2010; Sheahan & Bigda-Peyton, 2010
[43] Porter et al., 2004; The Scarborough Hospital, 2008; Welch & Davidson, 2010; Wiler et al., 2010
[44] Ben-Tovim et al., 2008
[45] Zun, 2009
[46] Sedlak & Roberts, 2004; Morgan, 2007; Dickson et al., 2009; Ng et al., 2010; Sheahan & Bigda-Peyton, 2010
[47] Banerjee, Mbamalu & Hinchley, 2008; Interview, Northern Lights Regional Health Centre, 2010
[48] Welch, 2006.
[49] Fleming-McDonnel, 2010; Interview, Northern Lights Regional Health Centre, 2010

- Use the right staff mix to match local patient needs, e.g. ortho tech; physio coverage[49]
- Stream patients in response to the busyness of the department with dedicated space and staffing to provide service in accordance with peak census.[50]
- Optimize bed management processes
- Morning mini rounds to assess bed availability[51]
- Bed czar to manage and ensure timely movement of patients to inpatient beds and movement out of the facility to chronic care beds, and coordinates transfers. An open inpatient bed is rapidly turned over and filled by an ED or ICU patient.[52]
- Similarly on the ED side, the patient flow coordinator monitors flow in the ED. This is a new role for the charge nurse who trades clinical duties for monitoring patient flow and identifying bottlenecks and delays. [53]
- Electronic bed tracking system to inform re bed availability[54]
- Faxing of report from ED to inpatient area for new admissions[55]
- Surge capacity/overcapacity protocols spell out an organized approach to use when an ED is unable to evaluate and treat new emergency patients in a timely manner because of lack of space and resources. Patients who are waiting for a hospital bed, i.e. boarders who are in the process of being admitted as hospital inpatients, are moved out of the Emergency Department**.** This plan involves transporting patients to inpatient hallways for admission rather than boarding in the ED. Patients who are in the ED for extended periods may not receive quality care. This relieves the ED nursing staff and provides improved patient safety, quality of care and shortens length of hospital stay by one day.[56]
- Emergency Express Unit/ Express Care Centre to prepare the patient for admission (i.e. paperwork) using an area and staffing (i.e. admit nurse or admit team) separate from the ED and the inpatient area. This improves LOS and provides patient satisfaction.[57]
- Scheduling discharge times where all patients are discharged by a standardized time of day[58]
- Use a clinical decision/observation unit for patients awaiting decisions re disposition/diagnosis. These patients receive care in a comfortable area with separate staff. i.e. not mixed in with other ED arrivals.[59]

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[50] Karpiel, 2004
[51] Pierson et al., 2009
[52] Brown & Kros, 2010; Interview, Boston VA, 2010
[53] Redesigning the charge nurse role to manage patient flow, 2005; IHI ED Community Change Ideas Team Assessment, 2007; Morgan, 2007
[54] Pierson, 2005
[55] Karpiel, 2005
[56] Macleod et al., 2008; Garson et al., 2008; Bartlett & Fatovich, 2009; Reducing overcrowding in the ED with the Full Capacity Protocol, 2009

[57] Gelrud, Burrroughs & Koterwas, 2008; AHRQ Innovation Exchange, St. Francis Medical Center, Los Angeles 2009; Buckley et al., in press
[58] Wilson, Siegel, & Williams, 2005; Macleod et al., 2008

- Virtual wait rooms: This is still in the conceptual stage. If a patient is non-urgent, the patient, paramedics or firefighters would contact the hospital through an online connection to schedule a visit. The patient would be added to the ED queue without having to be there in person and could wait at home. Then, closer to the time scheduled to see a doctor, the patient would go to the hospital or the ambulance would return to pick the patient up and bring them to the ED.[60]
- Use a pod design for nursing assignments to eliminate unnecessary steps and increase patient satisfaction by reconfiguring care assignments. Pod system assignments increase the visibility and accessibility of RNs.[61]
- Standardize rooms and carts so equipment in each room is the same.[62]

C. Examine ancillary cycle times and improve as necessary.

Evidence: A robust, prioritized approach to laboratory and radiology workload optimizes ED patient flow.[63] Making improvements to ancillary department cycle times will involve collaboration with other departments. 60 to 70% of the objective information on a patient's chart is lab information. Therefore, a delay in reporting lab results causes delays in diagnosis and management. Lab turnaround times (TATs) have a direct and significant relationship with patient wait times and patient flow, the quality of care and thus patient satisfaction.[64] The same argument could be made for many other departments, such as radiology, pharmacy. Geographic distance between ancillary departments impacts the timeliness of test results.[65]

Strategies:

- Examine processes for opportunities to improve TATs with feedback to ancillary services (track cycle times, set goals, i.e. 90% within x minutes,[66] reading of ED x-rays is prioritized.[67])
- Establish visual cues for communication of tests and results[68]
- Dedicated radiology transport technician[69]
- Prioritize radiology requests e.g. Bucket one was a true stat; Bucket two was fast track and Bucket three was used for more acutely ill and longer stay patients[70]
- Point of care testing[71]
- Dedicated STAT lab within the central lab[72]

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[59] Daly, Campbell & Cameron, 2003; Ryan et al., 2005; RWF Improving ED flow with care management unit – Grady Health System, 2008; Discharge unit helps speed patient flow, 2009; Interview, Dr. M. Cooke, NHS, 2010
[60] Child, 2010
[61] Donahue, 2009; Interview, Meriter Hospital, Madison WI, 2010
[62] Interview, Gateshead Queen Elizabeth Hospital UK, 2010
[63] O'Connell et al., 2008
[64] Holland, Smith & Block 2005; Woodward Hagg, Scachitti, & Mapa, 2007
[65] Miles & DeBusk, 2005
[66] IHI ED Community Change Ideas Team Assessment, 2007
[67] Woodward Hagg, Scachitti, & Mapa, 2007
[68] IHI ED Community Change Ideas Team Assessment, 2007
[69] Sedlak & Roberts, 2004
[70] Morgan, 2007
[71] Lewandrowski, 2004
[72] IHI ED Community Change Ideas Team Assessment, 2007; Singer et al., 2008

- Table top lab set up in fast track area to complete high volume tests such as urinalysis, pregnancy tests[73]

2. IMPROVING THE WAITING EXPERIENCES FOR ED PATIENTS AND FAMILIES

A. The ED needs to be easy to navigate and user-friendly.

Evidence: Patient experience can be improved by designing information and communications that set expectations for an ED visit - reducing anxiety and confusion and helping patients plan appropriately for the experience. Patients and caregivers need clear information about the patient flow process and also need to know where they are in the queue. Better informed patients are more likely to be satisfied.[74]

Strategies:

- The greeter provides one of the first building blocks of patient satisfaction that facilitates the success of the entire visit. Patients who come to the ED are often frightened and very uncomfortable. They may never have been there before and often do not know where to go or what to expect. A person immediately available to greet them, to let them know that their care process has begun, and to direct them through their first steps can go a long way to communicating care and alleviating initial anxiety. The greeter can be a RN, a clerk or a volunteer.[75]
- Provide the patient and/or caregiver with basic information regarding ED functioning (e.g. brochure or video). Information that is helpful to have include an understanding/awareness of triage status, the busyness of the department, normal wait times for tests and results, when discharge may occur, adequate info about what to watch for, medications, follow-up appointments.[76] Interestingly, one short study with flawed methodology found patient education using a brochure did not improve patient satisfaction.[77]
- Self-service kiosks can speed intake.[78]

B. Patient expectations are aligned with actual wait times and anticipated delays.

Evidence: Satisfaction seems to hinge not on how long the patient actually waits but whether this length is consistent with expectations.[79] Although each patient is different, the ED experience follows a predictable process with opportunities for setting expectations and improving patient experience. Further, patients frequently overestimate the urgency of their need for health care. Because they do not understand the triage system that sets the priority for the order of how patients will be seen, patient flow in the

[73] Morgan, 2007
[74] State of Victoria, Improving the Patient Experience, 2007; Boudreaux & O'Hea, 2004
[75] Sherrod & Brown, 2005; Graber, 2005; Fortin, 2006; D-to-D slashed 85%-in seven weeks, 2009
[76] Messner, Reck & Curci, 2005; Papa et al., 2008
[77] Sun et al., 2004
[78] The Scarborough Hospital, 2009
[79] Boudreaux & O'Hea, 2004

ED is interpreted as unfair. Thus the patient is predisposed to perceive wait time as too long.[80] If waiting times are longer than what the patient expects or deems appropriate, the patients are dissatisfied, regardless of the actual time waited.[81] Patient satisfaction improves when perceived wait times are shorter than expected. Patient perception is the difference between reality and their expectations. Wait times are accepted if they are perceived to be fair and the reasons for the wait are explained.[82]

Strategies: Managing expectations in the ED can help improve patient satisfaction.

- Develop a customer service culture[83]
  - customer service training for all staff and physicians
  - mini-sessions on handling difficult situations and people
  - script communications to standardize desired behaviours
- A service oriented ED helps the patient understand what the process is and what the experience will be like. This can be done through verbal communication at check in, perhaps a video or an informational pamphlet in the waiting room.
- Provide information on actual wait times. This can be accomplished by the greeter or by posting hospital wait times at the ED entrance or on the internet.
- Post information in cubicles about normal times to conduct tests and receive results.
- Remind patients that higher acuity patients are seen in order of priority and lower acuity patients can be fast tracked to be seen in order of arrival.[84]
- Create an expectation that purposeful patient rounding (a process where nurses and other clinical staff check and update patients at regular intervals) will occur. Rounding protocols emphasize the use of specific behaviours and proactively reduce anxiety, increase patient safety, and increase both patient and staff satisfaction. In the reception area, the emphasis is on checking for pain and informing about the expected wait time. In the treatment area, the emphasis is on reviewing the patient's plan of care, checking for pain and information about when staff will return.[85]

C. The ED department consistently communicates with patients and families and tracks progress.

Evidence: Patient satisfaction can be improved when patients know staff is tracking patient progress and the process of care. Patients are anxious and frustrated with the ED wait and the uncertainty over how long it will last. A lack of communication from the ED staff during waits can be a greater source of dissatisfaction to patients than the wait itself. Using systematic rounding protocols at regular intervals improves staff and patient satisfaction with care given. Various people can successfully carry out this role: the triage nurse, a staff communications officer or a volunteer.[86]

[80] Welch, 2010
[81] Boudreaux & O'Hea, 2004; Göransson et al., 2010
[82] Maister, D. H. (1985); Pitrou et al., 2009
[83] Dougherty, 2005; IHI ED Community Change Ideas Team Assessment, 2007; State of Victoria, 2007
[84] Pitrou et al., 2009
[85] Meade, Kennedy & Kaplan, 2008; NRC Picker, 2009; Dunn, 2010
[86] Nielsen, 2004; Fortin, 2006; Meek & Torsello, 2006; Göransson & von Rosen, 2010

Strategies:

- Make patient status visible, e.g. posting information about the patient's plans and progress in the ED cubicle, using a whiteboard, electronic or manual, e.g. awaiting lab results. An example of manual tracking of patient status is flagging the room to signal an order has been written.[87]
- Establish visual cues (signs, flags, colour coding) for communication of tests and results.[88]
- Use rounding protocols.[89]
- Use of volunteers[90] or staff communications officer position[91]
- Provide information about the wait and why: sign, brochure, and video.
- Use tracking technology/patient tracking systems: Alberta has upgraded MediTech software to track patients.[92]
- Use pagers or infrared devices which can permit low acuity patients to leave the ED.[93]
- iPhone applications can be used to post wait times in ED wait area.[94]
- Online ED clock publishes ED wait times in real-time, available in Flash and HTML format, enabling users to access from computers or smart phones. Information is fed directly from EDIS.[95]

D. Family/support persons are welcomed, and encouraged to be present during examination and treatment as far as the facility permits.

Evidence: Family is an extension of the patient, they are not considered visitors. Families provide emotional support and alleviate fear and anxiety. Family involvement in care improves quality, increases safety and boosts patient and family satisfaction. Family knowledge and information can enhance diagnosis and treatment and can decrease the probability of errors and unnecessary care. The family needs to be informed and included in planning care and treatments, timelines for tests and results, any delays and waiting times for consulting services, involved/knowledgeable re discharge and follow-up instructions.[96]

[87] Sherrod & Brown, 2005; IHI ED Community Change Ideas Team Assessment, 2007; Low-cost strategies help improve flow, 2009
[88] IHI ED Community Change Ideas Team Assessment, 2007
[89] Meade, Kennedy & Kaplan, 2008; Powell, 2008
[90] Fortin, 2006; Quinn, 2009
[91] Meek & Torsello, 2006
[92] Interview, Northern Lights Regional Centre, 2010
[93] AHRQ - Toronto Sick Children's Hospital, 2009
[94] Cole, 2010
[95] Gamble, 2010
[96] O'Malley et al., 2008; Lee, 2008; Sodomka, P. (2006); Ekwall, Gerdtz & Manias, 2009; Gordon, Sheppard & Anaf, 2010

Strategies:

- Seek and use information gathered from patients: focus on feedback from patient satisfaction surveys.[97]
- Give staff feedback from patient satisfaction surveys.[98]
- Conduct and act on information gained from patient focus groups.[99]
- Establish ED advisory councils that include patients and family members.[100]
- Design service to be family friendly e.g. adequately sized waiting room, railings, appropriate signage, enough bathrooms close by, play area for kids, change area for babies, privacy as necessary, flat screen TVs, computer plug-ins, telephones.[101]
- Provide adequate and varied seating suitable for different age groups.[102]

E. ED patients receive timely pain management, avoiding delays such as those related to diagnostic testing or consultation.

Evidence: Pain is one of the main reasons why patients seek emergency medical care. Historically EDs have not done a good job in the treatment of pain for a variety of reasons: failure to acknowledge pain, failure to assess initial pain, failure to have pain management guidelines in ED, failure to document pain and to assess treatment adequacy, and failure to meet patient's expectations.[103] Not surprisingly, studies have shown a correlation between pain relief and patient satisfaction.[104] Analgesia is an important element in the care and comfort of patients and is an area where improvement in practice and attention to pain management can exceed the expectations of patients and potentially improve patient satisfaction.[105]

Strategies:

- Use pain guidelines/protocols/pain management pathways with standardized order sets.[106]
- Provide pain management education for health care providers.[107]
- Provide a teaching guide on acute pain/chronic pain to inform patients and families on pain management and pain scales.[108]
- Offer simple comfort measures on a regular basis to patients in pain (positioning, potty, warm blanket, yoga, music, massage, imagery, breathing techniques).[109]
- Use rounding protocols.[110]

[97] IHI ED Community Change Ideas Team Assessment, 2007; Interview, Vancouver Island Health Authority, 2010
[98] IHI ED Community Change Ideas Team Assessment, 2007
[99] IHI ED Community Change Ideas Team Assessment, 2007; Ben-Tovim, 2008; Interview, Vancouver Island Health Authority, 2010
[100] Decosterd et al., 2007; Yanuka, Soffer & Halpern, 2008; Motov & Khan, 2009
[101] Dubuque, 2005; State of Victoria, 2007; O'Malley et al., 2008
[102] State of Victoria, 2007
[103] Motov & Khan, 2009
[104] Pitrou et al., 2009
[105] Nairn et al., 2004; Welch, no date
[106] Welch, 2010
[107] DeCosterd et al., 2007; Welch, 2010
[108] Hogan, 2005; Ducharme et al., 2008
[109] Hogan, 2005; Fortin, 2006
[110] Meade, Kennedy & Kaplan, 2008; NRC Picker, 2009; Dunn, 2010

3. PROVIDING AN ENVIRONMENT AND CARE THAT IS RESPONSIVE TO PEOPLE'S NEEDS

A. The Emergency Department is a safe, clean, comfortable and welcoming place.

Evidence: Literature identifies that the physical environment for emergency care can influence overall perceptions of health care and the health system. Research shows that patients want a safe, comfortable place to wait including pleasant surroundings, comfortable seating, as well as providing for groups such as children, the elderly, those with behavioural disturbances, and people with disabilities such as people with hearing and sight issues. Waiting rooms need to provide privacy in a public space and be flexible enough to accommodate different types of waiting and users. It needs to provide comfort in uncomfortable situations and support learning and education within the boundaries of the space.[111]

Strategies:

- Use volunteer greeters to provide information and comfort services. Greeters can also help keep the waiting room clean and tidy, communicate with nursing staff regarding patient flow and assist with inquiries from families and visitors.[112]
- Use the psychology of waiting times[113]:
  - The wait feels shorter when time is occupied with activities (supply TVs, computer plug-ins, telephones, and magazines).[114]
  - Pre-process waits feel longer than in process waits (quickly move patients to a care area, separate areas e.g. acute, fast track, observation etc.).[115]
  - Anxiety and pain make waits seem longer.
  - Uncertain waits are longer than known, finite waits. (Give time estimates; visual cues).
  - Unexplained waits are longer than explained waits. (Explain what's happening.)
  - The reason for the wait needs to seem fair. (Patients need to understand how the system works.)
  - The more valuable the service is perceived, the more tolerable the wait.
  - Group waits seem shorter than solo waits. (Encourage patient to be accompanied.)
- Have housekeeping provide visible records of cleaning areas (similar to retail areas).
- Desired waiting room amenities include availability of food and drinks, an adequately sized waiting room, enough bathrooms close by, play area for children, change area for babies, privacy as necessary.[116]
- Provide a Business Centre in waiting rooms.[117]

[111] Douglas & Douglas, 2004; Fortin, 2006; State of Victoria, 2007; O'Malley et al., 2008; Welch, 2010
[112] Fortin, 2006; Court, 2008
[113] Maister, 1984; IHI ED Community Change Ideas Team Assessment, 2007
[114] Dubuque, 2005
[115] Welch, 2010
[116] Dubuque, 2005; Fortin, 2006; State of Victoria, 2007
[117] ED adds business centre to wait area, 2007

B. There is patient-friendly and clear directional information to identify hospital facilities such as location of the ED, parking and amenities such as bathroom facilities.

Evidence: Emergency department patients are stressed physically and psychologically and often unfamiliar with hospitals and EDs. Patients need to know where to park, how to enter the ED, what elevators to take etc. Being disoriented or lost only exacerbates what may already be an anxiety-producing situation. Visitors to health care facilities rank the frustration of getting lost among the top complaints. While they initially blame themselves for their inability to find their way, they quickly redirect their frustration to the organization. The negative impact on hospital image, confidence in the facility and its caregivers, and trust is significant.[118]

Strategies:
- Good signage
- Good lighting
- Accessible parking
- Website provides similar information re parking, directions, patient information re EDs

C. The facility design provides room for privacy and controls for noise.

Evidence: Patient privacy incidents occur frequently in an ED, risk factors being length of stay and absence of a walled cubicle. Patients who have their conversations overheard are more likely to withhold information from staff and less likely to have had their expectations of privacy met.[119] In emergency departments, noise can be an even larger issue. Higher overall noise levels have been measured in EDs than in inpatient care units in several studies. One study conducted at Johns Hopkins Hospital in Baltimore, Maryland, pointed to the potential impact of noise upon patient safety in the ED, as well as privacy concerns with patients disclosing information to caregivers.[120] Findings from a recent study indicate a direct and significant correlation between respecting privacy and patient satisfaction.[121]

Strategies:
- Carry out bedside registration.[122]
- Use beepers or pagers instead of calling out names.[123]
- Use infrared staff badges to eliminate paging or phone calls.[124]
- Provide private examination rooms or curtains that pull to provide privacy.[125]
- Use background music in waiting area.
- Acoustic isolation rooms separate noisy patients from others.[126]

[118] Murphy & Brown, 2010
[119] Karro, Dent & Farish, 2005; Mlilnek & Pierce, 2008; Welch, 2010
[120] Orellana, Bush-Vishniac, & West, 2007
[121] Nayeri & Aghajani, 2010
[122] Sedlak & Roberts, 2004; Sherrod & Brown, 2005
[123] Toronto Sick Children's Hospital, 2009
[124] AHRQ -Albert Einstein Medical Center, 2003
[125] Dubuque, 2005

4. IMPROVING PROVIDER COMMUNICATION AND CUSTOMER SERVICE SKILLS

A. From the time of arrival, the emergency department staff anticipates common patient desires and needs.

Evidence: Communication appears as a key point for patient satisfaction, contributing to the quality of the patient's outcome, as well as the individual's experience. Improving caregivers' communication skills increases patient satisfaction.[127] Health care is a service industry and the interpersonal skills of all ED staff are crucial to build patient satisfaction.[128] People attending the ED are in pain, frightened and stressed and often show their distress in ways that can be difficult for staff to handle. When ED staff is familiar with not only the patient's clinical condition but also the patient and family emotions and expectations, it demonstrates caring and respect for the patient and family. Patients are given the impression they are at the centre of care.

Strategies:

- Use purposeful patient rounding protocols.[129]
- Develop behavioural standards to promote staff accountability e.g. Vanderbilt CREDO.[130]
- Provide customer service training.[131]

B. ED staff demonstrates a culture of caring and compassion through deliberate actions that emphasize the importance of caring for all patients as if they were family members.

Evidence: All work in the ED needs to be carried out quickly and efficiently with nurses depending upon each other when performing nursing interventions. In the increasingly complex, technological world of health care, technical competence is necessary, but must be combined with interpersonal skills such as empathy, warmth and respect, to communicate to the patient that health professionals care. While nurses acknowledge the need for psychosocial support and emotional caring, there is little time for such holistic care. Yet, compassionate ED staff demonstrate an understanding of what patients are experiencing and understand the perspective of patients and families. The art of caring for the patient correlates with satisfaction. [132]

[126] Welsh, 2010
[127] Dougherty, 2005; Dubuque, 2005; Perez-Carceles et al., 2010
[128] Graber, 2004
[129] Meade, Kennedy & Kaplan, 2008; NRC Picker, 2009; Dunn, 2010; Interview, Miami Baptist Hospital, 2010
[130] Interview, Vanderbilt University Medical Center, 2010
[131] Dougherty, 2005
[132] Walsh & Dolan, 1999; Nyström, Dahlberg & Carlsson, 2003; Wiman & Wikblad, 2004; Boudreaux & O'Hea, 2004; Sabo, 2006; Welch, 2010

Strategies:
- Place stools in room for physicians to sit down, thus increasing perception of spending more time with patient and caring.[133]
- Enhance interpersonal skills of providers, e.g. offer communication workshops.[134]
- Use the patient's name, make eye contact, and answer questions. Simple courtesy can be lost because the environment is chaotic and busy.
- Use purposeful patient rounding protocols.

C. Patients are informed clearly about their care and treatment decision.

Evidence: Providing the patients with information in all phases of the care process, giving the opportunity to ask questions, resolving doubts and providing legible and easily understood discharge instructions all contribute to increasing patient satisfaction. Patients are happier when they understand what is happening to them and why. Appropriate explanations using effective language and tone in communication demonstrate courtesy and caring. Providing information engages patients in the process of decision making and demonstrates respect for the patient and their support network.

Strategy:
- Improve staff interpersonal skills, i.e. workshops, customer service training.[135]
- Use purposeful patient rounding protocols.
- Use patient tracking systems.
- Offer brochures to inform re normal wait times.

5. IMPROVING COMMUNICATION AND EDUCATION

A. Follow-up initiatives are offered to smooth transition from hospital to home.

Evidence: During a stressful ED visit, patients and family members may not hear all the information provided to them. There is ample body of research that post-visit phone calls to patients deliver multiple benefits. Discharge phone calls reconfirm discharge instructions; reduce patient anxiety; reduce complaints and lawsuits; reinforce patient perception that excellent care has been provided, and, offer an opportunity for quick service recovery. Problems are resolved quickly when and where they occur. Additionally, revisits to the ED may be avoided.[136]

[133] Cameron et al., in press
[134] IHI ED Community Change Ideas Team Assessment, 2007; State of Victoria, 2007; Cameron et al., in press; Interview, Vancouver Island Health Authority, 2010;
[135] Boudreaux & O'Hea, 2004; Boudreaux, Cruz & Baumann, 2006; AHRQ - St. Francis Medical Center, LA, 2009
[136] Meade, 2005; Pitrou et al., 2009; Interview, Miami Baptist Hospital, 2010; NRC Picker, 2010

Strategies:

- Make follow-up phone calls to patients within 72 hours of discharge. (Patient consent to follow-up required.)[137]
- Offer a customer service resolution program with quick feedback and a chance to resolve issue at a low level. How: offer gas card, free parking, and community donations.[138]
- Develop a volunteer patient advocate position to liaise between waiting patients and ER staff, using key phrases to communicate.[139]
- Share information from patient satisfaction surveys with staff and take appropriate action.[140]

B. Instructions, including those relating to appropriate follow-up care are given verbally and in writing to the patient and/or family member prior to discharge.

Evidence: Provision of information is integral to achieving patient satisfaction. Patients often express considerable anxiety about their ability to care for themselves after discharge. Patients need understandable, detailed information regarding medications, physical limitations, dietary needs and information about follow-up care/next steps.[141]

Strategies:

- Provide hard copy of discharge instructions that can usually be printed off a computer and personalized for the patient.[142]
- Make follow-up post-discharge phone calls within 72 hours.

C. Interpreter services are available.

Evidence: Emergency Departments are frequently confronted with problems associated with language barriers. Many studies report that language barriers decrease equity in health care by reducing access to health care services including primary care and emergency department care. Further, language barriers reduce comprehension and involvement in decision-making, and decrease adherence to treatment, including medications.[143] One recent study found that the use of professional interpreter services dramatically increased satisfaction with patient-provider communication during the ED visit, for patients and all types of providers—including triage nurses, doctors and discharge nurses.[144]

[137] Hamilton, 2009; NRC Picker, 2010
[138] Interview, Banner Health System, 2010; Interview, Meriter Hospital Madison, WI, 2010; Interview, Miami Baptist Hospital, 2010
[139] Gelrud, Burroughes & Koterwas, 2008; Quinn, 2009
[140] IHI ED Community Change Ideas Team Assessment, 2007
[141] Dubuque, 2005; Perez-Carceles et al., 2010
[142] Porter et al., 2004; Guttman et al., 2004; State of Victoria, 2007
[143] Garrett, 2009; Chan et al., 2010
[144] Bagchi et al., 2010

Strategies:

- Provide interpreter services in person or via telephone.
- Use bilingual staff members, ad hoc interpreters.
- Use software, e.g. self-service kiosks offering several languages.[145]

[145] The Scarborough Hospital, 2008

Critical Success Factors

Success is measured by how skillfully the hospital executes the elements of change management. The organization has to be ready to change, to acknowledge and to accept there is a need to change. Nothing speaks more loudly to health care providers than issues of patient care. Adopting the patient perspective results in designing the best systems for the best care delivery.

It does not matter which improvement method or model (LEAN thinking, Six Sigma, or the theory of constraints) is used in the redesign process, as long as it is applied with rigour and persistence.[146] The focus at all levels from administration to the front-line staff must be to constantly improve the patient experience and consequently patient satisfaction with care in the Emergency Department. If benefits extend beyond helping patients (e.g. reducing waste, duplication or make the system run more smoothly),[147] the change will be even stronger and more easily sustainable.

The following success factors are evident in successful change management:

- Strong leadership: The CEO drives the change process. There is no substitute for a strong leader to set the direction, and the priorities. The Senior Management Team works together to define the vision and identify the resources required for success. Part of the Senior Management Team's work involves an assessment of the skill level within the organization and a realization that external consultants may be beneficial to push the required change. A well articulated vision of where the hospital will be in three to five years, expressed in specific performance outcomes, spreads throughout the hospital.
- Respected clinical champions: Doctors, nurses, and other clinical staff members are involved from the initial stages of the project. Each group is represented on cross-functional working teams and included as project leaders.
- Trustworthy communications: Top Down/Bottom Up: The CEO and Senior Management Team develop and follow a communication strategy encouraging transparent and honest two-way communications. The CEO is highly visible, meeting regularly with interested groups. Communication is ongoing with rumours and fears addressed regularly. Messages need to be patient-centred, stressing improvements for patients and to the quality of care.
- The right attitude: The theme is "get on board, or get out of the way." There is a conscious decision that exit strategies may be required for people who block the change effort.
- Willingness to take risks: There is a willingness to examine the status quo to look for opportunities for change. The focus is long-term; problems are anticipated and directly addressed.

[146] McGrath et al., 2008
[147] Maher, 2008

- A comprehensive and systematic approach: Change must be adequately planned and be hospital-wide. Both the "people" side and the "organization" pieces must be managed with implementation structured in manageable phases. All systems need to align: culture, reward systems, process, structure, and staffing/skills.
- High employee involvement: All employees participate in achieving team-based performance objectives. Problems are identified and solved through team effort in order to continuously improve personal, team, and organizational performance. The focus is on quality and patient and staff satisfaction.
- Permanently empowered employees: Interdisciplinary teams are self-managed, and empowered to make decisions. Layers of management that slow decision-making are removed, and accountability rests with the team. Team leaders provide direction, priorities, and facilitation to the team.
- Ownership of change by the majority of employees: Staff is highly involved in problem solving. Implementation of solutions creates ownership of the process.
- Financial resources: Add or reallocate resources to support the change effort. Expecting staff to accomplish changes using downtime can lengthen the timeline and derail the project.
- Extensive education and training at all levels: Physicians and staff benefit from training about how to deal with difficult people and situations, team building, stress management, conflict management, and customer service. In addition, staff may need to learn more about various quality improvement strategies e.g. LEAN, Six Sigma, rapid process improvement techniques.
- Commitment to see the change through to completion: Small changes are tested, refined or deemed not working and aborted, thus fostering a willingness to be creative in the approach to change. Achieving early and visible successes and setting incremental milestones maintains staff motivation and demonstrates progress. Successful change takes time and ongoing effort from all levels of the organization.

Appendix 4 summarizes critical success factors from the literature and key informant interviews. The critical success factors are presented in the words of the authors and key informants but organized topically.

Sustaining Change

Sustainability refers to holding the gains and can be defined as the incorporation of new programs or practices within the routines of an organization or health care setting, changing norms and maintaining outcomes over time.[148] Sustainability involves an ongoing improvement process. It needs to become part of normal business for a health care organization, not a series of one-off projects or crisis-driven reform programs.[149] Sustainability involves fundamentally shifting thinking and actions to embed or institutionalize the innovative changes.

Small measurable improvements in patient experience may be achieved over short projects. Sustaining more substantial change is likely to require organizational strategies, engaged leadership, cultural change, regular measurement and performance feedback and experience in interpreting and using survey data.[150]

Unfortunatly, up to 70% of all change initiatives fail.[151] Change is only sustainable when the new ways of thinking and acting about change become part of the culture. Culture can be felt in every part of the organization and at every level. It is the glue that allows the individuals who make up the many fragments or mini-organizations within a larger organization to identify themselves with the whole. A customer service culture develops when everyone values the patient experience.

Cultural change, expressed as new and different behaviours occurs slowly. Beginning a change initiative can be difficult, but is accomplished with relative ease compared with sustaining or cementing a change. To be sustainable, organizational change must be an evolutionary process that is planned from the beginning and closely monitored over time. Sustaining change requires the development of an environment that encourages testing and refining of small changes. A good implementation does not guarantee the sustainability of a change initiative. Without constant vigilance, organizations tend to revert back to older, familiar behaviors and attitudes. In short, change must be embedded within the institution to endure.[152]

Sustainable change is challenging to achieve. According to Macleod et al., successful hospitals will secure the three pillars of sustainable change: an efficient and effective operating system; a supportive management infrastructure and a deep-rooted learning organization. The operating system consists of the elements of the organization's processes, such as ensuring the right people, information and materials are in the right place at the right time, improved equipment availability, appropriate staffing). The management infrastructure is composed of the formal mechanisms put in place to support

[148] Baker, 2007
[149] McGrath et al., 2008
[150] Davies, Shaller, Edgman-Levitan, Safran, Oftedahl, Sakowski & Cleary. (2008) Evaluating the use of a modified CAHPS survey to support improvements in patient-centred care: lessons from a quality improvement collaborative. Health Expectations, 11, 160-176.
[151] Beer and Nohria, 2000
[152] Baker, 2008

and encourage the fundamentals of the desired transformation e.g. the right people in the right jobs to drive change; redefining roles and changing the way employees' performance is monitored and measured; tracking the right set of operational metrics and regularly reviewing the results. The learning organization forms the cultural fabric of the organization e.g. ongoing education and training (orientation) to support staff to deliver superior patient care; engaging the front line staff in problem solving. Macleod et al. offers sustainability self-assessment tools to help hospitals create and sustain improvements.[153] One of the essential factors mentioned by various authors is to assign a dedicated staff member to be responsible to monitor sustainability of the change.

[153] Roberto & Levesque, 2005; Macleod et al., 2008

Conclusion

A fundamental shift in thinking is required to improve patient satisfaction in EDs. The starting point is to reject the status quo:

> "What's stopping us from doing this…making changes? …our current process of how we are doing things!"[154]

The patient experience should drive the changes. Hospitals need to develop and embed a customer service culture of excellence as well as improve ED processes to improve the patient experience. How skillfully the hospital is able to execute change management plays a role in the degree of success. Many of the changes are simple and easy to implement. Complementary/multiple initiatives work most effectively to improve patient satisfaction but are more difficult to implement and require more planning.

Great persistence is required; cultural shifts take time and require constant tweaking. Without a culture shift, sustainability is not possible. Sustainability requires dedicated resources and ongoing monitoring. Hospitals can help sustainability by regular data mining, sharing performance indicators regularly with staff and assigning a staff member to be in charge of the ongoing sustainability efforts. An improvement journey never ends.

Final thoughts from famous people….

> "*This is a journey… Start with the right principles and roadmap, move from concept to action quickly and course correct collaboratively. The hardest part of change is not learning the new habits but forgetting the old ones…*"
>
> St. Michael's Hospital. [155]

> "*Every system is perfectly designed to get exactly the results that it gets.*"
>
> Don Berwick (IHI) [156]

> *"We cannot solve our problems with the same thinking we used when we created them."*
>
> Albert Einstein [157]

[154] Interview Boston VA Hospital, 2010
[155] Alikhan & Bowry, 2009
[156] Alikhan & Bowry, 2009
[157] Alikhan & Bowry, 2009

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Additional Resources

For further information describing ER innovations and examples of improvements, readers are encouraged to consult a number of excellent web-based sources of information:

- Institute for Healthcare Improvement http://www.ihi.org/IHI/Topics/Flow/EmergencyDepartment/
- Robert Woods Johnson Foundation sponsors a website, Urgent Matters. It offers a free newsletter describing quality improvement initiatives from around the USA. The newsletter, for example, recently discussed Rapid Cycle Testing. Also Best Practices Toolkit, not all specific to EDs
- Agency for Healthcare Research and Quality (AHRQ) Health Care Innovations Exchange http://www.innovations.ahrq.gov/browse.aspx
- Emergency Department Benchmarking Alliance (EDBA) http://www.edbenchmarking.org/
- Emergency Medicine News http://www.em-News.com
- Centre for Healthcare Quality Improvement:
- Patient Flow: http://www.chqi.ca/Resources/PatientFlow.aspx
- Sustainability: http://www.chqi.ca/Resources/sustainabilityandSpread.aspx
- Press Ganey: http://www.pressganey.com/cs/research_and_analysis

Appendices

Appendix 1 Template Interview

Introduction

We are completing a project for the Ontario Hospital Association and the Emergency Room Patient Satisfaction Performance Improvement Advisory Committee (ER PIAC) to identify leading patient satisfaction practices in hospital Emergency Departments. We are seeking examples of successful innovations or changes that have improved patient satisfaction in the Emergency Department at your hospital.

A. Hospital Profile

1. Name of hospital, including site if applicable:

2. Name and contact information of person completing questionnaire:

3. Number of inpatient beds at this hospital site:

4. How many Emergency Department visits did you have in 2009/2010?

B. Improvement Information

1. What was the specific reason for attempting to improve patient satisfaction?

2. Please describe the change(s) you made in detail (if possible).

3. How was this accomplished/implemented (e.g. committees/task forces; Rapid Cycle/PDSA; Lean methodology; other structured improvement strategy; physical plant re-structuring)?

4. How do you know the change(s) succeeded in improving ED patient satisfaction?

5. **What was the timeline for the change project?**

6. **What resources were required?**
   Staff:

   Operating $:

   Other:

7. **Has the change been sustainable? If so, how long? Why/why not?**

8. **What are the costs associated with sustainability?**

9. **What advice (i.e., lessons learned) would you give to other hospitals?**

10. **What were some of the critical success factors?**

11. **What were some of the limiting factors?**

12. **Do you have any specific recommendations for the OHA and the ER PIAC?**

13. **Is there anyone else we should speak to within your hospital or externally?**

Appendix 2 Summary of Interviews

15 interviews conducted
Canada: 5
USA: 5
NHS: 2
AU: 3

Total contacted: 32

One hospital in Quebec declined interview, one in BC was unable to participate and there was no response from the remainder (11) despite several attempts and multiple methods of contact.

Number of inpatient beds:

Range of 125 to 880 beds

How many Emergency Department visits did you have in 2009/2010?

Range of 12,000 to 100,300 visits

Country	Hospital	Inpatient beds	Number of ED visits
Canada	Northern Lights Regional Health Centre, Fort McMurray AB	180	73 000
	St. Paul's Hospital, Vancouver BC	500	64 000
	Victoria General Hospital, VIHA, BC	340	40 000
	Surrey Memorial Hospital, Surrey, BC	450	87 247
	Vernon Jubilee Hospital, Vernon BC	125	32 6000
USA	Vanderbilt University Medical Centre, Nashville TN	600	55 000
	Meriter Hospital, Madison WI (non profit community hospital)	337	42 627
	VA Boston Healthcare System, West Roxbury, MA	172	12 000
	Miami Baptist Hospital, Miami FL	680	100 330
	Banner Desert Medical Centre, Mesa AZ	594	88 424
AU	John Hunter Hospital, New Lambton, NSW	880	63 000
	Princess Alexandra Hospital, Woolloongabba, Queensland	712	50 000
UK	Queen Elizabeth Hospital, Gateshead	420	62 000

B. Improvement Information

1. What was the specific reason for attempting to improve patient satisfaction?

Improved patient satisfaction / patient experience: Northern Lights, Surrey Memorial Hospital, Miami Baptist, VA Boston, Banner Health, State of Victoria General Hospital, Victoria, VIHA; Gateshead Queen Elizabeth Hospital, UK

Optimize patient flow, quality and safety: St. Paul's Hospital; Banner Health

Improved wait times: 2 BC hospitals, Vanderbilt Medical Centre, Meriter Hospital, John Hunter Hospital, NSW AU

2. Please describe the change(s) you made in detail (if possible).

Hospital	Strategy	Comments	Results
Northern Lights	Added 2nd triage RN and LPN Developed and used protocols in triage Added computer to triage and clerk Electronic triage tracer Ortho tech in fast track at peak times (1400 to 2400 h)	Optimize use of MD time (MD shortage, single MD) Communication device to track patient flow, location of staff and patients Improved patient flow in fast track	Decreased wait times Arrival to triage time decreased Improved patient satisfaction scores
St. Paul's Hospital	Set up diagnostic treatment unit (4 beds), NP-driven, uses order sets, patient LOS <48 h Over-capacity protocol Fast tracking of CTAS 4s & 5s, and some CTAS 2 and 3 patients	Prevented unnecessary admissions System-wide response for access block Match capacity to demand: open more bays/rooms, add staff	Reduced inpatient admissions Reduced ED ALOS Reduced LWBS rate Reduced wait times for less urgent patients

	with clear guidelines for use and staffing models (dedicated staffing including clerk) Quick registration and triage completed together. Triage registration optimized using computerized system Completed bedside registration after care has started Rapid assessment zone for ambulatory CTAS 3 patients Nurse-initiated protocols CPOE and real-time patient tracking board	PRN	Decreased time to physician Improved patient satisfaction scores
Victoria General Hospital, Victoria, VIHA	Initiated patient streaming Quick triage Hosting all ambulatory patients in 1 area regardless of acuity, examined in separate treatment room and returned to dedicated internal wait area		Reduced wait times
Vernon Hospital	Rapid assessment zone Introduced use of internal wait area close to treatment and assessment area		Improved patient satisfaction Increased access to care Reduced ED LOS
Surrey	Rapid Assessment	Use data and patient	Improved patient

Memorial Hospital, FHA	Triage (Super Fast Track) with physician between noon and 10 pm Overcapacity Protocol Bed tracking system Separate waiting rooms for Minor, Super Fast Track and RAZ 52" monitor tracks patients in ED and their progress (lab work) Electronic Medical Record for clinicians Nurse Medical Directives at triage	satisfaction info to motivate staff-posted daily - very successful Will be financial incentive for inpatients soon Pulls patients from ED Are considering letting patients have access to real time information Pain protocol, xrays	satisfaction (MD seen sooner); CTAS 4 & 5 move quickly through the system; decreased LWBS 19% increase in capacity for CTAS 1, 2, & 3; decreased patient complaints Increased patient satisfaction
Vanderbilt University Medical Center	Team triage (RN, MD, Paramedic), operates between 1100-2300 h Pull through triage 2300 – 1100h (patient proceeds immediately to an available space) Integrated computerized triage application Quick registration initially, remainder done in wait area or bedside Computerized	Physician orders are placed at triage	Shorter wait to see physician: patient sees a doctor within 10 minutes of arrival Decreased LWBS rate to <1% ED LOS constant despite increase in number of patients ALOS in 2007 = 358 minutes Improved patient

	whiteboard Discharge follow-up phone calls		satisfaction (97th percentile; 100th percentile nursing courtesy and respect for patients Award for teamwork and overall quality in 2007
Meriter Hospital	Quick bedside registration collecting 4 pieces of Info Use a pod system for staffing, assign staff to room Shortened triage process, assessment and discharge	Added RN and paramedic staff since MD could diagnose and order faster than orders could be initiated	Patient satisfaction scores at 90th percentile within 6 months of changes Employee turnover declined Recognized as Top 100 Hospitals in Nation
Boston VA Hospital	Fast track (30% of patients) Match staffing to demand Electronic order sets and protocols for 5 types of acute patient conditions Bed control using a bed czar, use 0900 bed huddles Electronic tracking board "Pull" system for admission to floors		No ambulance diversions since July 7, 2006 LWBS rate = 0.5% Median time to place patient on floor after decision to admit is 49 minutes ED ALOS=2 h 36 minutes
Miami Baptist Hospital	Purposeful hourly rounding using communication protocol (AIDET) Follow-up discharge	Studer Group member, patient-centric environment	Patient satisfaction at 99th percentile from 6th percentile over 4 years Reduced LWBS

	phone calls Focused on educating medical staff to increase buy-in to changes		from 7.5% to 3.06%
Banner Desert Health	Quick triage and preliminary registration Team triage, registration process completed here Rapid treatment/assessment zone for low acuity patients and use of continuing care wait area (results pending)		Significant decline in wait times, ED LOS decreased 14% (from 310 minutes to 258 minutes) and LWBS rates (reduced from 7.1% to 1.7%) No increase to system revenues yet increasing patient volumes Reduced door to doc time from 117 to 49 minutes
Victoria State AU	Communication enhancement strategy: signage improved, conducted communication workshops for front line ED staff, use volunteers; improved physical amenities of wait areas		
John Hunter Hospital	Streaming patients according to acuity and complexity. Emergency Express = Fast track Introduced NP role (Advanced Clinical Nurse) Introduced Emergency	24 hour observational unit to prevent hospital admissions, most admissions after 1600 h, 50% discharged by noon next day	2006 ED LOS 3.6 hours to 3 hours LWBS from 4.0% to 1.5% Clinical redesign improved access block, LOS, triage wait times and LWBS rates Developed strong

	Short Stay Unit (16 bays)		culture of change within the team
Princess Alexandra Hospital	Developed poster "Why am I waiting?" Developed patient information leaflet Distribute ED contact cards to all patients and relatives Established Patient Focus Group		Good feedback from staff and patients No formal evaluation to date
Queen Elizabeth Hospital, Gateshead UK	Process mapping using LEAN method: reduced patient steps, standardized & increased equipment on carts, standardized and consolidated medications and dressing supplies; introduced phlebotomy carts Medical directives for RN to improve patient analgesia at triage RN training to assess and request xrays at triage Health care assistants used to porter/move patients	Improve flow and freed staff to spend more time with patients	Improved patient satisfaction from quarterly audits

3. How was this accomplished/implemented (e.g. committees/task forces; Rapid Cycle/PDSA; Lean methodology; other structured improvement strategy; physical plant re-structuring)?

Rapid Cycle/PDSA
LEAN methodology
Physical plant re-structuring

4. **How do you know the change(s) succeeded in improving ED patient satisfaction?**

   See chart above

5. **What was the timeline for the change project?**

   Incremental changes. Range of six months to one year to plan. Some had no formal time line.

   Ongoing progress with regular modifications

6. **What resources were required?**

   Staff: some added staff for fast track which works best with dedicated staff; Miami added porters; Surrey added a physician at triage (expensive)

   Operating $:

   Other: computers added; some hospitals experienced higher than normal turnover of staff due to significant change efforts and incurred costs to recruit and orientate; staff training costs

   Some hospitals received government incentives for improvements and use money to pay for costs associated with changes, some received project funding from various sources

7. **Has the change been sustainable? If so, how long? Why/why not?**

   Changes need ongoing reinforcement and the change process never stops. The hospitals most skilled with change and who were able to embed the changes into the organizational culture had the best sustainability. Banner Health System described struggles over the whole system but hope that changes to the orientation and performance management system will help sustain changes.

   Hospitals helped sustainability by regular data mining, sharing performance indicators regularly with staff and assigning someone to be in charge of the ongoing efforts.

   Tools: Education, training, ongoing monitoring

8. **What are the costs associated with sustainability?**

   Many hospitals say the ongoing costs have been absorbed into day-to-day operating costs. Most were unable to quantify exact costs.

   Meriter: “Ongoing large time commitment required to build and sustain the huge cultural shift to a service excellence philosophy”

VA Boston: “just a cultural change in our way of thinking”

Banner: “ongoing statistical collection and analysis and training/orientation”

John Hunter: “dedicated person to continually review all process and adapt accordingly”

9. What advice (i.e., lessons learned) would you give to other hospitals?

Northern Lights: staff need lots of support throughout change; seek out the opportunities

St. Paul’s Hospital:

- Have a clear goal in mind with what you are trying to achieve – don’t take the change lightly. Clearly translate what and why you are doing into plain clear bedside understandable language – i.e. Increased time to pain management – improved time to antibiotic and why – when staff understand what it means to the patients and the staff it really helps. Stories with data help to connect with the heart and the mind – you need to activate the emotions with the mind to engage the staff.
- Inform, Inform, Inform and then educate, educate, educate constantly. Having morning huddles every day for 2 – 3 weeks helps. Clear presence from leadership with facts is a must so the staff does not start rumors, make assumptions, and therefore undermine the process. It is usually 15% of staff that disrupt everything, so either get them on board first – CHAMPIONS- or be prepared to deal with trouble that may lead to discipline (not the best but necessary in some cases)
- Involve the staff where time permits – they will help to own the process and change will occur a little easier. It is difficult when you have huge numbers of staff – Kaizen events with volunteers or invitees from multidisciplines are useful to process map and problem-solve.
- Expect a long process. It is not for the faint of heart for sure. But it is over the longer haul extremely rewarding.
- Look to emerging leaders and social networks in your system for help. How can you join two people together who may help leverage each other in the process and help the cause. Network building is huge to sustainability. It is not good if once the project people are pulled, the project collapses.

Victoria General Hospital, Victoria, VIHA: it doesn’t matter what the change. Everyone has to be on board for it to last

Vernon Jubilee Hospital: plan for startup costs, get the funding first!

Surrey Memorial Hospital: involve front line staff where the change is occurring; watch the process, get feedback, make changes and communicate, communicate, communicate to the front line staff

Vanderbilt:

- Challenge conventional wisdom about triage: Triage has been performed the same way for 50 years. Patients see triage as a barrier to seeing the physician; therefore, hospitals should consider how triage can enhance patient service. If ED beds are available, then patients can receive treatment in the ED, but when beds are not available they can be treated in the triage area.
- Assign attending physicians to the triage role: Team Triage should be staffed by experienced physicians with an interest in this type of care, rather than by a multitude of physicians who are rotating through the role. In addition, Team Triage works best when the triage area is staffed by attending physicians rather than medical residents, who tend to order unnecessary tests that may keep patients from quickly moving to the next step (release or a treatment room).
- Promote teamwork: Team Triage requires all staff to work together. Promote teamwork by encouraging staff to speak highly of each other when talking to the patients. When nurses overhear a physician talking positively about them, they feel very validated, and the patient feels that they are in very good hands. Departmental successes should be celebrated with the inclusion of all team members.
- Expect some resistance: Team Triage requires a change in traditional employee roles, which may lead to job dissatisfaction; tips for enhancing staff support include the following:
    - Physicians: Doctors who are used to seeing patients one at a time in a treatment room may dislike the more hectic atmosphere of the triage area. However, if a sufficient number of doctors favor the new system, physicians may be able to choose whether they want to work in the triage area or the treatment room.
    - Nurses: Nurses who are used to making initial triage decisions may be unhappy about relinquishing this responsibility to physicians. There is no magic bullet for dealing with this dissatisfaction, but one can emphasize that Team Triage serves a vital purpose (enabling patients to see a doctor more quickly), that Team Triage reduces nurses' legal liability, and that nurses retain triage decision-making authority during off-peak hours.
- Share success: Make sure all staff are aware of improvements that result from Team Triage, such as decreases in patient waiting times and walkouts.

Meriter: allow plenty of time to shift the culture. You need to be very skilled in change management. The whole system/hospital needs to be on board and accountable. Standardize discharge times and benchmarks/standards for turnaround times are needed to support changes to ED throughput.

Boston VA:

- A systems approach to managing flow for VA Boston Healthcare System has allowed us to increase the throughput of the ED, meeting our goal of increasing access to our tertiary services. We have much more to do but we are heading in the right direction. It really is a journey that keeps taking us towards a better place.

- A systems approach to solving flow problems is an absolute necessity. Our teams have come to realize the interconnectedness of units and the need to pay attention to the upstream and downstream effects of changes (i.e., changes in one area and the effect it may have on another).
- Involving those at the front line is essential. As issues were identified by the ED Flow Team, they invited those who work in other areas to be part of the solution – one way to get the buy-in!

Banner: System-wide, the split flow model has worked to move patients in and out more quickly and has increased patient satisfaction, improved Door to Doc times, ALOS. Some facilities struggle to completely implement the model. The physician component is often a problem. At Banner, varying physician groups are contracted to provide ED coverage. Frequent problems include reluctance to do joint triage and committing to a second provider in order to use the volume-driven Split Flow model (e.g. facilities with 60-65K visits annually require coverage by more than one physician. With the US system driven by profit, many agencies attempt to provide coverage with only one physician. Banner intends to change contract language to gain more commitment, either using a financial incentive for physician Banner yearly profits or making the contract insist that the physician groups meet patient satisfaction targets, and statistical targets for ALOS and LWOT.)

RN staff must also buy into the model. The new orientation model will provide training and practice into scripting for the RNs and clerical staff and volunteers. Banner believes that providing scripting for the patients and families will promote the model. Users need to understand that this experience will be novel with the patient not necessarily placed into a bed but instead moving from room to room to receive care and information.

Change management is the issue. Sustainability requires attention/constant reinforcement to make sure staff does not slip back especially an issue with turnover of staff. Staff will hold patients in the INTAKE area rather than move to the Continuing Care Area.

Keep collecting and monitoring statistical data and share with staff. The model is logical and makes sense to staff but they need reminding.

Use the D2D toolkit. You simply need to plug into your own numbers to start the model. Then train all of the staff.

John Hunter Hospital: Change is great but you need a dedicated leader to achieve the continued result, to keep everyone motivated.

Gateshead Queen Elizabeth Hospital, UK: Communicate, communicate, communicate!

10. What were some of the critical success factors?

Northern Lights: leadership from senior management, collaboration with other departments, use good change management practices

St. Paul's: Leadership support; protected time for resources involved in project; extensive planning and rollout; information and education for staff

Victoria General Hospital, Victoria, VIHA: physician engagement: what is in it for them?

Vernon Jubilee: staff buy-in is critical; sharing data with staff. Physician input from ground level as well as front line RN involvement

Vanderbilt:

- Experienced MDs. Other agencies have used mid-level providers but have not had the sustainable results we get
- Enough support staff. MDs with a pen can write faster than the support staff can keep up
- Data to determine the staffing plan
- FORWARD FLOW, i.e. the patients and family/support persons feel they are moving, they see the physician quickly. They move into the treatment area, and waiting areas, wheelchairs to wait going to radiology. This is the critical factor in lowering the LWBS rate. The patients and family/support persons perceive something is happening, they are not just waiting and this helps patient satisfaction.
- Follow-up phone calls to discharged patients by RNs(we make calls the morning after a visit to the ED). We only reach about 30% of the patients; most have returned to work. The direct feedback to staff is invaluable.

Meriter:

- Top administration needs to understand and support the significance of the problems and the magnitude of the "fixes". The CEO needs to support the ED changes as an organizational priority and commit to making it happen.
- Tight system measures are needed. Decide what needs to be reported, what are the tight course corrections that need to happen.
- Affirm ALL progress with staff. Ensure staff know what service recovery looks like and provide any needed education and support; the staff need to be willing and able to make the changes.
- Some monetary resources will be needed to support changes, e.g. meeting time, equipment, some facility redesign may be needed

Miami Baptist: We have a staff eager to learn and to deliver great care. They simply lacked the tactics and resources that we provided via education, courses in Emergency nursing. They have the natural ability to do the right thing and just need support.

We have emphasized that nursing is scientifically based and we have lost the idea that nursing is a service-oriented profession. Thinking needs to shift to help the RN understand how to help the patient, to be less of an authority and to treat the patient as a guest with the RN less of an authority/expert.

Banner: 2 aspects addressed: 1.People: facilitated acceptance of changes among the individuals affected: created organizational structures to support the implementation work and coordinating with other activities that affect the ED; 2. Process: analyzed the process for adaptation to unique patient acuities and volumes. Created Door to Doc (D2D) tools for implementation that addresses both the process and people aspects.

State of Victoria, AU:

- Identified as a Government priority and investment
- Executive level support
- Strong local leadership: local department managers supported to uptake initiatives
- Clinician engagement
- Evidence based and consumer involvement in identification and development of initiatives
- Frontline clinician engagement in development, pilot testing and implementation strategies
- Complementary initiatives: not just a single intervention
- Standardization and consistency: set similar expectations yet allowing for some adaptation to local context
- Combination of funded and organizational support system wide
- Local ownership of implementation and ongoing clinical governance

John Hunter Hospital: hospital and area wide commitment to our values are essential for ongoing sustainability

Gateshead Queen Elizabeth Hospital, UK: making staff see the service from the patient's perspective

11. What were some of the limiting factors?

St. Paul's Hospital: cultural barriers; physician and other staff push-back and resistance; financial and people resources

Victoria General Hospital: the old ways of working

Vernon Jubilee: staff not buying in

Surrey Memorial Hospital: Those who resist the change; sharing the data helps

Vanderbilt: nurse education +++ for RN changes in triage; facility; more staff needed

Banner:

- Lack of a formalized orientation program to explain the Split Flow model, psychologically a struggle for RNs re how they feel about model, hard to tell patient re continual movement, OK if follow script that this experience will be a bit different
- Need to manage the message but patient satisfaction is high with the model
- Some hospitals struggle with physical space to follow the model, e.g. one hospital converted the main lobby area for use by a patient registration clerk at a desk and the RN behind a patient curtain to provide the quick look.
- Patients must understand how the new model works which is very dependent upon appropriate scripting by hospital staff and physicians
- Physician buy-in to providing 2nd provider is critical
- Lack of space for family/friend support in many facilities although this varies according to facility and time of day busyness.

Miami Baptist: old facility but you have to adapt and just deal with the challenges!

Meriter:

- The organization needs to be ready and willing to change the culture. Our people were not ready to buy in at first.
- Administration needs to be willing to execute changes. Asking staff to move on was difficult and sometimes costly.
- Administration at the top needs to be willing to support all the changes and the resulting challenges and required actions.
- Money

John Hunter Hospital: keeping up with the changing environment

12. Do you have any specific recommendations for the OHA and the ER PIAC?

Vanderbilt: Allow plenty of time for culture change. Don't stage changes just do it all at once.

Miami Baptist: Allow staff to drive the rapid test of change and try new ideas even if out of the box. Have a culture of innovation and be ready to modify what does not work. Keep moving forward as a team.

Meriter: data is needed to help plan the change and to help staff and physicians to move.

John Hunter Hospital: There needs to be a dedicated change leader to drive the change.

Appendix 4 Critical Success Factors

Critical Success Factor	Source
Need a unified department-wide approach that looks at all aspects of patient care to improve patient satisfaction	McGrath et al, 2008 Interviews, Meriter Hospital, 2010; John Hunter Hospital, 2010
Senior leadership support	Olshaker, 2009 McGrath et al, 2008 Wilson & Nguyen, 2004 Macleod et al., 2008
Committed and visible leadership	Boudreau et al, Alberta Children's Hospital, ACAHO, Cheng, Procter & Flores, 2009, St. Paul's Hospital, BC, ACAHO Interviews, Meriter Hospital, 2010: State of Victoria, AU, 2010
Strong support from Senior Leadership Team / Executive engagement	Cooke, 2005
Aligning senior leaders as sponsors or champions	Walrud, Tomallo-Bowman & Maguire, 2004
Clear goal, consistent plan	Cooke, 2005
Respected clinician champions	Olshaker, 2009; Cooke, 2005
Clinical champions for support	Carrus, Corbett & Khandelwal, 2010 Wilson & Nguyen, 2004
Clinical leadership / Credible support team	Cooke, 2005
Front line staff lead the way in designing solutions that improve the patient experience	Dickson et al, 2009; MacLeod et al., 2008; Eitel et al., 2008
Involve the physicians and clinical and front line staff	Macleod et al., 2008
Keeping accountability, ownership and empowerment close to the front-line staff who have the expertise in making the best decisions about patient transitions within the hospital	Lozon et al, 2009, St. Michael's Hospital Corporate Patient Flow Performance, ACAHO

Drawing on staff experiences engages staff and empowers them to effect meaningful change.	Cameron et al., 2010
Early and visible successes Incremental milestones Small changes are tested, refined or deemed not working and aborted thus fostering a willingness to be creative in the approach to change	Olshaker, 2009 Cooke, 2005 Walrud, Tomallo-Bowman & Maguire, 2004
Support and reward for change Incentives Monetary incentive	Olshaker, 2009 Cooke, 2005 Walrud, Tomallo-Bowman & Maguire, 2004
Consistency with strategy and other systems alignment: information; reward; evaluation A focus on patient care Making transparency an organizational value Department culture of continuous improvement Stay focused on system-wide issue with numerous competing organizational issues	Olshaker, 2009 Carrus, Corbett & Khandelwal, 2010 Wilson & Nguyen, 2004 Boudreau, et al, 2009, Alberta Children's Hospital, ACAHO Walrud, Tomallo-Bowman & Maguire, 204
Excellent execution of change management skills	McGrath et al, 2008
Gather staff buy-in, usually through involvement Physician and staff involvement with data-driven methodology	McGrath et al, 2008 Interviews, Vernon Jubilee Hospital, 2010; Vanderbilt University Medical Centre, 2010; State of Victoria, AU, 2010 Boudreau et al, 2009,Alberta Children's ACAHO Interviews, Victoria General Hospital, VIHA, 2010: State of Victoria,

	AU, 2010
Must have multidisciplinary input	McGrath et al, 2008 Wilson & Nguyen, 2004
Plan for sustainability: ongoing meetings, monitoring	McGrath et al, 2008
Focus on sustainability from the support	Carrus, Corbett & Khandelwal, 2010 Boudreau et al, 2009, Alberta Children's ACAHO
Clearly identified process owner And Performance management	Cooke, 2005
Focus on sustainability measures from the beginning	Macleod et al., 2008
Regular Communication	Carrus, Corbett & Khandelwal, 2010 Boudreau et al, 2009, Alberta Children's ACAHO Interview, Gateshead Queen Elizabeth Hospital, UK, 2010
Constant evaluation and reporting results back to staff and Listen to staff concerns and follow up in a timely manner	Cheng et al, St. Paul's BC ACAHO, 2009 Interview, Meriter Hospital, 2010
Communicate, communicate, communicate	Macleod et al., 2008
Using formal improvement methods Success in rapid process improvement cycles is less tied to orthodox prescription to one methodology as it is to the strength of staff engagement, facilitation and using a common approach that embeds the best elements that various methodologies have to offer	Wilson & Nguyen, 2004 Lozon et al, 2009, St Michaels Toronto Corporate Patient Flow Performance ACAHO
Lead with quality and safety	Macleod et al., 2008
Committing to rigorous metrics	Wilson & Nguyen, 2004
Performance measures widely available in real-time system	Boudreau et al, 2009, Alberta Children's ACAHO
Use of data to shape delivery plans	Cooke, 2005 Interview, Vanderbilt University

	Medical Centre, 2010
Detailed resources to support implementation Add or reallocate resources Protected time for resources involved in project	Boudreau et al, 2009, Alberta Children's ACAHO Walrud, Tomallo-Bowman & Maguire, 2004 Interviews, Vanderbilt University Medical Centre. 2010; Meriter Hospital, 2010; Gateshead Queen Elizabeth Hospital, UK, 2010 Interview, St. Paul's Hospital, Vancouver, 2010
Recognize the need to incorporate the teaching mission, as appropriate. Staff need to know their role in the change effort. Education/training for physicians and staff	Macleod et al., 2008 Interviews, St. Paul's Hospital, Vancouver, 2010; Meriter Hospital, 2010; Miami Baptist Hospital, 2010
Extensive planning and rollout for change	Interview, St. Paul's Hospital, Vancouver, 2010
Consumer involvement Making staff see service from the patient's perspective	Interview, State of Victoria, AU, 2010 Interview, Gateshead Queen Elizabeth Hospital, UK, 2010