Following the Leader

URGENT MATTERS LEARNING NETWORK II

URGENT Matters

Robert Wood Johnson Foundation

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF PUBLIC HEALTH AND HEALTH SERVICES

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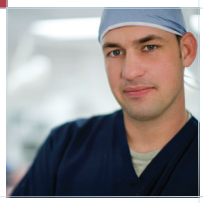


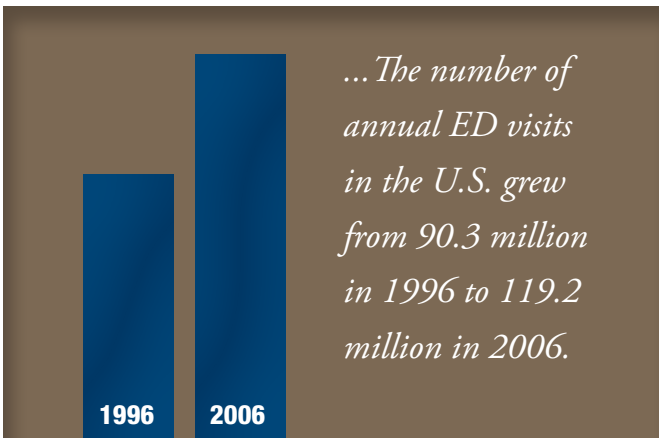
In today's increasingly strained health care environment, our nation's hospital emergency departments (EDs) provide a critical primary and emergency care safety net for Americans in every community. Yet over the last decade, studies have deemed the country's EDs to be at a breaking point, weighed down by crowding as patient volumes have steadily increased, while at the same time, capacity has decreased.

According to the U.S. Centers for Disease Control and Prevention, the number of annual ED visits in the U.S. grew from 90.3 million in 1996 to 119.2 million in 2006. Concurrently, the number of hospitals with operating EDs in the United States declined from 4,019 in 1991 to 3,833 in 2006. The result was that the number of ED visits rose thirty-two percent, while the number of EDs across the country dropped almost five percent – leaving an increasing number of patients concentrated in a smaller number of EDs.[i]

Patients entering a crowded ED face longer wait times for care, often resulting in an increased number of patients leaving the ED without being seen. Research has also shown that increases in ED crowding are associated with increased wait times for painkillers and antibiotics, greater mortality and more adverse health care events. The high degree of clinical uncertainty with patients presenting in an ED combined with the disorder of a crowded ED can contribute to poor quality care. With so many patients visiting the ED annually, millions of Americans may not be receiving safe and timely treatment.[ii]

On the Frontlines of a Growing Crisis

Recognizing this growing crisis, the *Urgent Matters* initiative was started. Initially funded by the Robert Wood Johnson Foundation (RWJF) in 2002 and housed at the Center for Health Care Quality at George Washington



University Medical Center, the initiative has worked to identify and spread innovations designed to eliminate or reduce ED crowding.

Beginning with the 10 hospital Learning Network I (LNI) in 2003, Urgent Matters provided an environment in which these institutions could develop and test strategies to improve patient flow. Hospitals reported on 17 standardized performance measures, which allowed them to evaluate the impact of the new innovations. The improvement process was facilitated by web-based learning, site visits and joint meetings with all of the LNI hospitals.

Urgent Matters demonstrated that hospitals could dramatically improve patient flow and decompress their EDs without investing significant financial resources.

Bursting at the Seams, the sentinel publication of the lessons learned in LN I, documented the seven factors critical to the success of implementing change to improve ED crowding in a learning network framework:

1. Recognize that ED crowding is a hospital-wide problem, not an ED problem.
2. Build multi-disciplinary, hospital-wide teams to oversee and implement change.
3. Recruit a "champion."
4. Guarantee management's support.
5. Use formal improvement methods.
6. Commit to rigorous metrics.
7. Make transparency an organizational value.

Building on the lessons learned from the first network of hospitals, Urgent Matters shifted its focus to national educational activities designed to find and spread strategies to improve patient flow and reduce ED crowding. Over the course of six years, hospitals from across the United States shared their innovations, which facilitated the development of the Urgent Matters Toolkit.

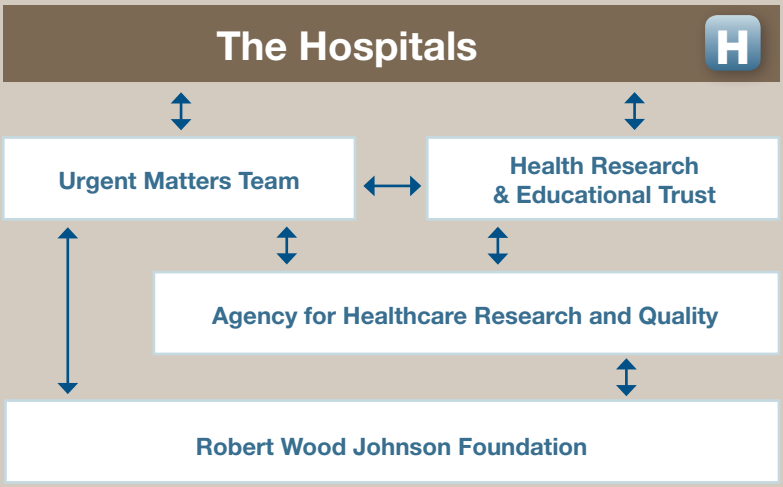
The toolkit of best practices was developed based on expert interviews and site visits with dozens of hospitals. It includes guides to and examples of data collection methods, strategies for changing workflow, ways of achieving organizational buy-in and strategies for spreading and sustaining change throughout the organization. The toolkit now contains more than 52 strategies implemented to improve ED crowding.

Urgent Matters has since become a valued resource center and disseminates best practices found in hospitals nationwide through its e-newsletter, conferences, Web seminars and special reports.

A Renewed Wake Up Call

In 2006, the Institute of Medicine (IOM) released its landmark report "Future of Emergency Care: Hospital Based Emergency Care at the Breaking Point." The IOM report drew heavily on the Urgent Matters experience and placed the crisis of ED crowding on the national agenda. The IOM report charges hospitals to reduce crowding by improving efficiency and patient flow using available strategies and tools and recommends the development of evidence-based indicators of emergency

F1 Relationships between Participating Organizations within the LNII Project



care system performance. Both these elements are critical for improving patient flow and reducing ED crowding and thus form the foundation of Urgent Matters Learning Network II (LNII).[iii]

Answering the IOM's call, RWJF and the Agency for Healthcare Research and Quality (AHRQ) partnered with the Health Research & Educational Trust (HRET) of the American Hospital Association and George Washington University to launch the next generation of Urgent Matters.

Using the lessons learned from the original Urgent Matters, LNII operationalized the recommendations of the IOM by testing and evaluating selected improvement strategies within a hospital learning network environment. Under this program, six hospitals were competitively selected by HRET, one of AHRQ's 15 ACTION partnerships (Accelerating Change and Transformation in Organizations and Networks) to participate in an 18-month learning network designed to foster shared learning and innovation to improve ED crowding.

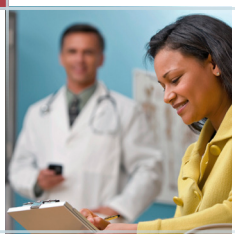
HRET and the Urgent Matters Team leveraged their considerable resources and expertise to guide the LNII hospitals throughout the project. The team oversaw and coordinated the activities associated with the day-to-day operations of LNII while also providing technical assistance to the hospitals. HRET worked closely with the hospitals to develop data collection and evaluation plans relevant to the individual strategies. Figure 1 represents the relationships between participating organizations within the LNII project.

The Urgent Matters LNII project had three significant and far reaching goals:

1. Rigorously evaluate the implementation of strategies for improving patient flow and reducing ED crowding within the context of a hospital learning network;
2. Advance the development of standard performance measurement in the ED; and
3. Promote the spread of promising practices to a wider audience and variety of hospitals.

This report details the success and lessons learned by the LNII hospitals. The first section will present case studies of the six hospitals' use of different strategies to improve flow in their facilities. While a formal, external evaluation of these strategies is being conducted by the HRET, the case studies provide first hand observations of the challenges and preliminary successes as reported directly to UM by the hospitals. The case studies will be followed by a discussion of the results of the field test of the ED performance measures. The report will conclude by detailing the dissemination of the learnings from Urgent Matters.

Goal #1



Rigorously evaluate the implementation of strategies for improving patient flow and reducing ED crowding within the context of a hospital learning network.[iv]

Good Samaritan Hospital Medical Center is a 437-bed not-for-profit, teaching and community hospital located on Long Island, NY. The hospital receives more than 101,000 ED visits annually. It is the busiest ED on Long Island, yet had gone on ambulance diversion only once in the last three years.

Impetus for Change

In 2007, Good Samaritan's Left-Without-Being-Seen (LWBS) rate of 3.5 percent was higher than acceptable to hospital administration. To address this issue the hospital implemented a plan, and the LWBS rate dropped by nearly 45 percent. Though a dramatic reduction, this rate plateaued over the next year at two percent, and then began creeping back upward. When the staff drilled down on this data, it clearly demonstrated the ESI 3 patients represented the most significant subgroup within the LWBS data. In fact, over 75 percent of all walkouts were patients triaged to an ESI 3[v] category, and most of these patients presented with one of six chief complaints: abdominal pain, vaginal bleeding, pregnancy complication, vomiting, flank pain and headache.

As such, Good Samaritan needed to create a solution for this subgroup of patients. These were patients not sick enough to be brought back immediately into their crowded ED, yet not so straightforward that they could be seen in the Fast Track. Thus, the MidTrack concept was developed to accommodate this specific patient population.

The MidTrack (MT) planning team needed a space to locate their new care delivery system, and the answer was right above them. The Ambulatory Surgery Unit (ASU) was located directly above the ED, and this area was open from 6 am to 6 pm, with a significant decrease in census at 4 pm. The planning staff approached hospital administration and approval was obtained to use this area after 4 pm. The ASU staff supported this novel use of their space.

The MT was a new service delivery line, and very few EDs had developed a separate "patient stream" for ESI 3 patients that was distinct and autonomous from the main ED. MT staffing was crucial to its success, because the skill mix of ED providers had to match the needs of this type of patient.

Daily Operations of MidTrack

The MT physician was stationed in the triage area, outside the main ED. When the triage nurse identified a MT patient, the physician was right there to begin evaluation and treatment. The physicians chosen to work this area had to be known as thorough but not excessive in their evaluation and management of complex, low-acuity patients. Lab work was performed immediately, x-rays were ordered and the patient was escorted to the MT area.

Upon arrival, the patient was placed in a comfortable recliner instead of the traditional ED stretcher.

Once situated in the MT, a Nurse Practitioner (NP), Licensed Practical Nurse (LPN), and ED Tech continued the evaluation and management initiated by the MT physician.

One of the benefits of the MT design was that the MT physician often reevaluated the patient in the MT area, usually while rounding with the NP. This continuity distinguished the MidTrack design from other physician-in-triage models, where a lack of continuity is a concern.

After the evaluation and treatment were completed, the NP typically discharged the patients. The relatively few patients that were admitted from MT were admitted per the usual ED routines.

Implementation

Prior to implementation, the MT planning team developed protocols regarding which patients could be seen in MT, and the policies and procedures needed to govern its operation. There were multiple challenges encountered during implementation, including:

- Time of Operation—Since MT did not operate 24 hours per day, the MT team found it difficult to set up the opening and closing routines along with monitoring the transition of patients to the main ED when the MT closed.
- Triage nurses would "save patients" for MT. Sometimes there were 4-6 patients waiting up to two hours for MT to open.
- When the main ED would get busy, the triage nurses were sending inappropriate patients to MT in an attempt to decompress the patient volume.
- ED Techs were taking patients to MT prior to drawing labs, causing delays in test results.

Reported Successes

Data supplied by Good Samaritan documents the success of MT. The stimulus to change for MT was the unacceptable LWBS rates experienced by the hospital, and a comparison of three LWBS rates before and after MT demonstrates improvements in these rates:

	Before MidTrack	After MidTrack
LWBS-all ED patients	2.6%	1.9%
LWBS-all ESI 3 patient	4.9%	3.1%
LWBS-MidTrack patients	7.0%	3.9%

There were additional benefits of the strategy reported by the hospital:

- Positive response from patients and staff
- Reduced stress levels in the ED
- NP role more clearly defined
- Hospital renewed focus on throughput

Hahnemann University Hospital is a 540-bed private, teaching hospital in Philadelphia, PA. The hospital receives more than 40,000 ED visits annually.

Impetus for Change

Hahnemann used a four-level triage system and found it was applied inconsistently, therefore becoming unreliable for accurately evaluating patients. The triage criteria were not clearly defined which caused variations in triage level assignment depending on the individual triage nurse. Patient flow was hampered by the four level system due to this inconsistent mistriaging of patients. This occurred most frequently with the low-acuity patients, resulting in long waits and many patients leaving without being seen. This metric was the primary impetus for change within this project, because Hahnemann's LWBS rate was 15 percent

when they joined LNII. For these reasons, Hahnemann elected to implement the Emergency Severity Index (ESI) as their triage tool.

Hahnemann also recognized that their Fast Track (FT) program was inefficient, and the hospital CEO called it the "Slow Track". There were approximately 300 patients per month evaluated in the FT area. The main problems with their FT program were: inconsistency in nursing staff resource allocation to FT; FT patients not being seen as a priority by nursing or physician staff, resulting in staff being pulled from FT to meet other departmental needs. Additionally, the FT treatment area was used as an overflow area when the main ED became busy.

Emergency Severity Index

The ESI planning team developed an implementation plan for the introduction of ESI. The team reviewed the relevant literature and assembled the teaching tools necessary for successful implementation. Key staff were trained to administer the education, and a schedule was developed for staff training sessions. The planning team solicited physician input throughout the process. There was little staff resistance to the change, because most staff members recognized the weaknesses of the old system. The key to implementation was the identification and training of a key group of nurses to champion the change. These nurses also took on the responsibility of coordinating the audit process to ensure all nurses were using the new system consistently.

The implementation of the ESI system had the desired effects. The new system improved triage validity and reliability as well as created a common language for all ED providers. Yet the gains were not yet at the level desired by the planning team, so additional staff training was implemented. The most important lesson the hospital learned was not to make the implementation timetable too aggressive.

Fast Track Improvement

Hahnemann approached this project on several fronts. As previously mentioned, the FT was frequently robbed of staff and overrun by main ED patients when the main ED became busy. The culture of the organization did not value FT as a separate service line offering a distinct brand of care. Flowing from that culture was a lack of focus on FT resources and processes. The project director implemented changes addressing both sets of issues. NPs were recruited and given "ownership" for the management and evaluation of FT. A core group of nurses wanting to specialize in FT care were identified and trained, and a new staffing mix of technicians and paramedics was set in place. The ED also made a relatively minor structural change (a wall with a door), which separated FT from the main ED, but could be easily accessed by the main ED when FT was closed. Despite not getting all the pieces in place until shortly before LNII ended, Hahnemann experienced substantial decreases in FT throughput times.

Reported Successes

Based on these and several other initiatives, Hahnemann was able to reduce its LWBS rate from 15 percent to five percent over the course of LNII. Lessons learned from their experience in LNII highlighted the importance of senior administration support throughout the project. The project team kept their staff updated on project progress and involved as many staff as they could at different points. Other benefits realized by Hahnemann were:

- Increased awareness of ED crowding as an organizational issue, not an ED issue;
- Demonstrated to staff that process improvement works and improvements can be sustained;
- Increased awareness of the importance of using data to tell the story; and
- Amplified the ED's ability to mentor other departments to improve their patient throughput.

St. Francis is a 230-bed not-for-profit private hospital in Indianapolis, IN and a member of a faith-based health system. It receives more than 60,000 ED visits annually.

Impetus for Change

Long wait and throughput times were causing unacceptable patient dissatisfaction and high LWBS rates. St. Francis found the time patients spent in triage varied from nurse to nurse, so the project team decided to develop a clear, concise and direct policy tool to guide the arrival to triage to bed process based on Rapid Intake and Comprehensive Triage.

Process Features

Upon arrival at the ED desk, the patient was greeted by an RN and registration staff. Together they performed a rapid "quick look" triage and short registration. If a treatment area was available, the patient was taken back and a comprehensive triage assessment and full registration was completed. If a treatment area was not available, these functions were performed in the triage area. Throughout this process change, the ED staff had been working to standardize the comprehensive triage process, making it more uniform across the nursing staff.

Reported Successes

By the end of the LNII, St. Francis had achieved a reduction in their overall length of stay from 207 minutes to 195 minutes, a 6 percent decrease. The hospital team also reported reductions in their LWBS rate from 3.9 percent to 2.6 percent, and a 50 percent reduction in their Left Before Triage rate during the course of LNII. As a result of these decreased rates, they realized a $396,000 increase in revenues. St. Francis also saw an increase in their patient satisfaction scores.

The project team reported their participation in UM LNII "broke the wall" between the registration and nursing staffs. Other benefits included:

- Registration process became more streamlined with far fewer duplications.
- Staff reported that the nursing documentation of care provided on intake had significantly improved.
- CEO and CNO attendance at grantee meetings markedly increased their engagement with ED issues.
- ED staff become more engaged and felt part of the solution.
- Patients lodged fewer complaints about wait times.
- The project team learned the importance of challenging institutional norms.
- The hospital became more aware that ED crowding is a hospital-wide issue.

Stony Brook University Medical Center is a 540-bed public hospital on Long Island, NY. The hospital receives more than 75,000 ED visits annually. The project team selected an ambitious project to improve the ED consult process.

Impetus for Change

Stony Brook staff knew it was taking far too long to get consultants to come to the ED and see their patients, but they only had anecdotal information; so they decided to collect data regarding this process. After the initial data collection process was completed, the team had adequate information about consult requests and completion times to present to the different consulting services to advocate for a new system.

Process

The team developed and then implemented a centralized process for requesting a consult and tracking the consultant response. When an ED physician needed a consult, instead of paging the consult physician, he/she completed a consult request form and gave it to the unit clerk. The unit clerk would then place the call and monitor for the call back. When the consultant called the ED, the clerk would give them the information supplied by the ED physician and transfer the call if needed. If the consultant did not call back within a timely fashion, the clerk followed an escalation protocol. Consultant callbacks became much timelier after a few service chiefs ended up being called. The strategy began as a paper-based process but has begun to transition to an electronic version.

Reported Successes

Although implementation was not easy due to initial resistance by both the ED physicians, as well as the consultants, the project team persisted; and before too long, all physicians were seeing a smoother, more efficient consult process emerge. By the end of the UM project, Stony Brook had seen impressive results. They were completing approximately 725 consults per month and had decreased the ED length of stay of consult patients by one hour. Because of the new process, consultants are now more willing to provide "curbside consults" and have been much more proactive in solving their own staffing issues, which were slowing consults down. Other benefits included:

- Improved phone etiquette and overall professionalism exhibited by unit clerks;
- Improved relationships between consultants and ED clerks;
- Improved relationships between ED and surgery department; and
- Increased staff involvement in the change process provided more positive outcomes.

Thomas Jefferson University Hospital is a 724-bed not-for-profit, private hospital in Philadelphia, PA. The hospital is an urban, academic, Level I Trauma Center that receives more than 55,000 ED visits annually.

Impetus for Change

The project team worked extensively with the ED staff to determine where they should focus their improvement efforts and decided to improve their FT program. The team recognized that their FT program did not function efficiently and was a source of conflict within the organization.

The goal of the FT Program Improvement Initiative was to create a 90-minute FT using Lean Strategy Improvement. Jefferson's three-prong approach included: redesign of the FT team, enhancement of the FT environment and restructuring of patient flow through the FT.

Team Redesign

Jefferson believed their FT staffing mix of one nurse practitioner and one RN or EMT, depending on availability, was inadequate. Another staffing issue involved the practice of "pulling" the FT staff to the main ED. It

was common practice for the RN or EMT to be pulled to another area in the ED, leaving the Fast Track to 'do the best they can' with little to no additional resources provided at that time. This practice increased the length of time it took to see and discharge a patient from FT. The project team designed a FT team that included an RN, EMT, NP and a registrar designated to the area. The team worked to change the overall "culture" thus prohibiting the pulling of FT staff.

Environmental Optimization Strategy

The project team noted supplies, equipment, pharmaceuticals and computer programs needed to care for FT patients were scattered throughout the ED. Using Lean methodology, the staff determined this caused a significant waste of staff time and energy. The team developed supply inventories and par levels to standardize supply availability. They also worked with the IT department to provide the necessary computer programs in the FT area.

Patient Flow Strategy

Jefferson reviewed and revised how patients flowed through FT from arrival to departure. Process changes included the development of time stamps to assess the efficiency of the different sub-processes within FT. They also studied their FT patient population and developed guidelines for what type of patients are appropriate to be seen in FT.

Reported Successes

Jefferson was pleased with the results of their work. By the conclusion of Urgent Matters LNII, they were approaching their 90-minute goal for FT patients. Due to the project team's work establishing specific patient selection guidelines, staffing levels and physical space modifications, the FT was more clearly delineated as a separate service line. This resulted in the ED staff becoming more aware of the contribution FT makes to ED flow. Other benefits included:

- Improved team approach to work;
- Acceptance of a 90 minute goal by medical staff;
- Improved interdepartmental cooperation;
- Created greater "attention to time"; and
- Generated interest within the nursing staff to create a core group of nurses who specialize in FT care.

Westmoreland Hospital is a 301-bed not-for-profit private hospital in Greensburg, PA that receives more than 41,000 ED visits annually.

Impetus for Change

Westmoreland formed a project team, and after reviewing their internal data, concluded that their worst bottleneck was the boarding of admitted patients in the ED.

Westmoreland's ED throughput time for discharged patients was at an acceptable level. They were, however, experiencing significant and repeated delays in getting admitted patients transferred to the inpatient units. A large portion of these delays was concentrated in the hand-off report between the ED and inpatient unit nurses. The project team found there were multiple calls made by both staff before the report could be given. For that reason, the Westmoreland project team developed a new protocol for the report, centering on the new ED/Inpatient Report Tool.

New Process

When the ED nurse was preparing to transfer a patient he/she completed the Inpatient Report Tool and faxed the report to the receiving unit. A follow-up telephone call was then made by the unit clerk to confirm the inpatient unit nurse received the report. The ED and inpatient unit nurse would then have an opportunity to discuss the patient when the ED nurse took the patient up to the unit.

Reported Successes

Westmoreland saw positive results from this strategy. Four months after implementation, they had reduced the median hold time per patient from 130 to 80 minutes. The project team also reported an overall improvement in the relationship between the ED and inpatient unit staffs. This same strategy had been attempted earlier and had not succeeded. With this attempt, the team was more consultative with the inpatient unit and ED staff

and provided a more widely accepted tool. Other benefits included:

- Increased awareness of patient throughput issues, and the need to resolve them from the Housekeeping Department to the Board of Directors;
- Increased focus on ED holds (boarders);
- Increased dialogue between units about flow issues;
- Facilitated the development of a hospital-wide improvement team;
- Increased focus on the need to standardize processes and procedures so the same care is predictable; and
- Increased accountability for process improvement at the level of hospital administration.

Looking Forward

All of the UM hospitals reported learning valuable lessons due to their experience in the collaborative as they developed and implemented their strategies. We asked them to share the lessons learned in the form of advice to future ED improvement collaboratives. The following reflects the guidance they offered:

- Engage all front line staff and staff from all levels of the organization.
- Develop and maintain clinical champions.
- Make time for staff to attend team meetings.
- All people who are going to be affected by strategy should be at the table.
- Team leadership needs to be very diligent in supporting the staff who will take the heat from the change.
- Get word out immediately to the hospital staff and your community about your involvement in a national, multicenter quality improvement collaborative.
- Do not give up – perseverance and timing is essential.
- Believe in your capacity to affect change.
- Secure and maintain C-Suite involvement—an administrative champion is essential.
- Be very good with data. Having data is essential—continue collecting data even when it is not the data you want to see.
- Don't be afraid of challenging institutional norms.
- Expect resistance when people's practice is subject to measurement.
- There is never enough communication.

Goal #2

Advance the development of standard performance measurement in the ED.

ED crowding has emerged as one of the key problems facing America's health systems. Despite the problems previously outlined in the introduction, there are no widely used measurements of ED care to inform stakeholders about the effectiveness of ED organizational performance. Fortunately for future ED patients, there are two very high profile organizations working to advance the development of performance measurement in the ED.

The National Quality Forum (NQF) is a consensus-based organization that reviews, evaluates and endorses high priority performance measures submitted by different health care related enterprises. In 2008, the NQF endorsed 10 ED performance measures. The measures address the safety and effectiveness of emergency care, care coordination and communication and efficient management of patient flow through the emergency department. The NQF has reviewed all of the performance measures used in the LNII project and three have already received endorsement.

The Centers for Medicare and Medicaid Services (CMS) provides health insurance for millions of Americans. As such, they have taken an increasingly proactive role in improving the care delivered by U.S. providers and facilities. Using the "power of the purse" CMS has, in coordination with the NQF and other consensus-based organizations, used public reporting and pay for performance to encourage providers to adhere to an increasing number of performance measures.

The LNII project field-tested five of the NQF's high profile ED performance measures, and CMS is considering three of the measures for inclusion in its inpatient and outpatient payment updates for the public reporting system in 2014.

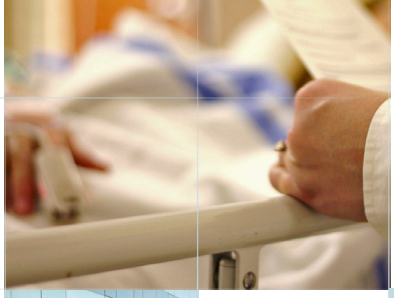
The measures and the accompanying definitions used in this study were obtained from measures support partners at the Oklahoma Foundation for Medical Quality.

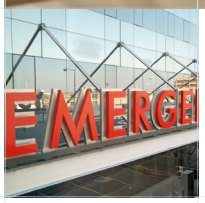
Table 1 lists the measures.

Emergency Department Performance Measures	
1	ED Arrival to ED Departure— Admitted ED Patients*
2	ED Arrival to ED Departure— Discharged ED Patients*
3	Admit Decision Time to ED Departure*
4	Time to Pain Management— Admitted and Discharged ED Patients**
5	Time to Chest X-Ray— Admitted and Discharged ED Patients**

** Proposed by CMS for inclusion in its quality reporting program*

*** Under review by NQF for endorsement*





Following an initial period of measure clarification, training and implementation, the hospitals collected data for the measures, and reported them on a regular and continuous basis to the Urgent Matters team. In turn, reports on the hospitals' progress were then shared with the measures support partners at the Oklahoma Foundation for Medical Quality. From there, the refinements and improvements were reported back to CMS, closing the loop on an iterative process.

The patient level data was reidentified and reported electronically to the UM team on a monthly basis. The hospitals also reported challenges and time requirements related to collecting data. To assess the benefit and burden of the measures, interviews with the project directors and data abstractionists were performed after the hospitals had 12 months of experience with the performance measures. The George Washington University Institutional Review Board approved the study.

The first aim of the field test was to assess the clarity of the measure definitions when applied by hospital personnel in a clinical setting. Secondly, this test provided information regarding sample size requirements for collecting ED performance measures. Lastly, we also explored the benefit and burden of collecting performance measures.

The fundamental questions driving this project were:

1. Are the measures under study beneficial to stakeholders?
2. Is widespread collection and reporting feasible?

The Urgent Matters hospitals provided a wealth of information about the measures. They reported that the definitions for measures one and two were clearly stated and presented minimal opportunity for misinterpretation. Hospitals found measure three problematic and open to interpretation. This measure looks at the time period from when the decision to admit was made to the patients transfer to the inpatient unit. Some hospitals record the ED physician's decision to admit and others record the admitting service/physician's decision to admit. The hospitals reported that measures four and five required minor technical clarifications but were otherwise clearly written.

It was very important that the sample sizes used by the hospitals was large enough to provide an accurate representation of the throughput times experienced by the hospitals. The data supplied by the hospitals indicated the sample size was sufficient to obtain reliable estimates of the median throughput times within a hospital ED.

Hospitals reported multiple benefits and minimal burden from this data collection. Hospitals without effective electronic medical records (EMR) tended to report more difficulty than did their counterparts with robust EMR systems. All hospitals reported decreasing burden after the first several months of data reporting. Most respondents reported that these measures provided important information that could be used to improve the care in their EDs and that they would continue collecting most, if not all, of the measures after LNII was over.

A full report with the details of the field study will be sent to Oklahoma Foundation for Medical Quality.

Goal #3

Promote the spread of promising practices to a wider audience and variety of hospitals.

The spread of promising practices has already begun as several of the Urgent Matters hospitals were featured in their local newspapers during the collaborative. Along the same lines, an article appeared in the May 2009 issue of *Modern Healthcare* that focused on the work of all six Urgent Matters hospitals. The program's communications partner, GYMR Public Relations, has also developed and disseminated two issue briefs detailing the work accomplished in LNII.

The UM Team convened an ED Policy Forum in Washington, DC in April 2010, which was attended by many notables in the field of emergency services. A recording of the Policy Forum is housed on RWJF's website. Both Urgent Matters and our evaluation partner for this project, HRET, have been highlighting the hospitals and their strategies on their individual websites. Good Samaritan presented their strategy as part of an Urgent Matters webinar attended by over 350 people, and this same strategy was presented at the AHRQ Annual Meeting in September 2010. HRET and Urgent Matters had three presentations at the Academy Health Annual Research Meeting held in Boston in June 2010.

The strategies advanced by the Urgent Matters hospitals will be written up as best practices and appear on the RWJF website as Promising Practices from the field. These best practices will also be submitted to AHRQ's Innovation Exchange, as well as be housed on the Urgent Matters website. In addition to this article, Urgent Matters will provide a separate report to CMS detailing the hospitals experience with the ED Performance Measures. GYMR will work with the hospitals to disseminate their results in their local communities.

The HRET has also committed to widespread dissemination. HRET staff presented the strategies at the American College of Emergency Physicians (ACEP) Annual Scientific Assembly in September 2010 and have abstracts pending for several other national conferences. HRET is also developing in-depth case studies of each hospital's experience with the strategies and will be submitting articles to multiple trade and peer-reviewed journals.

EDs as Organizational Change Agents

In organizations there are designated leaders, as depicted on the organizational chart, and informal leaders. Informal leaders emerge as they demonstrate a willingness to take on challenges and make improvements around them. Informal leaders in health care have the ability to attract followers because they are knowledgeable about the work to be done, they demonstrate trust and respect for others and they can articulate a vision describing better patient care.

Due to the ED's pivotal role that affects most staff within a hospital, EDs have this same opportunity to demonstrate informal quality improvement leadership at an organizational level. Through their willingness to articulate a vision for improved patient care and their ability to

identify and implement process changes, ED staffs are in a unique position to become change leaders within their facilities. The following comments demonstrate how LNII hospitals are well on the way to establishing themselves as leaders within their organizations as well as in the ED field.

Good Samaritan Hospital Medical Center

- Isolation of ED within hospital community was decreased.
- Increased engagement of senior leadership with ED issues.

Hahnemann University Hospital

- Opened doors to other departments and increased their awareness of their role in relieving crowding.
- Created more of an organizational awareness that ED crowding is a hospital wide issue.
- Learned best practices from other hospitals.
- Improved accountability.
- ED has set an example of how to approach flow issues.

St. Francis Hospital

- Increased engagement with C-suite on ED issues.
- Improved relationships between registration and nursing staff.
- Provided an example to other units of how to approach flow issues.

Stony Brook University Medical Center

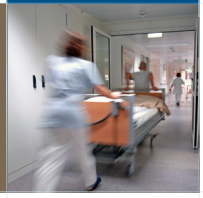
- Improved relationships between consultants and ED clerks.
- Improved relationships between ED and surgery department.

Thomas Jefferson University Hospital

- Increased awareness of diversion as a hospital wide issue—not an ED problem.
- Improved interdepartmental cooperation.
- Shifted administrative focus to increase accountability within ED.

Westmoreland

- Increased transparency—departments are more willing to identify opportunities for improvement in their work flows.
- Increased accountability for process improvement—the hospital's Board of Directors has been following progress and remains supportive.
- Increased focus on ED holds (boarders). Team is working with attendings to facilitate hospital discharges.



Conclusion

Those of us who have been in the health care industry for a while remember when the ED was called the Emergency Room (ER). Only in recent years has the name changed to reflect the increasing complexity and patient volumes that now characterize hospital based emergency services. ERs were relatively simple places based on a linear patient flow model; where patients arrived, went to registration, saw the triage nurse, were brought in to the ED and placed in a treatment area, saw the doctor, had tests done, saw the doctor again and either went home or were admitted. Between each and every step, there was usually considerable wait time and therefore multiple opportunities for error and waste.

EDs today are much more complex and moving with dispatch away from linear flow. In a small but rapidly growing number of hospitals, the first person you talk to after arrival is a doctor, nurse practitioner or physician's assistant and your evaluation and treatment begins immediately. All the LNII hospital strategies reflect attempts to adjust to the increasing demands of a larger volume of medically complex patients.

The *concept* of a fast track has been well received and widely used by EDs, most hospitals have one. It makes sense and is good flow planning to segment patients into a less acute, easily treatable patient stream and have another stream for the more acute, medically complex patients. Hahnemann and Jefferson successfully improved their FTs. They did this by changing the cultures of their organizations from one that saw FT as a concept, to organizations that saw FT as a distinct service line within the department, with its own staff, equipment and geographic location. Good Samaritan took this process one step further and created MidTrack, a fast track for medically complex patients. This strategy is on the cutting edge of ED process improvements and will be studied closely by the field.

Another outgrowth of increasing volume and complexity are the challenges it presents to efficient and effective communication. Three of the UM hospitals tackled this problem head on. St. Francis successfully improved

communication between departments (ED and Registration). Westmoreland worked with the inpatient units to get admitted patients up to the units faster and in a safer fashion. Stony Brook took on the challenge of the consult process and now ED physicians and consultants talk with each other sooner, more often and more effectively. Good communication is essential to good care, and patients at all these facilities benefitted from the work done by these Urgent Matters hospitals.

As well thought out, planned and implemented as all these strategies were, the next challenge to the Urgent Matters hospitals is sustainability. For some hospitals, this will be a little easier because the "old way" of doing business no longer exists. Yet for all of them the gains made are still fresh and need to be nurtured, maybe still occasionally tweaked and reinforced until they are all just part of the departments' processes for taking care of its community.

References

i. Urgent Matters. Urgent Matters Learning Network II Issue Brief 1: Improving Patient Flow & Reducing Emergency Department (ED) Crowding. February 2010. http://urgentmatters.org/media/file/UM%20LN%20II%20IB%20-%20FINAL%20CORRECTED%202.pdf.

ii. Ibid.

iii. Urgent Matters. Urgent Matters Learning Network II Issue Brief 1: Improving Patient Flow & Reducing Emergency Department (ED) Crowding. February 2010. http://urgentmatters.org/media/file/UM%20LN%20II%20IB%20-%20FINAL%20CORRECTED%202.pdf.

iv. The formal external evaluation of these strategies is being conducted by the Health Research & Educational Trust under contract to the Agency for Healthcare Research and Quality. Results from this evaluation will be forthcoming. These case studies provide preliminary results as reported to Urgent Matters by the hospitals.

v. The Emergency Severity Index (ESI) is a 5 level triage classification system. ESI 1 patients are the most acute and need to be seen immediately. ESI 5 patients are the least ill and can wait hours without being seen.