Year Two Progress Report

PARTNERSHIP FOR PATIENTS - NEW JERSE

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Working Together to Make Healthcare Better

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May 2014



or more than a decade, the New Jersey Hospital Association has led its members in a statewide commitment to healthcare quality improvement under the NJHA Institute for Quality and Patient Safety. Today, that work has culminated in Partnership for Patients-New Jersey, the Garden State's contribution to a nationwide quality improvement initiative developed by the U.S. Centers for Medicare and Medicaid Services. CMS has chosen NJHA as one of 27 "hospital engagement networks," or HENS, from across the country to lead hospitals in this important work.

THE GOAL: To ensure quality care and improved safety for patients by reducing the incidence of healthcare-associated conditions and reducing preventable complications that lead to readmission to the hospital.

AND THE RESULTS: Significant, measurable improvement by New Jersey hospitals in several key healthcare measures that have the potential to avert more than 9,000 adverse events for hospitalized patients, with an estimated cost savings of more than \$100 million in one year. The improvements achieved by New Jersey hospitals have resulted in healthcare that is safer, more efficient and ultimately more affordable. Based on this work, and reflected in this data, patients in a New Jersey hospital today are far less likely to develop a post-surgical infection; experience a medication error; get pneumonia, a urinary tract infection or a bloodstream infection while hospitalized; be injured in a fall; or develop a pressure ulcer.

ABOUT PARTNERSHIP FOR PATIENTS-NEW JERSEY

In December 2011, NJHA was selected by CMS to bring the Partnership for Patients initiative to New Jersey hospitals as part of a "hospital engagement network." Under the initiative, NJHA is leading New Jersey hospitals and health systems in a statewide group engaged in education, analysis, information and data exchanges. These are tried-and-tested strategies that have proven to increase healthcare quality and patient safety. Reporting and tracking data is a critical component of the effort.

The Partnership's national goals are to:

- Keep patients from getting injured or sicker. The aim is to decrease complications, also called hospital-aquired conditions, by 40 percent, compared with 2010 baseline data.
- Help patients heal without complications. The aim is to reduce preventable complications during a transition from one care setting to another, so that hospital readmissions would decline by 20 percent compared with 2010 baseline data.

All of New Jersey's acute care hospitals have signed on to the Partnership for Patients effort, with 62 of them joining NJHA's program. NJHA's original federal contract covered 2012 and 2013, but in December 2013 CMS extended the contract through 2014 based on the success of the project's first two years. This report details the data behind those efforts.

Visit NJHA's Partnership for Patients Web site at *www.njha.com/pfp* for more information, tools and resources on this important statewide initiative.



SUMMARY OF RESULTS

New Jersey hospitals have achieved double-digit improvements in each of the hospital-aquired conditions defined in the Partnership for Patients, including a 58.7 percent reduction in adverse drug events, a 37.1 percent decline in pressure ulcers and significant reductions in several types of infections, reaching as high as an 83.8 percent reduction in infection rates following knee replacement surgery.

In addition, New Jersey hospitals have reduced the statewide 30-day readmission rate from 21.6 percent in 2010 to 19.8 percent in the first half of 2013, a reduction of 8.7 percent. Those results reflect hospitals' commitment to working with other healthcare partners, along with patients and families, to ensure that fewer patients return to the hospital once they are discharged. NJHA and its hospitals recognize that additional work remains to further reduce hospital readmissions and are committed to increased coordination and communication to support patients and ensure their successful recoveries.

Using data on the expected rates of adverse events and comparing those rates with the rates of improvement identified among New Jersey's hospitals, this work has averted an estimated 9,206 adverse events for hospitalized patients between 2012 and 2013. Those averted events would produce total healthcare cost savings of between \$102 million and \$125 million.

DATA NOTES

The table on page 4 shows the results of data collected from New Jersey hospitals participating in Partnership for Patients-New Jersey for hospital-aquired conditions, along with 30-day readmission rates. Data sources include the National Healthcare Safety Network; the National Database on Nursing Quality Indicators; Patient Safety Indicators; and hospital-reported data extrapolated from chart reviews. Depending on the data source, the baseline rates represent data from 2010, 2011 or the first quarter of 2012. The current data reflects the third or fourth quarter of 2013.

The arrow chart on pages 8 and 9 reflects the difference in the number of harm events occurring between 2012 and 2013 between expected cases (calculated using baseline rates) and observed cases. The cost savings are calculated based on figures provided by the U.S. Agency for Healthcare Research and Quality, the American Hospital Association's Health Research and Educational Trust and RTI International.

PARTNERSHIP FOR PATIENTS - NEW JERSEY: RESULTS AT A GLANCE

ΤΟΡΙC	WHAT WE MEASURE	BASE- LINE	1-YEAR STATUS	CHANGE
Adverse drug events	The rate of patients who experience an adverse outcome related to improper medication at any dose.	9.8 %	4.0 %	- 58.7%
Catheter-associated urinary tract infections	The rate of infections per 1,000 catheter days.	1.61	1.11	- 30.9 %
Central line-associated bloodstream infections	The rate of infections per 1,000 central line days.	1.39	1.10	- 20.3 %
Falls	The rate of patients per 1,000 who experience a fall that results in harm.	0.59	0.49	- 18.1 %
Early elective deliveries	The percent of babies born in an elective delivery before 39 weeks.	4.9 %	3.0 %	- 38.7
Birth trauma injury	The rate of injury sustained to a newborn during delivery, per 1,000 live births.	2.30	1.61	- 30.3 %
Obstetric trauma with instrument	The rate of injury to a mother from use of a medi- cal instrument during delivery, per 1,000 vaginal deliveries.	143.0	128.4	- 10.3 %
Obstetric trauma with- out instrument	The rate of birth injury to a mother, without use of a medical instrument, per 1,000 vaginal deliveries.	24.2	20.6	- 14.9 %
Pressure ulcers	The percent of patients who developed a pressure ulcer during their hospital stay.	3.8 %	2.4 %	- 37.1 %
Surgical site infection- colon surgery	The rate of post-surgical infections for patients undergoing colon surgery.	4.39 %	2.82 %	- 35.8 %
Surgical site infection- hysterectomy	The rate of post-surgical infections for patients undergoing a hysterectomy.	1.48 %	1.04 %	- 29.9 %
Surgical site infection- total knee replacement	The rate of post-surgical infections for patients undergoing knee replacement surgery.	1.03 %	0.17 %	- 83.8 %
Venous thromboembolism (VTE) [†]	The rate of post-surgical cases of deep vein thromboembolism or pulmonary embolism (blood clots that can develop due to immobilization.)	0.75 %	0.67 %	- 10.1 %
Ventilator-associated pneumonia	The rate of cases of pneumonia in patients on a ventilator, per 1,000 ventilator days.	The definition and data collection for this measure have changed, so benchmark data is not available.		
Hospital readmissions	The percent of discharged patients readmitted to the hospital within 30 days, for all causes.	21.6 %	19.8 %	- 8.7 %

The results reflected above are based on data from 100 percent of New Jersey's 62 HEN hospitals for catheter-associated urinary tract infections, central line-associated bloodstream infections, surgical site infections, venous thromboembolism and ventilator-associated pneumonia. All other measures are based on data reported from approximately 50 percent of hospitals.

[†]Results for this measure are based on VTE Patient Safety Indicators reported to the

Centers for Medicare and Medicaid Services, pending new January 2013 VTE CMS measures.



QUALITY IMPROVEMENT AREAS

The Partnership for Patients zeroes in on several types of adverse events that can arise during a hospital stay; these events are called "hospital-acquired conditions." Following are brief explanations of the conditions that hospitals are focused on.

Adverse Drug Events (ADE)

An adverse drug event is an episode in which any medication at any dose may have resulted in an adverse outcome for a patient. New Jersey's efforts in this area include the formation of an Adverse Drug Event Advisory Committee, where pharmacists from N.J. hospitals test processes and outcome measures, along with close monitoring and education on the use of the blood thinner warfarin. More recently, the Partnership has added efforts addressing opioids and insulin to promote immediate response to blood sugar events. **RESULTS: 58.7 percent improvement in ADE rates.**

CATHETER-ASSOCIATED URINARY TRACT INFECTIONS (CAUTI)

Urinary tract infections account for more than 30 percent of infections reported in acute care hospitals. Virtually all of those incidents are associated with the insertion of a catheter, and very often those catheters are inserted in the emergency department when a patient first arrives in an unstable or urgent condition. In partnership with the Emergency Nurses Association and the New Jersey chapter of the American College of Emergency Physicians, NJHA has led New Jersey's hospitals in the adoption of national standards used in an initiative called On the CUSP: Stop CAUTI. It provides crucial support to ED physicians and nurses in improving appropriate catheter use and proper insertion techniques for reducing CAUTI. **RESULTS: 30.9 percent improvement in CAUTI rates.**

CENTRAL LINE-ASSOCIATED BLOOD STREAM INFECTIONS (CLABSI)

Central lines, which are IV lines inserted into a major vessel like a vein, leave patients vulnerable to bloodstream infections. NJHA has a long track record in efforts to reduce CLABSI rates: In 2004, NJHA's Institute for Quality and Patient Safety launched a statewide quality collaborative with 55 hospitals to improve care for patients in the intensive care unit. Reducing CLABSIs was a key part of this initiative, and the participating hospitals achieved a 73 percent reduction by implementing best practices. That work was expanded in 2009 with more hospitals. Today, under the Partnership for Patients, hospitals continue their focus on central lines in key units such as dialysis and neonatal intensive care to protect the patients most vulnerable to CLABSI. **Results: 20.3 percent improvement in CLABSI rates.**

Partnering With Our Patients

Shift changes in hospitals – in which one nurse hands off a patient's care to another nurse Starting the next shift – can provide an opening for miscommunication and errors. To address this problem, nurses at Robert Wood Johnson University Hospital perform safety huddles with their peers at various times during the day as well as take hand-offs right next to the patient's bedside, which helps make the patient and family key partners in the safety process. Together, the nurses and patient/family complete a status update and safety checklist. The session ends with an opportunity for the patient and family to ask questions. Since implementing these new processes, patients have reported greater satisfaction with their care, and nurses report higher job-satisfaction rates.

Injuries from Falls

Patient falls are the most frequently cited adverse event reported to the N.J. Department of Health's Patient Safety Reporting System. NJHA's original efforts focused on falls in hospitals, but have now been expanded to post-hospital settings like nursing homes, as well as discharged patients' homes. NJHA partners with several stakeholders to promote education, awareness and patient engagement in reducing falls, including the N.J. Department of Human Services and



the N.J. Interagency Council on Osteoporosis. **Results: 18.1 percent improvement in the rate of falls that result in harm.**

EARLY ELECTIVE DELIVERIES/OBSTETRICAL ADVERSE EVENTS

Early deliveries - that is, babies born before 39 weeks of gestation - can pose risks to both mothers and newborns. For babies, the risks can include problems with breathing, vision and even learning and behavioral issues later in life. For mothers, early elective deliveries using induced labor can increase the risk of serious bleeding and uterine rupture. And yet, many parents have chosen early elective deliveries for convenience or other reasons. With urging from NJHA and the N.J. Department of Health, virtually every New Jersey hospital that provides labor and delivery services has now discontinued scheduling of elective deliveries prior to week 39. The successful results of that policy change not only are reflected in this data but have also been cited by the March of Dimes and The Leapfrog Group. NJHA also focuses on reducing birth trauma injuries and maternal hemorrhage, with emphasis on standardized best practices in fetal heart rate monitoring and maternal medication protocols. NJHA is expanding this work in 2014 in partnership with the Association of Women's Health, Obstetrics and Neonatal Nurses, focusing on maternal hemorrhage and preeclampsia. Results: 38.7 percent improvement in early elective delivery rates; 30.3 percent improvement in rate of birth trauma injury; 10.3 percent improvement in obstetric trauma (with instrument) and 14.9 percent improvement in obstetric trauma (without instrument.)

PRESSURE ULCERS

Pressure ulcers, also known as bed sores, are a serious healthcare occurrence in the frail and elderly. National studies show that more than 1 million individuals each year develop pressure ulcers in hospitals and nursing homes. NJHA's Institute for Quality and Patient Safety has overseen two highly successful quality collaboratives to reduce the incidence of pressure ulcers, with more than 50 hospitals, nursing homes, rehabilitation facilities and home health agencies working together by sharing best practices, following standardized guidelines and sharing data. That work continues under Partnership for Patients-New Jersey. **RESULTS: 37.1 percent improvement in pressure ulcer rates.**

SURGICAL SITE INFECTIONS (SSI)

About 30 million surgeries are performed in the United States each year, and research shows that about 500,000 of them result in post-surgical infections. Patients who suffer an infection after surgery are five times more likely to be readmitted to the hospital, have longer hospital stays and have mortality rates twice that of the average hospitalized patient. For data collection purposes, results are reported for three types of surgeries: hysterectomy, colon surgery and total knee replacement. Hospital efforts in the prevention of surgical site infections include best practice strategies like the use of standardized surgical safety checklists. But New Jersey's effort also takes a broader approach, addressing more complex issues such as urinary catheterization of post-surgical patients, preventing delirium in elderly post-surgical patients and empowering staff in strategies to prevent surgical harm. **RESULTS: 35.8 percent improvement in surgical site infections following colon surgery; 29.9 percent improvement in SSIs following hysterectomy; 83.8 percent improvement in SSIs following total knee replacement.**

VENOUS THROMBOEMBOLISM (VTE)

A venous thromboembolism, commonly known as a blood clot, affects 350,000 to 650,000 people each year, resulting in an estimated 200,000 deaths nationally. These blood clots often strike individuals who are immobile or who are on certain medications, making them a serious concern in hospitals, nursing homes and other health-care settings. Tracking VTEs involves identifying patients who are on certain treatment medications and intervening proactively to change treatment protocols. Under Partnership for Patients-New Jersey, this work includes tracking the percentage of patients on anticoagulants and using risk assessment protocols to help prevent VTEs. **RESULTS: 10.1 percent improvement in VTE rates.**

Ventilator-Associated Pneumonia (VAP)

Patients who use a breathing tube or ventilator are vulnerable to pneumonia. And according to the Centers for Disease Control and Prevention, ventilator-associated pneumonia is the leading cause of mortality in hospital intensive care units. The risk increases each additional day that a patient spends on the ventilator. New Jersey's hospitals have implemented processes and protocols to constantly assess patients and their need to remain on ventilators. Many New Jersey hospitals have now gone months at a time without a single case of ventilator-associated pneumonia. In an earlier NJHA quality collaborative, hospitals successfully reduced VAP rates by 55 percent. However, the Centers for Disease Control and Prevention recently redefined this quality measure from "ventilator-associated pneumonia" to a broader category now called "ventilator-associated event." Because of this change in definition and data collection, there is no baseline data available to measure results in the HEN. **RESULTS: Not yet available.**

Preventable Readmissions

This category tracks cases in which a patient is readmitted to the hospital within 30 days of discharge from a previous hospital stay. The goal is to make sure a patient's recovery remains on track and no return to the hospital is needed. NJHA launched a statewide quality collaborative in 2012 with the American Heart Association and National Transitions in Care Coalition focusing on readmissions for heart failure patients. Strategies in that effort have provided valuable lessons learned and best practices in caring for all types of discharged patients. Today, under Partnership for Patients-New Jersey, NJHA has partnered with Healthcare Quality Strategies Inc. and other stakeholders in a coordinated effort that includes post-acute care providers. The primary objective is to educate clinicians as well as patients and families on ways to improve communication and coordination about discharge instructions; care preferences, especially in end-of-life care; and other key patient recovery information. New Jersey has seen steady improvement in its 30-day readmission rate but recognizes that more work remains to reduce the rate further. **RESULTS: 8.7 percent improvement in readmission rates.**

'Prevention' for Patients – New Jersey 2012-2013

Hospitals' Quality Efforts Avert Adverse Events and Added Healthcare Costs



Total Cases of Harm Averted: 9,206 **Total Healthcare Costs Averted:** \$102 million to \$125 million

*Represents 2012 only, due to revision of measure in 2013

Note: Total cases of harm averted represent the difference in the number of harm events occurring during the project period (2012-2013) between expected cases (calculated using baseline rates) and observed cases. Baseline benchmarks use data from 2010, 2011 or earliest available six-month period.

Data sources: National Healthcare Safety Network; National Database on Nursing Quality Indicators; Healthcare Quality Strategies Inc.; Patient Safety Indicators; UB-04 Hospital Discharge Dataset; ADE and EED data are self-reported by hospitals. Costs are calculated based on figures provided by the U.S. Agency for Healthcare Research and Quality; the American Hospital Association's Health Research and Educational Trust; and RTI International.





STRATEGIES AND PARTNERSHIPS

mproving healthcare quality and patient safety demands a team approach among all healthcare participants – hospitals, physicians, nurses, post-acute providers and patients, loved ones and caregivers. It truly is a partnership. In keeping with that commitment – and reflecting the nationwide vision of the Partnership for Patients-New Jersey's effort includes several strategies and key relationships beyond its 62 participating hospitals. Below are some of the partnerships and collabora-



tions that help drive and sustain this quality improvement effort.

PATIENT AND FAMILY ENGAGEMENT

Research shows that patients who are involved in their healthcare decision-making report greater satisfaction with their care and have better medical outcomes. Patients, and their loved ones, are essential partners in improving healthcare quality and patient safety. NJHA and its members are using several best practices to improve patient and family engagement including:

- Incorporating a presentation aimed at patients in every Partnership for Patients learning session to focus clinicians on the importance of providing accessible and appropriate patient-centered information.
- Gathering feedback through patient interviews, especially with readmitted patients, to identify the obstacles and challenges patients face and develop solutions.
- Inviting patients and family members to serve on hospital committees and task forces to help shape further programs.

Partnering With Our Patients

Morristown Medical Center has found a new way to allow family members to become more involved in their loved ones' hospital stay: round-the-clock visiting hours. "Supporting patients in a way that allows them to be with family and loved ones can be an important component of the healing experience and may reduce the anxiety and social isolation associated with illness," said MMC President David Shulkin, MD. "Patients are allowed to more spend time with their loved ones, which helped promote the physical and mental healing process, and visitors become a valuable asset to hospital staff as they grew more cognizant of patient changes." Patients and their family members give the new hours a thumbs-up. Said one son visiting his mother in the hospital: "It allowed our whole family to be in on her treatment and support and made a difficult experience that much better."

Partnering With Our Patients

The neonatal intensive care unit (NICU) at the Children's Hospital of New Jersey at Newark Beth Israel Medical Center has made tremendous strides toward creating an environment where patients are viewed as true partners in care. In an effort to improve quality of care and the patient experience, the hospital formed a Parent Advisory Panel made up of former NICU parents who have dedicated their time to helping the hospital improve practices for future NICU families. The hospital has found that empowering families to take a more active role in the care of their children has helped the hospital achieve better health outcomes.

• Providing free downloadable consumer brochures on the Partnership for Patients-New Jersey Web site, on areas ranging from medication safety to fall prevention in the home.

PATIENT FLOW

One key philosophy steering Partnership for Patients-New Jersey is that efficient care leads to high-quality care. Driven by that principle, NJHA developed an innovative partnership with the Boston-based Institute for Healthcare Optimization that engaged hospitals in a 15-month effort to improve patient flow through the hospital. The work was led by Eugene Litvak, PhD, IHO's president and CEO and a specialist in operations management in healthcare delivery organizations. Fourteen New Jersey hospitals committed to this collaboration with the IHO to analyze their operations and find the smoothest and most time-efficient care of patients. Hospitals examined the inefficiencies in their operations, including uneven usage of operating rooms, which led to long waits, overtime costs and cancellation of procedures at peak times and wages paid to idle staff during low usage. Others identified bottlenecks in admitting patients to inpatient beds which forced many patients to wait long periods in the emergency department or in post-surgery units.

Participating hospitals used this analysis to develop solutions including a reallocation of OR space and staffing and new standardized discharge processes to increase bed availability. Results included:

 21 percent to 85 percent decrease in wait times for emergency department patients to be admitted to a hospital bed



- 11,800 to 17,300 additional patients that could be treated without adding inpatient beds or operating rooms
- Roughly 20,000 additional patients that could be accommodated in hospital emergency departments
- Reductions in the length of hospital stays ranging from 3 percent to 47 percent.

This work resulted in reduced wait times and shorter hospital stays for patients, and improved value and reduced overall costs for the broader healthcare delivery system.

PARTNER ENGAGEMENT

NJHA's Partnership for Patients-New Jersey has 62 formal participants – NJHA member hospitals who have committed to this three-year initiative – but it truly does require the entire healthcare community working in concert to achieve the state's healthcare improvement goals. NJHA has developed numerous networks and partnerships with other healthcare stakeholders in this shared quest. A complete list would be too lengthy for this report, but a partial list of organizations that have partnered with NJHA and its HEN include:

- the N.J. departments of Health and Human Services
- March of Dimes
- VNA Health Group
- the Association of Women's Health, Obstetrical and Neonatal Nurses
- the Institute for Safe Medication Practices
- Premier
- Healthcare Quality Strategies Inc.

- the American Hospital Association's Health Research and Educational Trust
- the Emergency Nurses Association of New Jersey
- the New Jersey chapter of the American College of Emergency Room Physicians
- Quality Insights Renal Network 3
- along with many other state hospital associations.



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