

CENTER FOR HEALTHCARE

Quality & Safety



GENERATING KNOWLEDGE TO IMPROVE PATIENT CARE


UTHealth[®]
The University of Texas
Health Science Center at Houston

MEMORIAL
HERMANN

Welcome



2017 marks CHQS' first full decade of improving healthcare quality and safety through research, education, and performance improvement.

Our work has had a significant impact – influencing national policy, appearing in leading medical journals, and receiving prestigious grants and awards. We have clearly defined the scope of the patient safety problem, identified major safety threats, and pioneered initiatives to improve electronic health records, safety culture and teamwork – all in an effort to make patients safer.

However, medical errors remain a leading cause of death around the world, and we have a lot more to do. That's why we're spearheading efforts to measure and improve the quality and safety of care provided by clinicians at UTHealth and Memorial Hermann, as well as at hospitals nationwide. For example, our work on measuring and improving safety culture and training clinicians to improve care at Memorial Hermann contributed to their Eisenberg Award for Safety and Quality in 2012. We are energized to lead innovative healthcare quality and patient safety initiatives both here in Houston and through collaboration with our peers across the US.




Our newest initiative is focused on partnering with patients and their families in improving healthcare quality and safety. Until now, the patient safety movement has largely done its work without involving the patients themselves. Yet their input provides a much more complete picture of why things go wrong, helps us make more effective safety improvements, and encourages clinicians to feel more personally accountable for improvement. The doctors and nurses on the front lines of care delivery must engage patients directly in safety improvement efforts. They must tell patients about errors that have harmed them, and hear the patient's thoughts about why a harm occurred. And when building care improvement teams, they should include patients.

As we celebrate our tenth anniversary, we are very grateful for our supporters and collaborators here in Houston and around the country. We hope this report leads to new relationships that help us generate knowledge to improve patient care. Please do not hesitate to contact us.

Thank you for your ongoing support.

Eric J. Thomas
Director

A DECADE OF IMPACT

<p>CHQS OPENS</p> <p>Center investigators receive the Eisenberg Award for Patient Safety.</p>	 <p>First class of the Clinical Safety & Effectiveness Course</p>	 <p>IOM releases report <i>Health IT and Patient Safety: Building Safer Systems for Better Care</i> which adapts CHQS members' socio-technical model and cites Center faculty six times.</p>	 <p>BMJ Quality and Safety selects two CHQS papers as two of the ten most important papers of the year.</p>	 <p>Patient Safety Learning Laboratory \$4 million award from AHRQ creates a collaborative learning lab focused on reducing harm in the neonatal intensive care unit.</p>	<p>Five CHQS members contribute significantly to the National Academy of Medicine's report: <i>Improving Diagnosis in Healthcare</i>.</p>	 <p>New Grant March of Dimes/Memorial Hermann Children's Hospital Center on Perinatal Patient Safety</p>				
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017



Patient Safety

Leadership ▸ **Eric J. Thomas, MD, MPH** **Madelene Ottosen, PhD, MSN, RN**
Dean Sittig, PhD

The Patient Safety program conducts innovative research to improve the safety of inpatient and outpatient care. We are exploring safety culture, diagnostic errors, teamwork, the impact of patient and family engagement, neonatal safety, and the utility and safety of electronic health records.

Selected Projects

- Safety Culture:**
We helped create the Safety Attitudes Questionnaire, have used it to measure safety culture at Memorial Hermann and elsewhere, and have developed new survey items to measure other aspects of culture.
- Caregiver Innovations to Reduce Harm in Neonatal Intensive Care:**
A four-year, \$4 million project that is building collaboration among bedside clinicians and parents and training them to reduce preventable NICU harms.
- The Texas Disclosure and Compensation Study:**
Identified ways to use the medical error disclosure process to communicate with patients, and learn from their experiences, to improve safety.
- March of Dimes/Memorial Hermann Children’s Hospital Center on Perinatal Patient Safety:**
Developing a new perinatal safety culture toolkit and testing new ways to measure and improve safety culture.
- Electronic Health Record Safety:**
Working to overcome the current barriers to improving EHR-related safety and establish EHR safety best practices, by developing and implementing a pilot set of framework-based measures in key EHR risk areas.

SPOTLIGHT

Involving NICU Parents in Safety Improvement

January 25, 2013 was among the happiest and scariest days of Meghann and Simon Andrew’s lives. That’s when their beautiful Elizabeth Caroline was born 15 weeks early and lived her first three months in the NICU.

Today, Lizzy is 4 years old and doing great. Her NICU experience gave her parents a unique education about patient care that brings a vital perspective to CHQS.

Now, as co-chair of Memorial Hermann Children’s Hospital’s NICU Parent Advisory Council, Meghann is directly involved in initiatives to improve NICU care. For example, she’s working on a project to improve the use of colostrum in infant care that comes from her personal understanding of the critical role mothers play in nourishing their babies in the NICU.

“It’s exciting to apply my NICU experience to now support current NICU mothers struggling with lactation — and to help improve overall NICU communication, safety, and family experiences.”



Population Health

Leadership ▶ **Kevin Hwang, MD**

The Population Health program conducts research and initiates quality improvement efforts focused on groups of patients defined by demographic criteria, medical history, symptomology, and more.

Selected Projects

- **Blood pressure measurement and treatment:** We are addressing barriers to obtaining accurate BP measurements in both medical offices and homes.
- **Team-based blood pressure management:** Case managers, pharmacists, and PCPs are working in tandem to improve patients' uncontrolled hypertension and relevant comorbidities.
- **Screening for obstructive sleep apnea:** We are proactively and systematically identifying high-risk patients based on age, gender, hypertension, body mass index, and symptoms, and referring them to sleep medicine clinics for definitive evaluation and treatment.

Strategic Analytics and Quality Improvement

Leadership ▶ **Priya Khatri, MPH, MBA** **Emily W. Sedlock, MPH**

The Strategic Analytics & Quality Improvement program leads efforts to define and interpret performance improvement measures and improve the quality of care.

Selected Projects

- **Preventive health dashboards:** CHQS was part of a large team led by Dr. Ryan Walsh, Chief Medical Information Officer, to develop dashboards that help primary care clinicians assess performance on ACO measures such as cancer screenings and immunizations.
- **Lab process dashboard:** Displays clinics' timeliness in lab result verification and compliance with standard lab order processes, which impact turnaround times of lab results, reduces the risk of losing test results, and ultimately improves diagnosis and treatment.
- **Performance improvement:** Leading improvement of preventive health services, screenings, diabetes care; and providing annual wellness exams to Medicare patients.
- **Safety event reporting:** Enables front-line office and clinical staff to report events in an environment that promotes learning and quality improvement.



SPOTLIGHT

Leading Change at the Front Lines

No one is in a better position to notice opportunities for safety and quality improvement than the physicians and nurses who provide direct patient care. To help them lead change at the front lines, CHQS and Memorial Hermann offer the “Clinical Safety and Effectiveness” course to help these clinical care providers become quality improvement leaders.

Eighty-four clinicians have completed the course to date, and most have gone on to assume important leadership roles at MHHS, LBJ, and UT Physicians. Some have won awards for their work.

Projects resulting from this course include:

- Improving residents' use of an electronic incident reporting system
- Improving screening rates for diabetic retinopathy
- Reducing blood stream infections in the NICU
- Integrating “Back to Sleep” recommendations into NICU practice
- Reducing post-op ventilation hours in CABG patients
- Reducing length of stay with improved pain management in hip fracture patients
- Improving HPV vaccine series completion at UT Physicians

Engaging Families and Patients

“Nothing about me without me.”

This phrase speaks volumes about the critical importance of engaging patients and families in the process of improving healthcare quality and safety. After all, healthcare exists for the sole purpose of helping people regain and maintain the level of wellness that lets them achieve their most fundamental


goals. Clinicians simply cannot facilitate healing without understanding their patients’ goals, involving them in decisions, and staying aware of their experience during treatment. All of this requires clinicians to establish strong partnerships with the patients and families they serve.

Through our work, we want to model that patients and their families are the experts in knowing their medical history, the level of health they want to achieve, and how they respond to treatments. They can also provide essential insight to help clinicians improve the quality of healthcare delivery by sharing their experiences. When we effectively engage patients and families, we learn how well clinicians focused on their goals, explained treatments, included them in decisions, communicated with them about their treatments, and delivered care at their bedside. Perhaps most importantly, we want to learn about safety concerns that patients and families observe from the bedside or at point of service and invite their input in the best ways to improve care.




Our Improvement Initiatives


Our close engagement with patients and their families has generated a variety of safety and quality improvement initiatives:

Post-error analysis: In speaking with  over 70 patients and/or family members who experienced medical errors, we learned they were never asked for input about the events surrounding the errors. This, despite that most patients could identify two-to-three contributing factors for their event.

With their help, we developed *IMPACT (Improving Post-event Analysis and Communication Together)* – a guide that helps healthcare organizations seek input and learn from patients and families who experience medical errors.

 **NICU parent surveys:** We interviewed NICU parents about their perceptions of patient safety. As a result, we learned parents feel their infants are safest when NICU staff adhere to safety procedures, interact directly with their infant, and communicate with them about the infant’s condition and progress.

We used this feedback to create a parent survey about NICU safety that provides a valuable assessment of NICU care delivery and helps us identify improvements.

 **NICU Parent Advisory Council:** We have recently established a council of eight NICU parents and three clinicians that takes a project team-based approach to improving patient safety. Each project team includes a parent champion who maintains the team’s focus on the outcomes and processes that matter most to parents and infants.

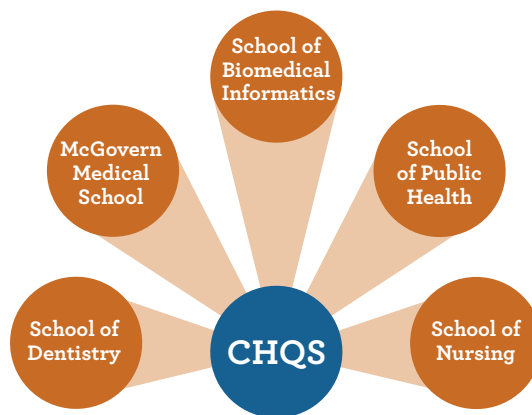
The NICU Parent Advisory Council has already succeeded in bringing parent input into our daily work. Parents have suggested ways to educate families about the NICU, co-developed a feedback system to comment on care, and helped clinicians recognize the value that parent voices bring to patient safety.

Leading Change with Research Partnerships in Houston...

Over the past decades Houston has emerged as a vital center of economic and cultural activity, and houses many of the nation's most respected medical institutions, including our two parent organizations – the University of Texas Health Science Center at Houston and Memorial Hermann Texas Medical Center. And while our work is driven by its goal to provide safe, patient-centered healthcare for everyone who comes to UTHHealth and Memorial Hermann seeking care, our reach also extends far wider.

CHQS' partnerships with a broad network of highly respected individuals and research institutions are critical to generating new knowledge about how to improve the quality and safety of healthcare, educate healthcare professionals, and lead quality improvement efforts for patients – both here in Houston and nationwide.

Our national voice and leadership position is also amplified through our roles in national organizations. Center members serve on boards of The National Patient Safety Foundation, American Medical Informatics Association, and The Collaborative for Accountability and Improvement. We also serve on national grant review panels and review articles for national and international medical journals.



The Center for Healthcare Quality & Safety interacts with five key organizations

Collaborator Insights

National patient safety researchers discuss their collaborations and experiences with the Center

Sigall Bell, MD, Harvard University

I first worked with the Center through a grant involving medical error disclosure training. It was such a positive and productive experience that we continue to collaborate.



The Center is truly influencing the national standard of care when it comes to learning from and responding to harmful events – by directly eliciting perspectives from patients and families. We're working together to better understand and respond to these long-term impacts, to provide more holistic support for patients and families after these events.

We're also focused together on broadening safety culture to include healthcare providers speaking up, a critical component of patient safety. And we're co-leading a national task force to identify key priorities in the field, mobilize research efforts, and build broader collaborations among national safety leaders.

Jochen Profit, MD, Stanford University

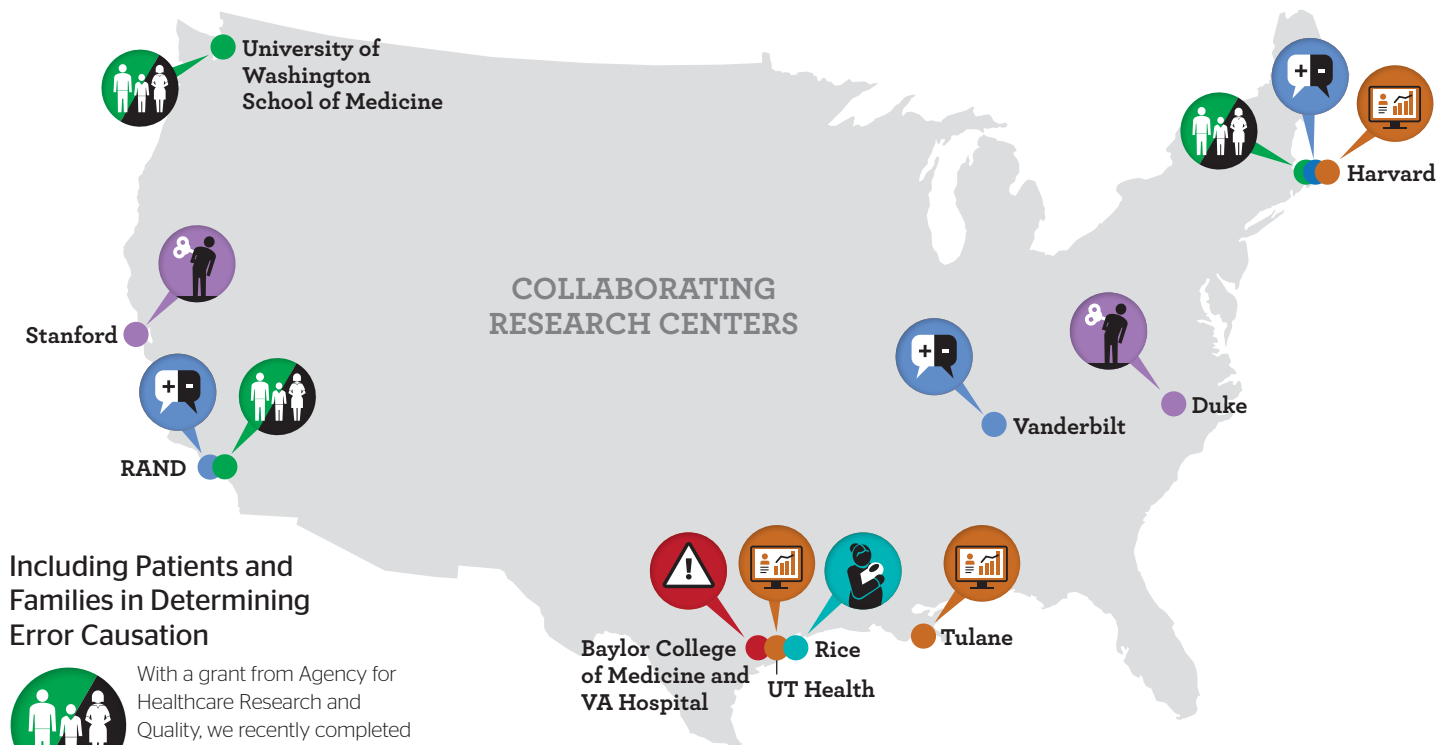
The Center leadership pushes the boundaries of thinking, with a scientific rigor that has helped our collaborations make significant academic advancements in neonatology.



Where many researchers focus on changing process, the Center is interested in the larger context of care – the culture of safety, teamwork, and leadership impacts. We're working together now on a major NIH grant looking at healthcare provider burnout, which has significant detrimental impact not only on the providers, but also their organizations, and most importantly, patient care.

I couldn't think of a better collaborator than Dr. Thomas and the whole team at the Center. They've created an academic spirit of sharing, trust, and collaboration. And they're highly respected as a vital national resource, not only in my area of neonatology, but also health technology and diagnostic error work. And they prioritize making their research widely accessible to others in the field, clearly caring most about benefiting patients at the front lines.

.... And Across the Country



Including Patients and Families in Determining Error Causation



With a grant from Agency for Healthcare Research and Quality, we recently completed a study of how hospitals can include patients and family members in determining the causes of the errors that harmed them. The project also investigated whether patients could identify the causes of their events, and developed a debriefing tool to help hospital staff conduct conversations to elicit the patients' perspectives about the causes of their events.

and report best practices for EHR safety across healthcare organizations.

COLLABORATORS:

Madelene Ottosen, PhD, MSN, RN,

UTHealth CHQS

Thomas Gallagher, MD,

University of Washington

Sigall Bell, MD, Harvard

Jason Echegaray, PhD, RAND

Identifying the Root Causes of Diagnostic Error



Hardeep Singh is an international leader in the area of diagnostic error. Our joint research was heavily cited in *Improving Diagnosis in*

Healthcare, an important report published by the National Academies of Sciences in 2015.

COLLABORATORS:

Hardeep Singh, Baylor College of Medicine and Houston VA Medical Center

Eric Thomas, MD, MPH, UTHealth CHQS

Dean Sittig, PhD, UTHealth CHQS

EHR Safety: Developing Measures and Identifying Best Practices



With a grant from the National Library of Medicine, the Clinical Informatics Research Collaborative is focusing on key socio-technical risk areas for EHR safety, creating measures to identify

and report best practices for EHR safety across healthcare organizations.

COLLABORATORS:

Allison B. McCoy (PI), Tulane

Hardeep Singh, Baylor College of Medicine and Houston VA Medical Center

Dean Sittig, PhD, UTHealth CHQS

Adam Wright, Harvard

Understanding Safety Culture and Burnout



In collaboration with researchers from Stanford and Duke, CHQS is currently engaged in a study to identify the sources of and reduce

burnout among clinicians in NICUs. Drs. Profit and Sexton are also studying safety culture measurement and improvement.

COLLABORATORS:

Jochen Profit, MD, Stanford

Bryan Sexton, PhD, Duke

Eric Thomas, MD, MPH, UTHealth CHQS

Improving Perinatal Safety



With funding from the March of Dimes and Moore Foundation, the March of Dimes Center for Perinatal Safety will be a model of

learning and training for healthcare institutions to establish family-centered best practices in perinatal care, focusing on the full spectrum of perinatal care for mothers and babies.

COLLABORATORS:

Kuojen Tsao, MD, UTHealth

Eduardo Salas, PhD, Rice

Madelene Ottosen, PhD, MSN, RN, and

Eric Thomas, MD, MPH, UTHealth CHQS

Studying Clinician Attitudes About Speaking Up



CHQS is conducting joint research with research peers at Harvard and Vanderbilt, looking at clinician attitudes regarding speaking up about

their patient safety and professionalism concerns.

COLLABORATORS:

Eric Thomas, MD, MPH, UTHealth CHQS

Sigall Bell, MD, Harvard

William Martinez, Vanderbilt

Jason Echegaray, PhD, RAND Corporation

CHQS Supporters



We especially thank **The University of Texas Health Science Center at Houston (UTHealth)** and **The Memorial Hermann Health System** for their ten years of generous support, which helped to create the Center for Healthcare Quality and Safety.



About CHQS

The UT Houston-Memorial Hermann Center for Healthcare Quality & Safety conducts research that generates new knowledge about how to improve the quality and safety of healthcare. We also actively disseminate our findings and participate in educational programs designed to train researchers and caregivers to improve care. We encourage you to contact us with any questions or comments.

UT Houston-Memorial Hermann Center for Healthcare Quality & Safety

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