Western Connecticut Health Network to Receive the 2013 John D. Thompson Award for Excellence in the Delivery of Healthcare Through the Use of Data

WALLINGFORD – At its 95th Annual Meeting on June 25, the Connecticut Hospital Association (CHA) will present Western Connecticut Health Network with the 2013 John D. Thompson Award for Excellence in the Delivery of Healthcare Through the Use of Data for its project, A Multidisciplinary, Multi-Hospital, and Community-Based Program to Improve the Treatment of Patients with ST Elevation Myocardial Infarction.

Cardiovascular disease remains the leading cause of death in the United States, with over one quarter of the approximately one million heart attacks each year being the more severe ST elevation myocardial infarction (STEMI). The preferred treatment for these patients is coronary artery balloon angioplasty and stenting to open the occluded coronary artery causing the heart attack.

In 2007, Danbury Hospital, part of Western Connecticut Health Network, formed a multidisciplinary team to improve door to balloon times (D2B). This is the time from patient arrival at the emergency department “door” to the time the artery is opened in the cardiac catheterization lab. Membership included physician and nursing leadership from Cardiology, Pathology, and Emergency Medicine, and representatives from performance improvement and Emergency Medical Services. Data were collected for each step of the D2B process and included up to 23 distinct data points. It soon became apparent, as others have shown, that D2B times were shorter for patients presenting “on hours” (non-holiday weekdays from 7:00 a.m. – 7:00 p.m.) with a median of 52 minutes, compared to “off hours” (all other times), with a median of 87 minutes. Patients arriving by ambulance had a trend for shorter D2B times than ambulatory patients. Patients who had electrocardiograms (ECGs) performed in the field by emergency medical responders had the shortest median times, since this allowed earlier activation of on-call staff.

These results led to changes in process in the emergency department and catheterization lab including renovation of the triage area to allow space for a dedicated ECG machine to more rapidly perform ECGs. When the data showed that certain cath lab call teams were ready more quickly to accept a patient during off hours, the teams were reconfigured based on distance from the hospital to hasten preparation. Since 2007, there has been significant improvement in median D2B times with a narrower range of variation due to a more predictable and stable process.

In September 2009 with a gift provided by two generous community donors, WCHN provided 17 EMS programs within a 25-mile radius with wireless modems to allow transmission of ECGs to a receiving station monitored by Emergency Department physicians. Written protocols were developed and shared with EMS supervisors. There was also significant education and training of area paramedics in utilization of the new technology and the importance of rapid transmission of the 12 lead ECG to the ED receiving station. With this effort, an average of 90 ECGs per month are electronically transferred to the ED for physician review. STEMI alerts are routinely initiated in the field by EMS providers.
Since 2009, this work has resulted in a significant, sustained decrease in median D2B time from 83.5 to 72 minutes for off-hour patients arriving without EMS. Patients presenting via EMS with field ECGs had a significantly better median D2B time of 61 minutes. Compared to 2007, the median D2B time for off-hour patients in 2012 improved by over 23 minutes. Since February 2011, 100 percent of patients presenting with STEMI at any time of day and eligible for data analysis have had D2B times less than the benchmark of 90 minutes.

In 2011, WCHN expanded its efforts to include its affiliated hospital, New Milford Hospital, which does not have percutaneous coronary intervention capability. ED processes were unified and additional processes put in place to reduce the time needed to transfer the patient. With these efforts, the median time spent in the referring hospital decreased from 74 minutes to 47 minutes, and the median interval from EMS transport arriving at the referral hospital to the patient leaving the hospital decreased from 22 minutes to 5.3 minutes. This has resulted in more than 70 percent of transfer patients achieving a D2B time of less than 120 minutes from arrival at the first hospital. WCHN’s multidisciplinary team has significantly improved the care of patients with myocardial infarction.

CHA is pleased to present the John D. Thompson Award for Excellence in the Use of Data to Western Connecticut Health Network for its innovative approach to dramatically improve care for patients with cardiovascular disease.

The John D. Thompson Award honors the contributions made by John D. Thompson to healthcare administration and patient care quality during his career. Winners of this prestigious award have achieved excellence in patient care through the use of data, as demonstrated by the improvement of internal operations, procedures, and outcomes.

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About CHA
The Connecticut Hospital Association has been dedicated to serving Connecticut’s hospitals since 1919.
Through state and federal advocacy, CHA represents the interests of Connecticut’s hospitals on key healthcare issues in the areas of quality and patient safety, access and coverage, workforce, community health, diversity, and hospital reimbursement.