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Project #65: Reducing Door to Balloon Time in STEMI: Celebrating the EMS, ED and Cardiology QI Collaboration

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Project #65

Reducing Door to Balloon Time in
STEMI: Celebrating the EMS, ED and
Cardiology QI Collaboration
(Wyandotte)

HENRY FORD HEALTH®



Reducing Door to Balloon Time in ST Elevated Myocardial Infarction (STEMI): Celebrating an EMS, ED and Cardiology QI Collaboration

Team Members: Satheesh Gunaga, Kristina Cross, Timothy Manning, Kerri Myshok, Toni Silas, Christian Fisher, Mustafa Hashem, Diane Fidler, Elizabeth Ashley, Elizabeth Ashley, Elizabeth Plemmons, Brooke Buckley, Kim Meeker, Jennifer Eslinger

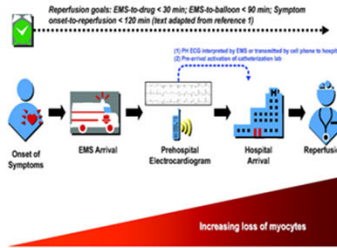
Henry Ford Wyandotte Hospital, Departments of Emergency Medicine and Cardiology, Wyandotte, MI



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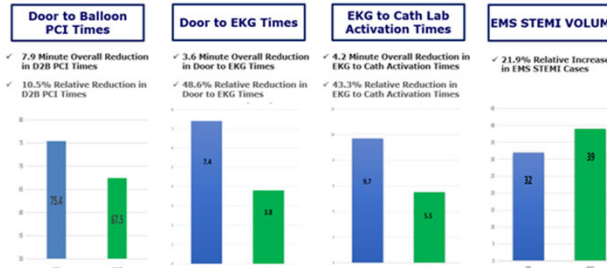
PROJECT AIM STATEMENT

- To employ a multidisciplinary approach, engaging local emergency medical services (EMS), emergency department (ED) and cardiology teams to assure that STEMI patients in our community receive prompt, equitable, consistent, safe and high-quality revascularization of their coronary arteries.
- To deploy a variety of educational, operational and feedback tools to initiate early prehospital EKG transmission and Cath Lab activation for patients in our community suffering from ST segment elevated myocardial infarction (STEMI).



BEFORE AND AFTER RESULTS AND MEASURES

Primary QI Outcomes and Results



ACT: EDUCATIONAL EFFORTS & FEEDBACK MECHANISM

Henry Ford Wyandotte Hospital Monthly Virtual EMS CME Seminars
CME Approved for EMS & EMTs & Paramedics (EM, NREMT, and NREMT-P)

Wednesday, July 14th, 2021
1 pm - 3 pm - Zoom Virtual Conference

40 Minutes - Dr. Satheesh Gunaga, MD
Topic: Prehospital STEMI Identification and Management: The EMS Role

40 Minutes - Dr. Timothy Manning, MD
Topic: Prehospital STEMI Identification and Management: The EMS Role

MULTI-DISCIPLINARY QI INITIATIVE PLAN & DO PRE- AND POST-IMPLEMENTATION STATE

Quality Improvement Plan

Pre-Implementation (January 2020-June 2021)

- In the Pre-Implementation State, there was significant hesitancy by both EMS and the ED teams to activate Cath Lab for STEMI patients unless the EKG was very clear.
- Hesitancy in Activation led to rare EMS Field STEMI activations
- Hesitancy in Activation led to delays in ED 12 Lead STEMI Activations when EKG findings were not certain.
- Lead time is essential for the Cath Lab team to assemble and be prepared for patient arrival, especially when out of house.

Quality Improvement Plan Post-Implementation (July 2021 - December 2022)

- Cardiology and ED leadership teams agreed that field activations represented highest standard of care in STEMI care.
- Cardiology and ED leadership teams agreed to accept and be supportive of any increase in false activations of the Cath Lab secondary to new QI process.
- Division of EMS leadership team, proactively met with both private and municipal EMS partners and began educating out new early field STEMI activation process and QI work.
- Initial EMS and ED Education Shown to the right and on next slide.
- QI Team Performed regular PDCA cycles during this early activation phase of the QI work, tracking data, providing education, and giving feedback to Cardiology, ED and EMS team.

Importance of Prehospital STEMI Recognition & EMS Cath Lab Field Activation on Patient Outcomes



What We Need From Our EMS Partners



What You Can Expect From Us at Wyandotte

- Early Field Activations of the Wyandotte Cath Lab and Team by ED Doctors
- ED and Cardiology Acceptance of Potential EMS False Activations
- Formal ED Team "PAUSE" to Listen to EMS Report
- Engagement in Direct to Cath Lab Process
- Direct Follow Up with EMS Teams on Patient Outcomes and PCI results
- Continued EMS and ED Innovation and Partnership on STEMI Care
- High Quality ED and Interventional Cardiology Care for our Patients

PDCA: COMMUNITY ENGAGEMENT AND PHILANTHROPY

Henry Ford Wyandotte Hospital and its Division of EMS Donates Six Life Pack 15 Cardiac Monitors to our Local EMS Partners

PDCA & LESSONS LEARNED

Take Aways and Lessons Learned

- Early EMS STEMI EKG Transmission and ED Cath Lab Activation Reduced Door to Balloon Times and other D2B Metrics.
- Early on when buy in by EMS and ED teams were poor, PDCA cycles triggered EMS visits, creation of new educational materials and EMS focused STEMI CME Presentation.
- PDCA cycles clearly identified gaps in our data collection, specifically around tracking false STEMI Cath Lab Activations. This also resulted in a formal cardiology peer review forum for QA.
- Based on PDCA cycles we identified 4 Fire Departments with EMS resource and Life Pack Limitations. In August of 2021, HWH and its Department of Philanthropy donated \$234,328 to help correct this inequity.
- Identified opportunity for Cath Lab Activation to be initiated by RN answering Life Net or Radio Report
- In order to improve further we rolled out a Direct to Cath Lab QI Initiative as well in November of 2021 and are working on PDCA cycles to refine and optimize this process.
- Multidisciplinary and Multiphasic QI Initiatives involving EMS offer unique opportunities for improved patient outcomes.

HENRY FORD HEALTH

Reducing Door to Balloon Time in ST Elevated Myocardial Infarction (STEMI)

Henry Ford Wyandotte Hospital Celebrating an EMS, ED and Cardiology QI Collaboration



This project scored high in:

- **Quality/Safety**
- **Customer Experience**
- **Cost Efficiency/Value**
- **Growth**
- **Community Benefit**
- **Equity**