Seconds Matter: Marlton ED to CCL Simulation to help Streamline STEMI Care

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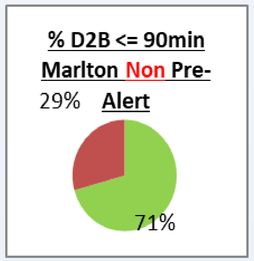
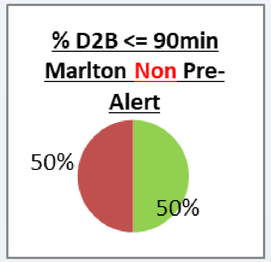
Virtua Health

BACKGROUND

- As an HRO organization Virtua Strives to meet US National STEMI benchmark Door to Balloon (D2B) time of less than 90 minutes for patients who present with ST Elevation Myocardial Infarctions (STEMI) (Rao et.al, 2025)
- STEMI cases reviewed with in 48 hours to measure performance and identify barriers to meeting D2B
- Data revealed continued challenges meeting D2B<90 at Virtua Marlton with non-pre-alert cases who present with vague symptoms. Benchmark for NCDR is 85% of cases will meet <90min
  - DECEMBER MEETING 71%
  - JANUARY MEETING 50%
  - =TREND DOWNWARD IDENTIFIED
- Multi-unit interdisciplinary System AMI Committee decided to repeat a PDSA cycle because prior simulations led to process changes in the past that improved performance



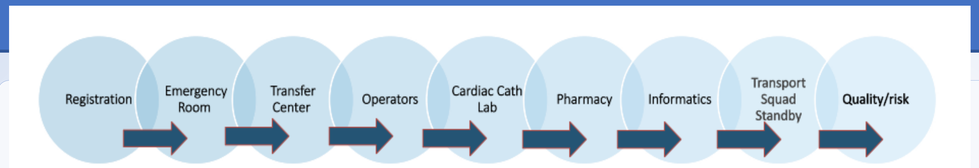
DEC 2024



JAN 2025

POSTER OBJECTIVES

- Identify stakeholder groups in Virtua who impact meeting Benchmark STEMI metrics D2B <90 min for Non-pre-alert ED patients
- Identify 2 actions that positively contribute to meeting benchmark metrics



METHOD

- Stakeholder groups and representatives identified as planners
- Weekly meetings conducted from April 17th to date of drill June 25th.
- Developed realistic Clinical Scenario: Pt present to Marlton ED with vague symptoms
- Performed drill June 25th with immediate hot debrief following the drill
- Analyzed EPIC charting from drill and reviewed observation checklists to collect STEMI metrics from drill
- Post drill cold debrief 1 week after drill discussed findings and next steps

RESULTS

STRENGTHS

- D2CCL 17 MIN during mock.
- Quick registration and ECG.
- CCL activated by ED doctor because 12 LEAD showed clear-cut STEMI =saving time

AREAS OF OPPORTUNITY

- Staffing challenges in ED
- No demographics sent out in Zipit alert
- Patient to CCL fully dressed
- ED staff not documenting during drill in Epic playground because unsure if they were expected to
- Rovers not utilized as expected during drill to scan meds due to long patient list in PLY Rover environment

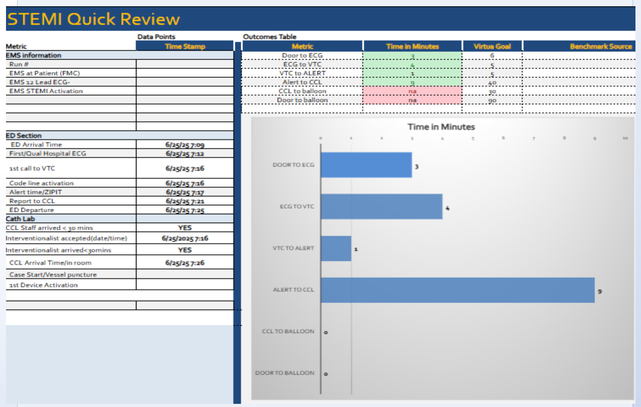
RESULTS cont.

ACTION ITEMS

- Continue to educate ED staff on STEMI patient prep for Cath Lab
- Virtua Transfer Center: confirmed process to follow if alert goes out without demographics, they will send a 2nd alert with the demographics once they obtain them: including Name, DOB, pt location.
- Staffing challenges. ED leadership will continue to assess and evaluate possible solutions
- Future drills: lead observer to use scripting during drill to guide care team to follow standard processes
- Challenges with Rovers during drill: IT team to assess if can make PLY patient easily accessible in PLY Rover to assist with allowing scanning of meds to contribute to realism of drill in future

ADDITIONAL LIMITATIONS OF MOCK

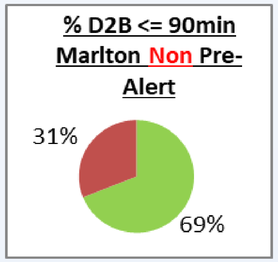
- D2CCL metric OF 17 MIN may not be realistic in a live emergency scenario



CONCLUSIONS

- Periodic drills are beneficial in determining STEMI processes and assess adherence to protocols.
- Patient prep for CCL identified as area for improvement: QI project on STEMI readiness will help improve readiness and is being done concurrently to this project by OLOL CCL Professional Governance Team
- Staffing challenges and patient acuity during drill mirror staffing challenges that occur for live STEMI cases. ED continue to perform ongoing evaluations
- Metrics for July D2B <90 min=69% showing improvement from January however still not meeting 85% benchmark.
- System AMI committee continue to review each case to identify and address outliers

JULY 2025



ACKNOWLEDGEMENTS

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REFERENCES