



MedStar Health

Collaborative response to Code Yellow Cardiac in the procedural area

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Background

In 2023, the Electrophysiology (EP) lab reported **14 Code Yellow Cardiac (CYC)** calls, with response times **up to 39 minutes**.

Review of these events identified contributing risk factors:

- Later-day procedures with limited staffing
- Inconsistent equipment availability
- Unclear role delineation
- Inconsistent Cardiovascular Operating Room (CVOR) nursing response
- Delays in code activation by EP surgeons
- Delayed Cardiothoracic (CV) surgeon response

An interdisciplinary team was formed to evaluate gaps and develop a standardized response process aligned with National Performance Goal (NPG) 01.050.02¹, emphasizing:

- Clearly defined roles
- Early risk stratification
- Structured communication
- Standardized escalation pathways

Purpose

To design, educate, and implement a standardized CYC response strategy for RNs, surgical technologists, EP, and CV surgeons to:

- Reduce surgeon and nurse response time
- Increase confidence and promote a just culture environment
- Improve interdisciplinary communication
- Mitigate Risk through early case screening and resource alignment
- Enhance patient safety during emergent cardiac events in the EP lab

Methods

- Convened an interdisciplinary team OR and EP team members
- Established a structured emergency algorithm to define the criteria for when to call a CYC
- Developed a CYC policy to define the roles and responsibilities of each responder
- Created a standardized CYC emergency cart
- Educated staff on the algorithm, roles and responsibilities, and the CYC emergency cart in a phased approach and with visual aids
- Reinforced the education with an escape room activity

Results

- Reduced the total number of CYC events from **14 events** → **to 3 events** in CY2024, with **zero associated mortalities**.
- Reduced activation delay and achieved a CYC response time from **39 minutes** → **<6 minutes**.
- Standardized roles and responsibilities across EP Lab and CV OR teams, improving coordination and escalation.
- Standardized and reorganized CYC supply carts, enhancing rapid access to critical equipment and overall emergency readiness.
- Completed phased interdisciplinary education for EP Lab and CVOR staff, reinforcing algorithm adoption and emergency readiness.

Limitations & Next steps

Limitations include a lack of a structured process for adjusting equipment needs or managing backorders. Need for a formal orientation process for new surgeons, residents, and fellows.

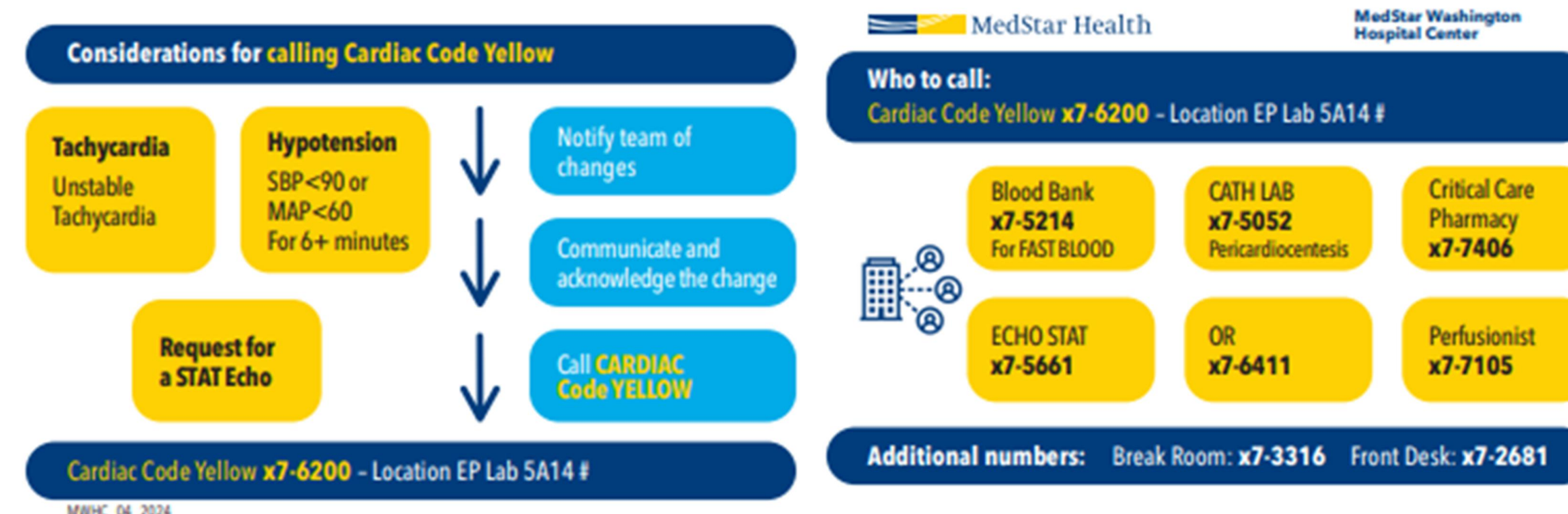
Next Steps include developing a collaborative simulation for all EP and CVOR CYC responders. Provide readily accessible resources outlining roles, responsibilities, and algorithms. Continue surgeon engagement in ongoing process improvement initiatives.

Conclusion

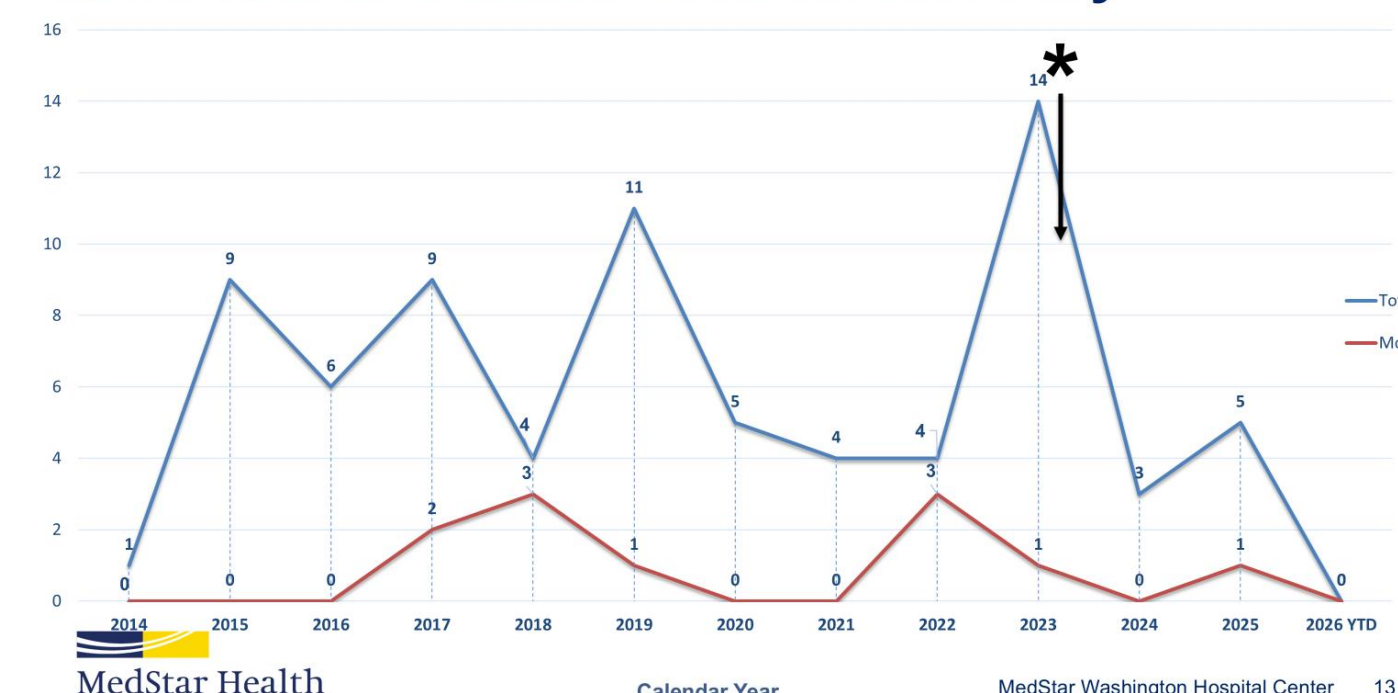
Implementation of a defined CYC algorithm, clearly established responder roles, and standardized emergency equipment streamlined the response process in the EP Lab. This unified approach, supported by focused education, improved emergency preparedness, strengthened team performance, and enhanced patient safety during high-acuity cardiac events

Acknowledgements

We thank the CYC response team, surgeons, leadership, and safety team at MedStar Washington Hospital Center for their collaboration and commitment to patient safety.



Code Yellow Cardiac Total vs. Mortality



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References & Contact

