

# Improvement Project

**Team Members:** Dr. Hannah Grausz, Dr. Audrey Grant, Tammy King, Elie Rhyu, Adedayo Dada, ERRH Nursing, ERRH Registration, ERRH Laboratory, ERRH Radiology  
**Team Leader:** Sarah Stanmyre, MSN, RN, CEN, Tarahn Aiesi, BSN, RN, CEN  
**Executive Sponsor:** Michelle Vassallo, MHA, RN, CEN



## Introduction - Problem Statement

The American Heart Association (AHA) guidelines state that all adults presenting with chest pain should have an electrocardiogram (EKG) performed within ten minutes of arrival to the Emergency Department. In 2015, our percentage of patients receiving an EKG within ten minutes was 62%. We developed an A3 and created guidelines but our average only increased to 75% in 2016, indicating that we needed to do more in order to improve this metric.

## Project Goals/Aim Statement

To improve our efficiency and meet the AHA guidelines consistently, we met as an interdisciplinary team made up of Nursing, Registration, Physicians, Laboratory, and Radiology in November 2016 and created a Standard Work (SW) known as “EKG Alert.”

## Saving Lives One EKG At a Time

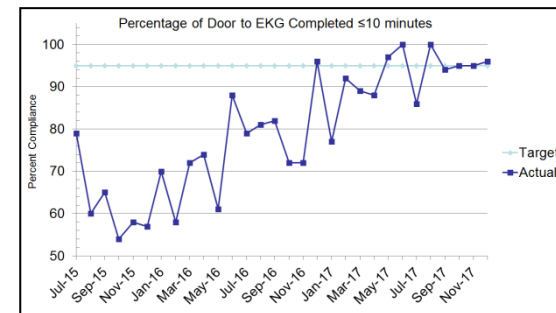
## Results

Based on the discussion at our work group, we implemented the following items which drove our success including:

- Discussed process issues and barriers (RN issues, registration issues, EKG machine/equipment issues)
- Developed EKG Alert SW
- Implemented twice monthly chart audits for all chest pain patients
- Reviewed statistics and potential barriers in daily huddles and staff meetings to maintain focus on the metric
- Added signage to the lobby to instruct patients to notify registration about AHA heart attack symptoms

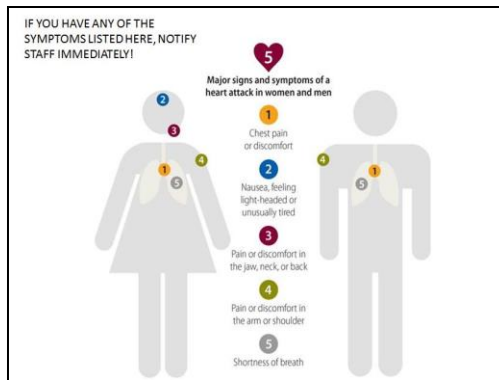
## Improvement Achieved - Outcomes

Our improvements after implementing the EKG Alert SW process included an overall yearly compliance of 92% in 2017, with 95% in the past 8 months, and improvement in our average time to EKG completion to 6 minutes.



## Next Steps & Recommendations

The next steps of this project are to continue improving our average door to EKG time and sustain our results and maintain 95% compliance or higher. We would like to expand our success to our sister facility, the Inova Emergency Room of Fairfax City and share our findings with the Inova Health System, especially with other free standing Emergency Rooms within the system.



Step	Process Step	Responsible	Time Goal	Critical Notes on Step
1	When RN gives complaint of Chest pain (Indications of Arrhythmia, breathlessness, palpitations, rapid heart rate, irregular heartbeat, chest tightness, chest heaviness, chest discomfort, abnormal sweating, dizziness, fainting, lightheadedness, abnormal EKG, anginal pain, hypotension, high blood pressure)	Registration	1 min.	Signage posted in lobby with it's
2	When registration is completed, Nurse, DOB, other complaint only	Registration	30 sec	See room registration paperwork
3	"EKG Alert" is overhead pager @ available staff members respond	Registration	30 sec	At available staff members includes ancillary departments: Lab, Radiology, & Security
4	Registration places patient sticker on "EKG Alert" signifier	Registration	5 sec	This is to help with "EKG Alert" pager and EKG tests
5	If available staff member comes patient to EKG, if no one responds, registration walks patient to room	Registration	1 min.	At EKG, can get nurse, ask patient to get under ead, get EKG machine, get EKG cables
6	Change RN gives verbal room assignment to staff member bringing it back	Change RN	15 sec	Place in available room (BEPIC)
7	Change RN documents diagnosis which RN does EKG	Change RN	15 sec	Document in EKG paper
8	EKG order is placed	Change RN/MD	1 min.	EKG order can be placed by MD, RN, or EKG as per
9	EKG is done at bedside	RN	2 min.	Delivered to DMF or available
10	EKG is handed to MD for sign-off	RN	1 min.	
11	EKG is documented in Epic with time performed and time given to MD	REG/MD	1 min.	

**Critical Notes on Overall Process**

101 "EKG" twice daily check of EKG machine, Reboot, wipe down machine, check EKG stickers/paper, check clip, initial or daily sheet when completed

102 Audit of door to EKG times to be run monthly by Nurse Manager to evaluate trends

103 Forward RN to Nurse Manager if EKG machine delayed off connectivity or any extenuating circumstances that prevented EKG being done in 10mins

