



LEAN EKG Machine- An Analysis of the EKG Process at OSUMC

Nishitha Gali M.H.A.; Oghogho Oboreh Edobe M.H.A.; Peg Page OMSII; Steven Rivera OMSII; John Whelan OMSII
Cari Marshall; Ipe Paramel, M.H.A.

INTRODUCTION

EKGs Performed Without Orders
EKG Orders With No Complementary Test
EKG Mismatch (Test/Order)

Patient safety
Impedes record keeping
Additional work to rectify
Lost revenue

TOTAL NO. FOR 2018 AND 2019 FOR EKG W/O ORDERS	TOTAL NO. FOR 2018 AND 2019 FOR ORDERS WITHOUT EKG
411	85 AS OF NOW

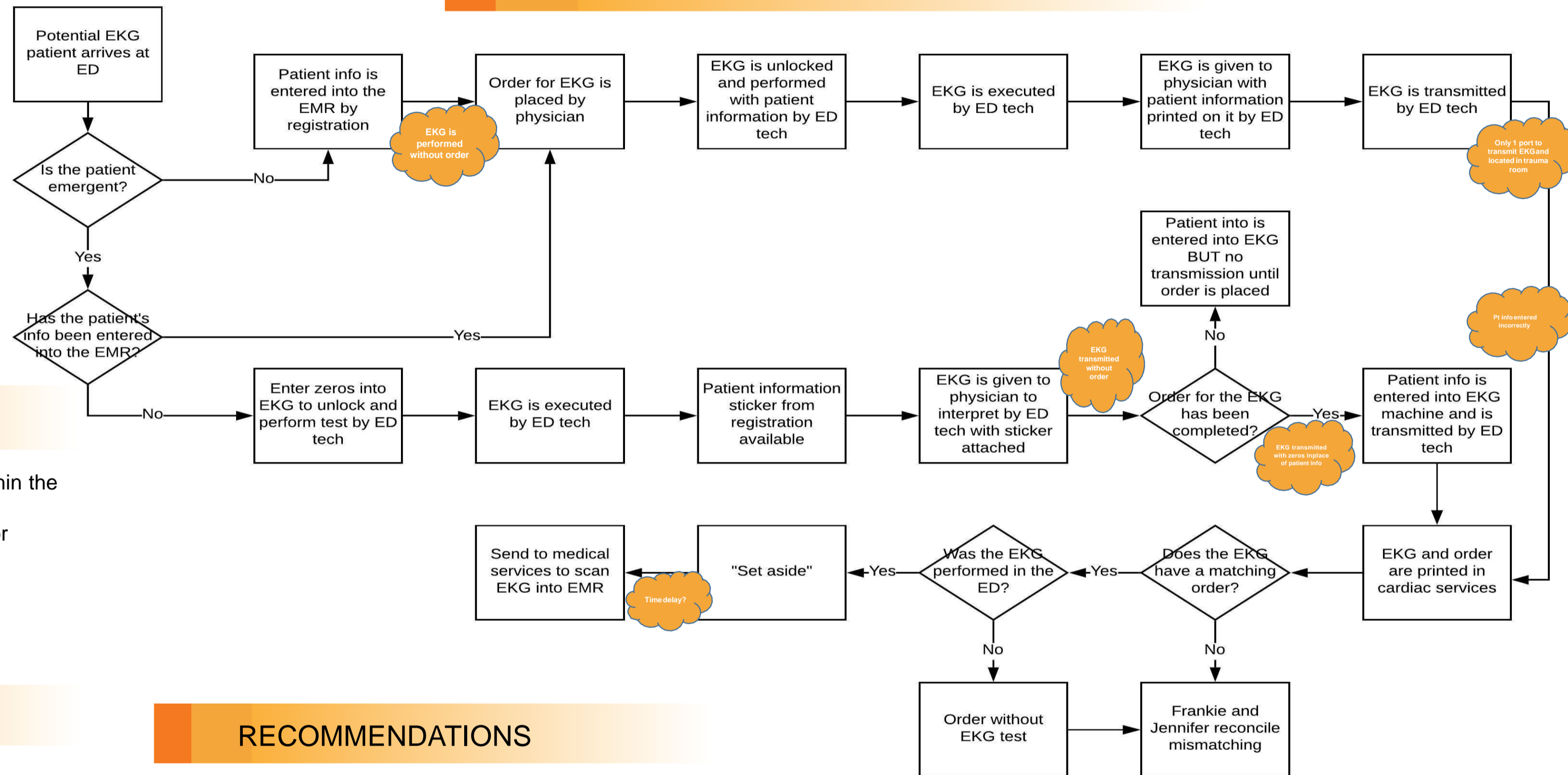
PURPOSE/METHODS

- Observe and document the EKG Process within the ED
- Analyze process for weak points and areas for improvement
- Present possible solutions as well as other considerations
- Improve EKG accuracy by at least 90%

RESULTS

- Three Older EKGs; Not WIFI Capable
- 1 of the 3 EKG machines is unreliable
- No Standard Operating Procedure for ED techs
- One Ethernet Cable/Port For Transmission located in trauma room
- Typing errors cause mismatches
- Overproduction and Excess Processing
- EKGs without orders cannot be billed for
- Require time and resources to separate mismatch EKGs
- Waiting
- Time lost when test is not available on EMR
- Errors
- Patients lose valuable health information and the hospital loses revenue needed for improving patient care

EMR EKG PROCESS MAP



RECOMMENDATIONS

IMPLEMENT and MAINTAIN:
 EKG Status Log
 Door-to-Data Time
 A Standardized Operating Procedure for the EKG Testing and Transmission

Other Considerations:
 Indicator for patients leaving the ER to the floor
 Protocol for test refusal
 Protocol for order request/cancellation
 Physical Transmission Location
 Newer Technology



CONCLUSION

As a team we applied LEAN concepts to understand the EKG process and to identify disruptions in flow and complexities that can be simplified. The data collected identified specific obstacles in the EKG process and mapped out the process to reference for training as a standard procedure. Our recommendations aim to improve record keeping and rectify lost revenue, while keeping patient safety as the top priority.