



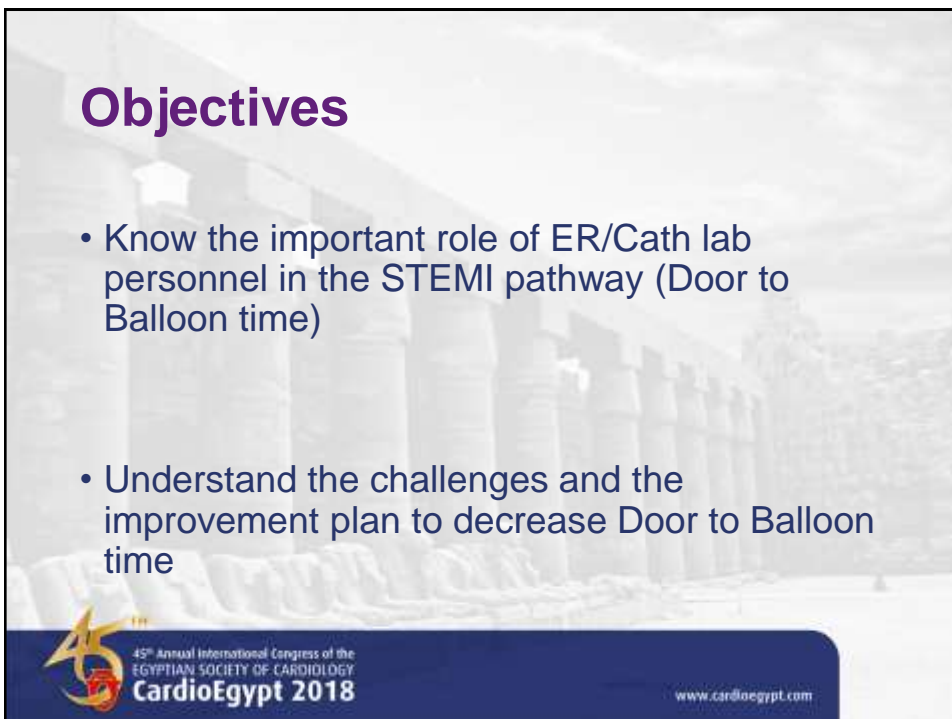
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**Door to Balloon Time
Challenges and Improvements**

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Objectives

- Know the important role of ER/Cath lab personnel in the STEMI pathway (Door to Balloon time)
- Understand the challenges and the improvement plan to decrease Door to Balloon time

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Introduction

- Early reperfusion therapy is optimal for salvaging cardiac muscle and improves survival of the patient with STEMI diagnosis
- Door-to-balloon time is a quality measurement monitored by hospitals in the treatment of a STEMI



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Definitions

~~Door to Balloon time~~

**First medical contact (FMC) to
PCI**

Time of STEMI diagnosis at or before ED arrival to successful
PCI



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Clinical Pathway of STEMI patient

STEMI patient who is candidate for reperfusion

Initially seen at PCI capable hospital

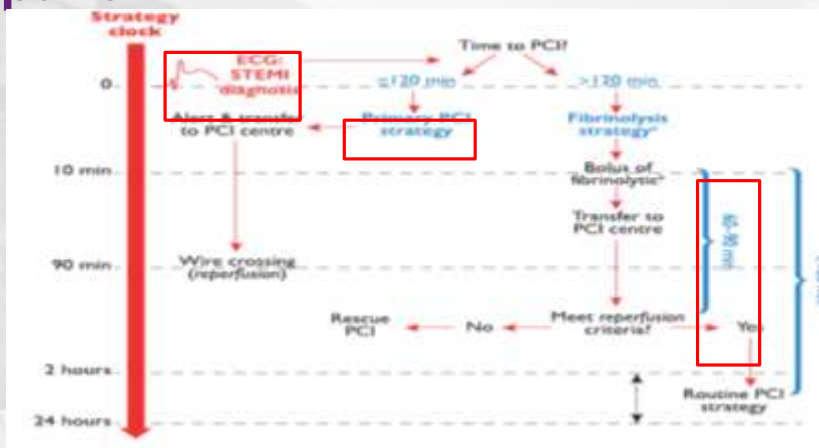
Send to Cath Lab for primary PCI
FMC to Device time is < 90 min



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Clinical pathway of STEMI patient



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Pre hospital to ED door

Transport method

- Self transport or Walk in Patient
- By EMS

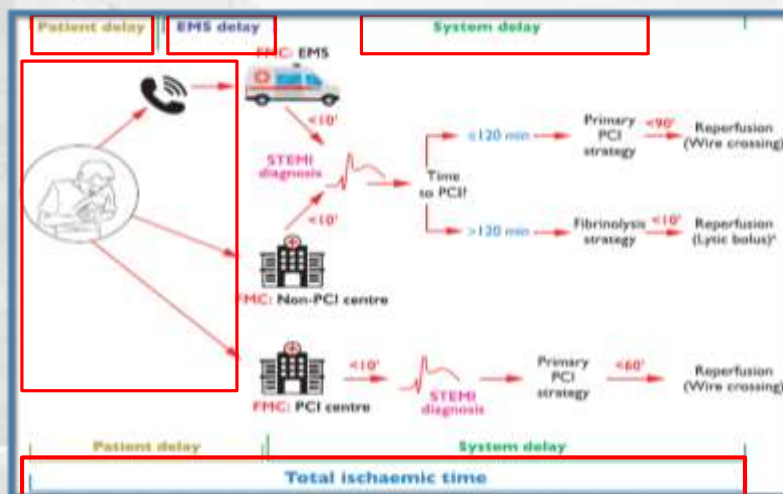
Note: It is very important to know the **onset of chest pain**



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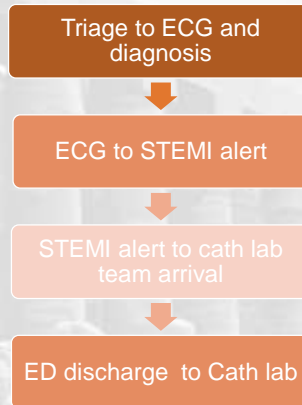
Systematic Approach



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Critical Minutes (ED door to ED discharge < 60 min)



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Challenges and Improvements (ED door to ED discharge)



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Challenges

1. Triage assessment (door to ECG).
2. Lack of ED physicians involvement in activation.
3. Patient preparation.
4. Physician lack of time documentation.
5. Delay of consent and procedure explanation.



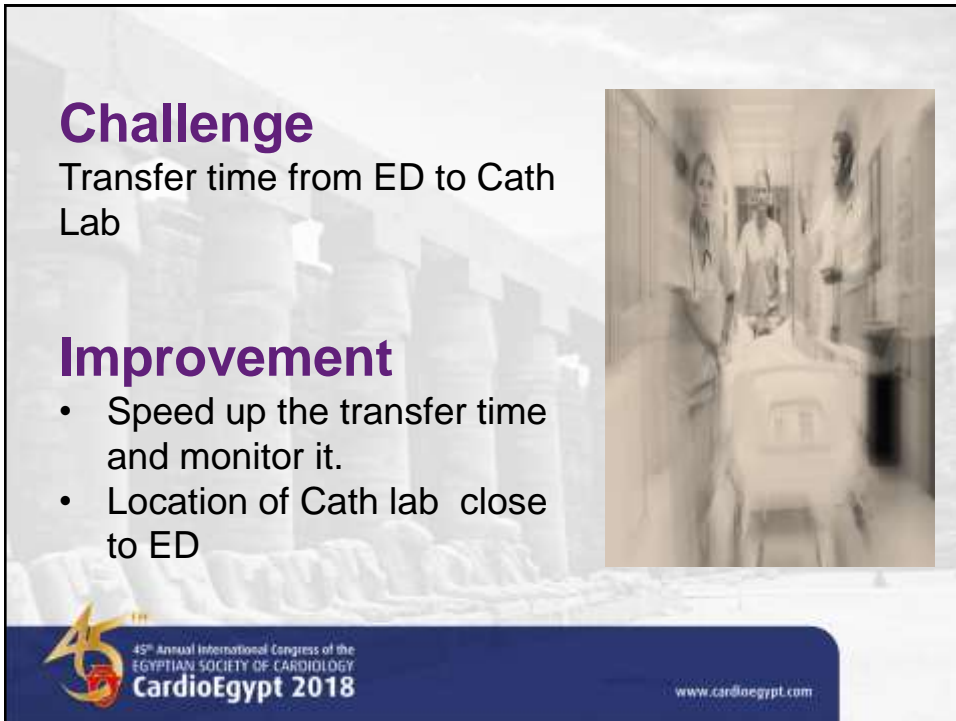
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Improvement

1. Immediate ECG with chest pain (Door to ECG).
2. Immediate activation by ED physician, link group among team for better communication
3. On going staff education.
4. Electronic documentation system.
5. Procedure explanation and consent for approval done in ER.



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Challenge

Transfer time from ED to Cath Lab


Improvement

- Speed up the transfer time and monitor it.
- Location of Cath lab close to ED



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Summary

Early Recognition

Early Activation

Early Transfer

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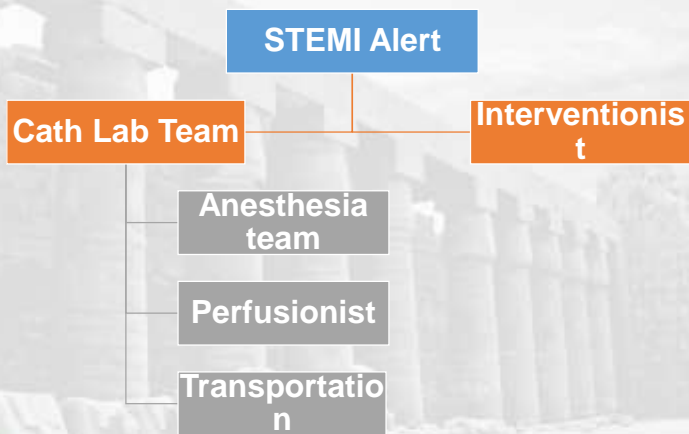
STEMI ALERT



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Cath Lab Activation Workflow



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Cath Lab Door to PCI time Cath Lab personnel Role

- Readiness of Cath Lab (Personnel /Equipments)
- Patient preparation (radial versus femoral)
- Vascular access time (radial versus femoral)
- Balloon / Device time
- Complications require interventions before or during balloon/device time

Total time <30 minutes



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Critical Minutes

Triage to ECG and diagnosis
ECG to STEMI alert
STEMI alert to cath lab team arrival
ED discharge to Cath lab door

**ED door to
Cath Lab door
< 60 min**

Cath lab door to patient preparation
Stick to balloon / device

**Cath Lab door
to PCI < 30 min**

Total time <90 minutes



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Challenges and Improvement

(Cath Lab door to PCI)



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Challenge

Cath lab team availability after hours

Improvement

- Notifying ED of transfer as soon as first staff arrives in facility
- Team leader assignment/Workflow



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Challenge

Cath Lab staff Accommodation

Improvement

- Specific transportation is organized for the on call team
- Accommodation near hospital is provided



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Challenge

Delay Stick to balloon time in cath lab

Improvement

One view CAG done for non culprit lesion then
move to open culprit lesion



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Challenge

Lack of regular Multidisciplinary feedback of Data

Improvement

- Involved the Cath Lab/ED team in Monthly Data
- Analysis and strategic improvement sessions



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Challenge

Time synchronisation



**CARDIAC CATH
LAB**



**EMERGENCY
DEPARTMENT**



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Summary

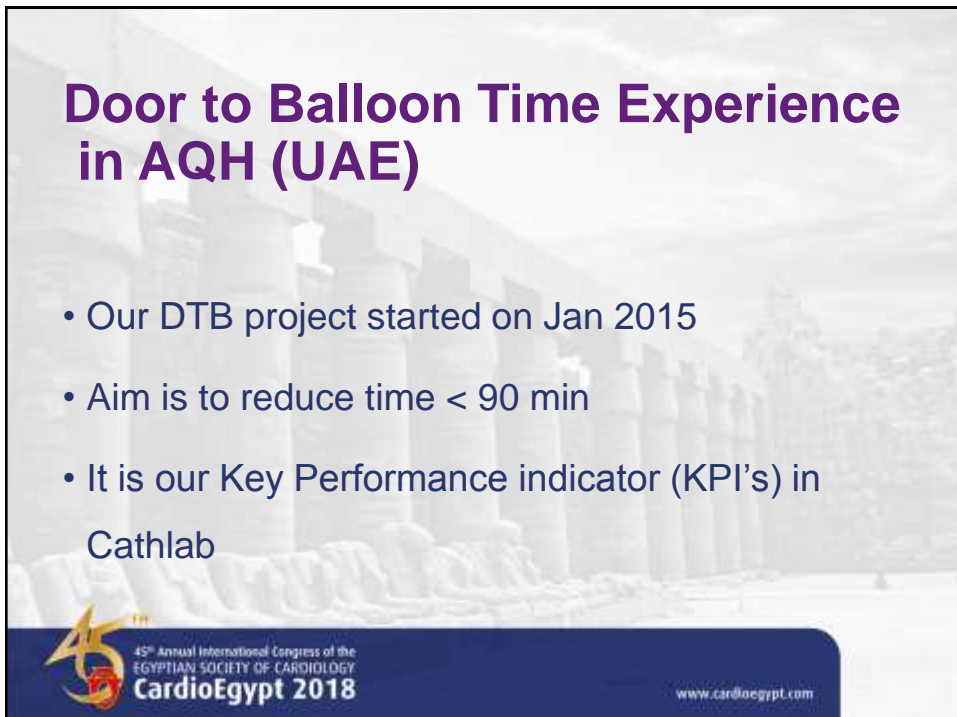
Preparedness

Commitment

Alertness


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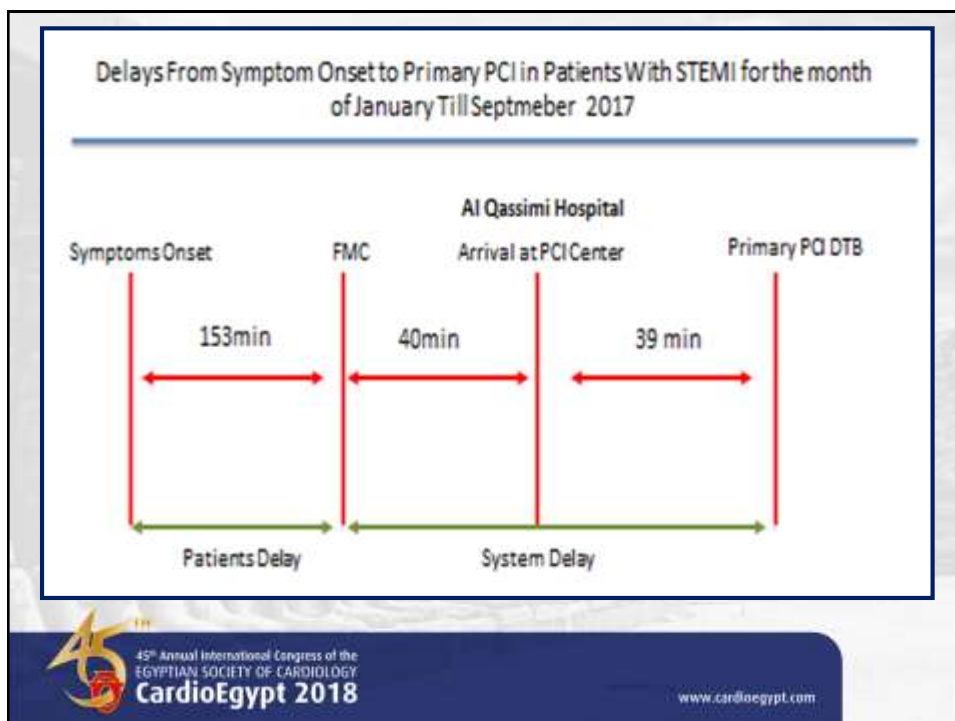
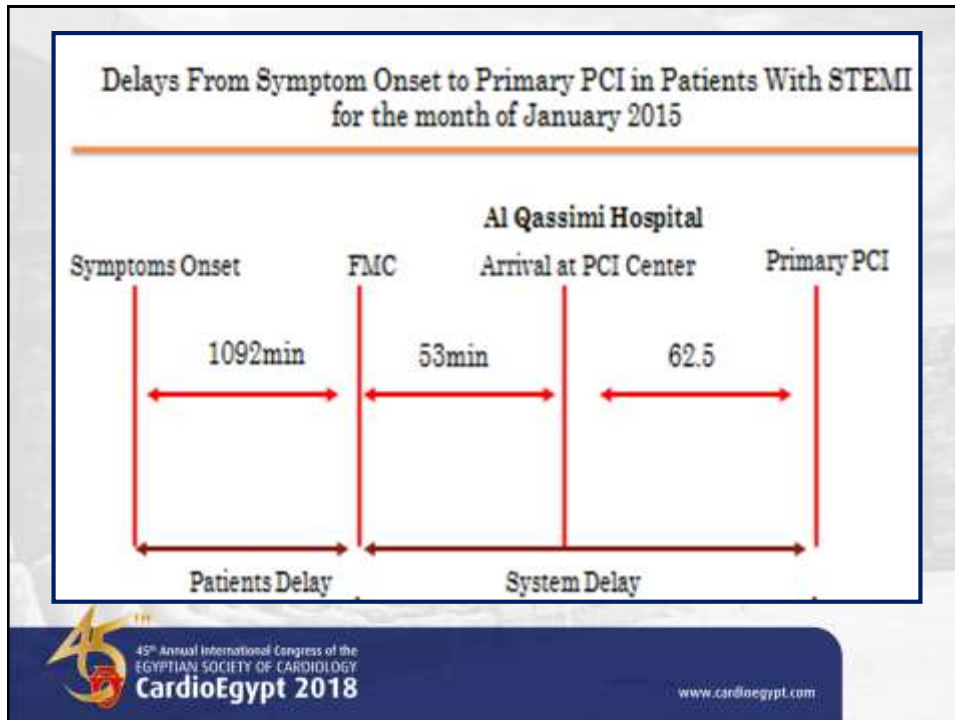


**Door to Balloon Time Experience
in AQH (UAE)**

- Our DTB project started on Jan 2015
- Aim is to reduce time < 90 min
- It is our Key Performance indicator (KPI's) in
Cathlab

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Take home message



Early Recognition



Early Dispatch



Early diagnosis



Early Reperfusion



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No institution can have an excellent reputation for cardiac care without an outstanding STEMI treatment program

Time is Muscle

Muscle is Heart

Heart is Life



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**A team is not a group of
people who work together**

▪

**A team is a group of
people who trust each
other .**



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Simon Sinek

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