

# IMPLEMENTATION OF 24/7 PRIMARY PCI IN PUBLIC HOSPITALS, OUR INITIAL EXPERIENCE AND HOW IT HAS IMPACTED THE LIVES OF MAURITIANS AND HEALTH SYSTEM

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PORT LOUIS

MAURITIUS





# GUIDELINES

## GUIDELINES

- AHA/ACC
- ESC
- NICE(National Institute for Health & Care Excellence UK)
- SCAI
- LOCAL

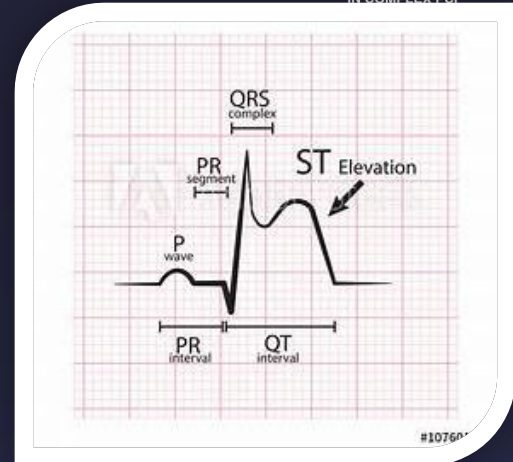
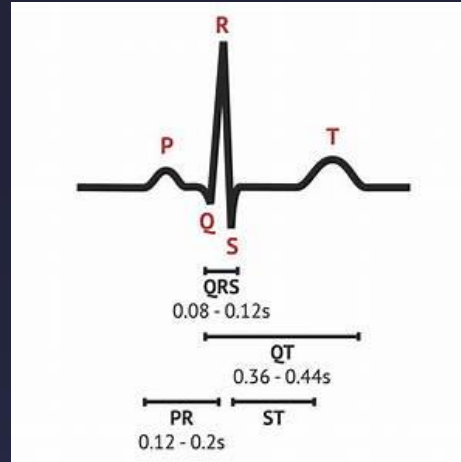
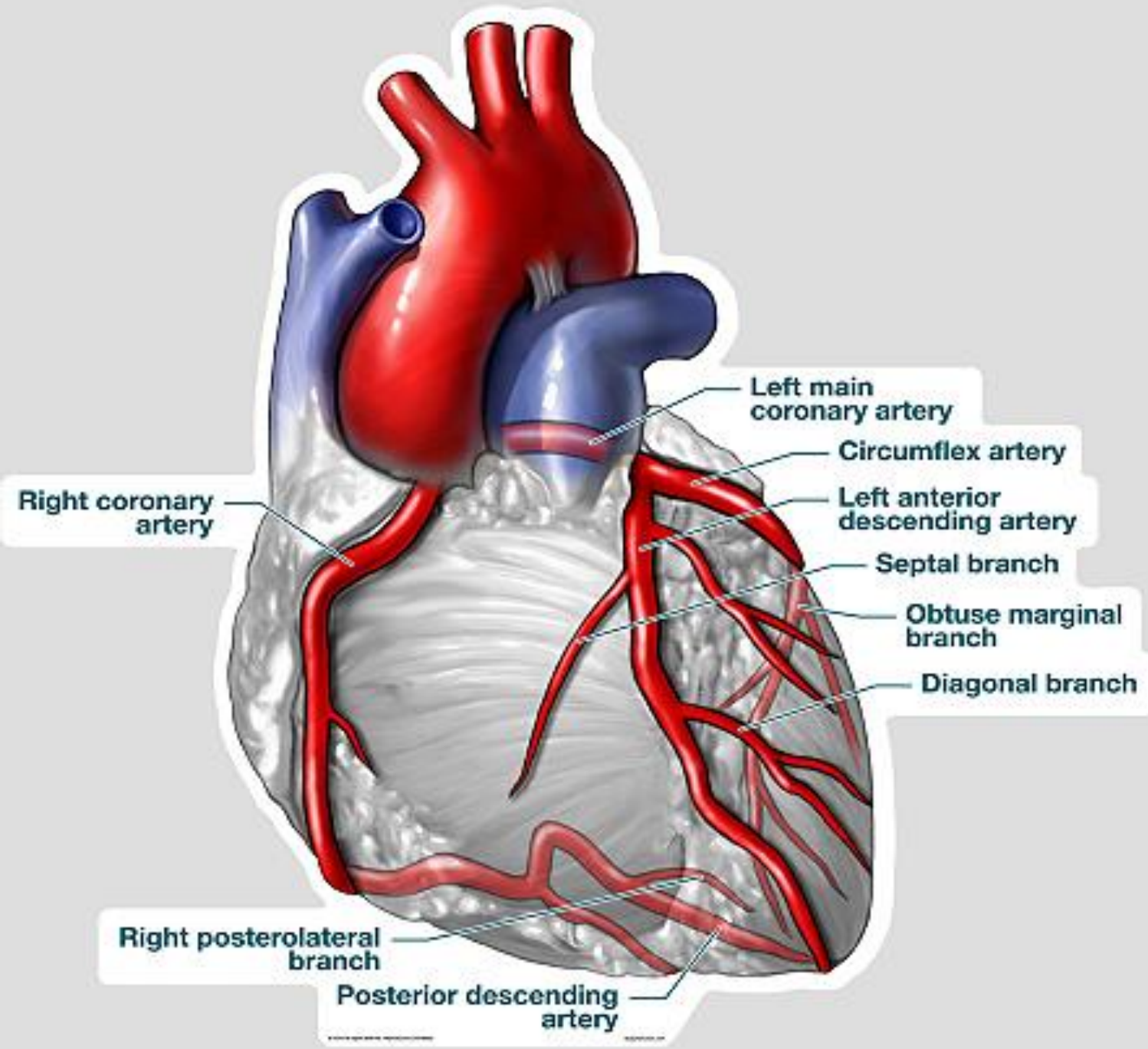
**ALL SAY ONLY ONE  
THING**



# STEMI

IN COLLABORATION WITH

**CHIP-CTO**  
*India*  
ACHIEVING BEST OUTCOMES  
IN COMPLEX PCI



EARLIER THE CULPRIT VESSEL IS OPENED BETTER IS THE

- IMMEDIATE
- SHORT TERM
- LONG TERM OUTCOMES

**MIN IN MI MEANS  
CARDIAC MUSCLE**





IN COLLABORATION WITH

**CHIP-CTO**  
*India*  
ACHIEVING BEST OUTCOMES  
IN COMPLEX PCI

# 2 WAYS TO OPEN THE BLOCKED CORONARY ARTERY

- THROMBOLYSIS (MEDICAL)
- PCI (INTERVENTIONAL),  
ANGIOGRAPHY / PLASTY

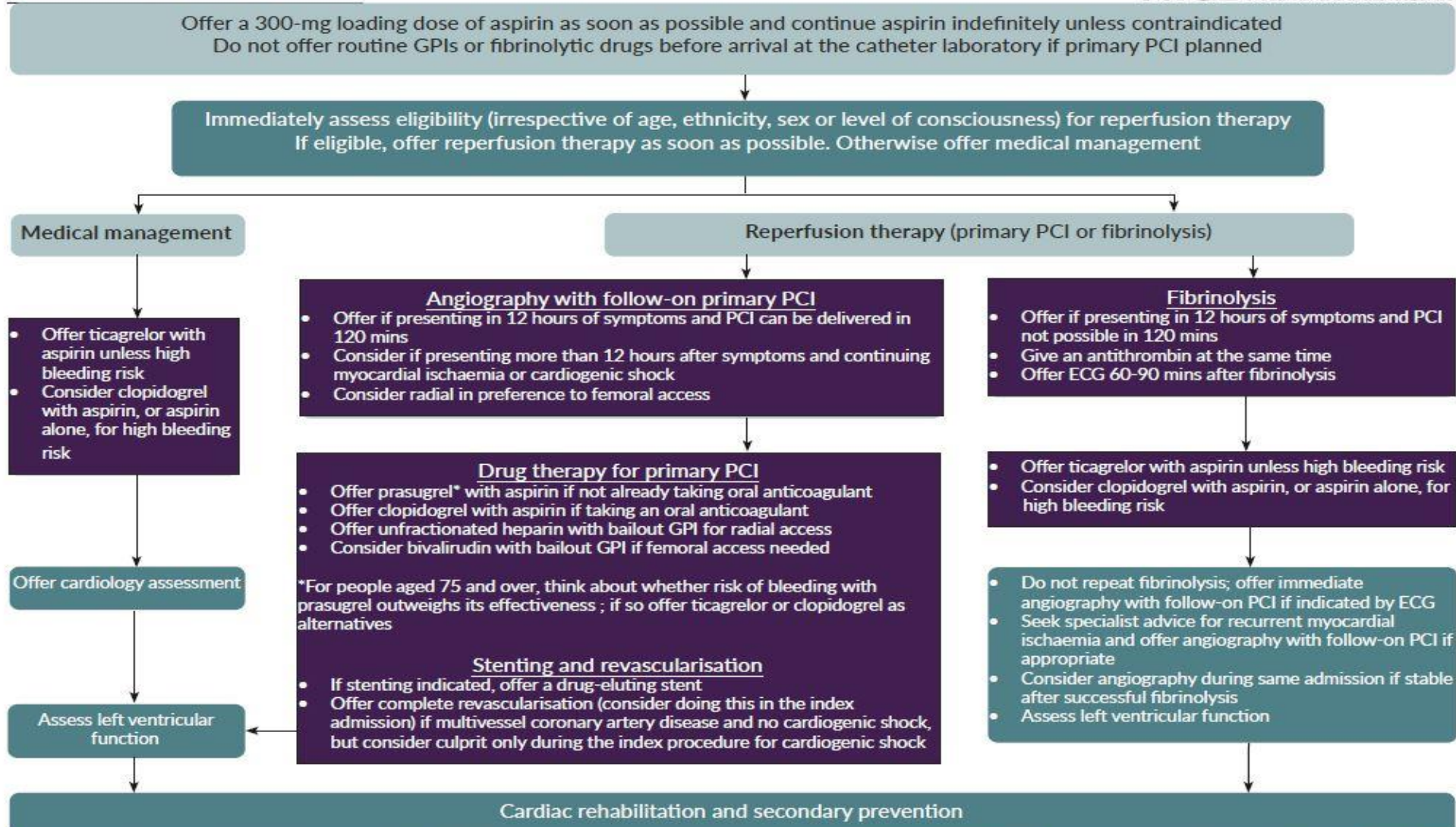


- THROMBOLYSIS WAS STILL USED IN MOST OF OUR 5 REGIONAL HOSPITALS
- CAG MAY/NOT BE DONE BEFORE D/C N PT PUT ON WL OF CAG
- DECISION
  - PTCA
  - CABG
  - MED T/T



## STEMI: early management

**NICE** National Institute for Health and Care Excellence



# NICE GUIDELINES 2020

1. FIRST MEDICAL CONTACT WITH PT OF CHEST PAIN (10MIN) – ECG AND DIAGNOSIS
2. IN NON- ANGIOGRAPHY CAPABLE CENTERS – 10 MIN TO THROMBOLYSIS
3. IN PCI CAPABLE CENTRES:
  - ANGIOPLASTY WITHIN 120 MIN
  - WIRE-CROSSING ( REPERFUSION) WITHIN 90 MIN



- IF CATH LAB AVAILABLE 1 ARY PCI IS THE PREFERRED T/T
  - ARTERY OPENED UNDER VISION (CHANCES OF FAILURE LESS)
  - LESSER RISK THAN WITH THROMBOLYSIS (BLEEDING)
  - IMMEDIATE RELIEF OF SYMPTOMS AS SOON AS ARTERY OPENED
  - ST SEGMENT RESOLVES INSTANTANEOUSLY







## BEFORE 01/09/2020

- CATHLAB OPEN 9–16 HRS
- STK, TNK, THROMBOLYSE, STABILISED
- CAG DEFERRED BEFORE D/C OR WL,
- CATHLAB CLOSED AFTER 4 PM ON WK, SAT NOON, SUN AND PH CLOSED
- FAILED THROMBOLYSIS – RESCUE PCI PTS TRANSFERRED TO VH OR DDY(AVAILABILITY OF CATHLAB, PLACE AND MOOD OF DR ON CALL)
- SOME PA ON THE WAY, BEFORE REACHING HOSP OR AFTER CAG
- MIN MEANS MUSCLE IN STEMI, PRECIOUS TIME LOST(TRASPORT/SAMU)

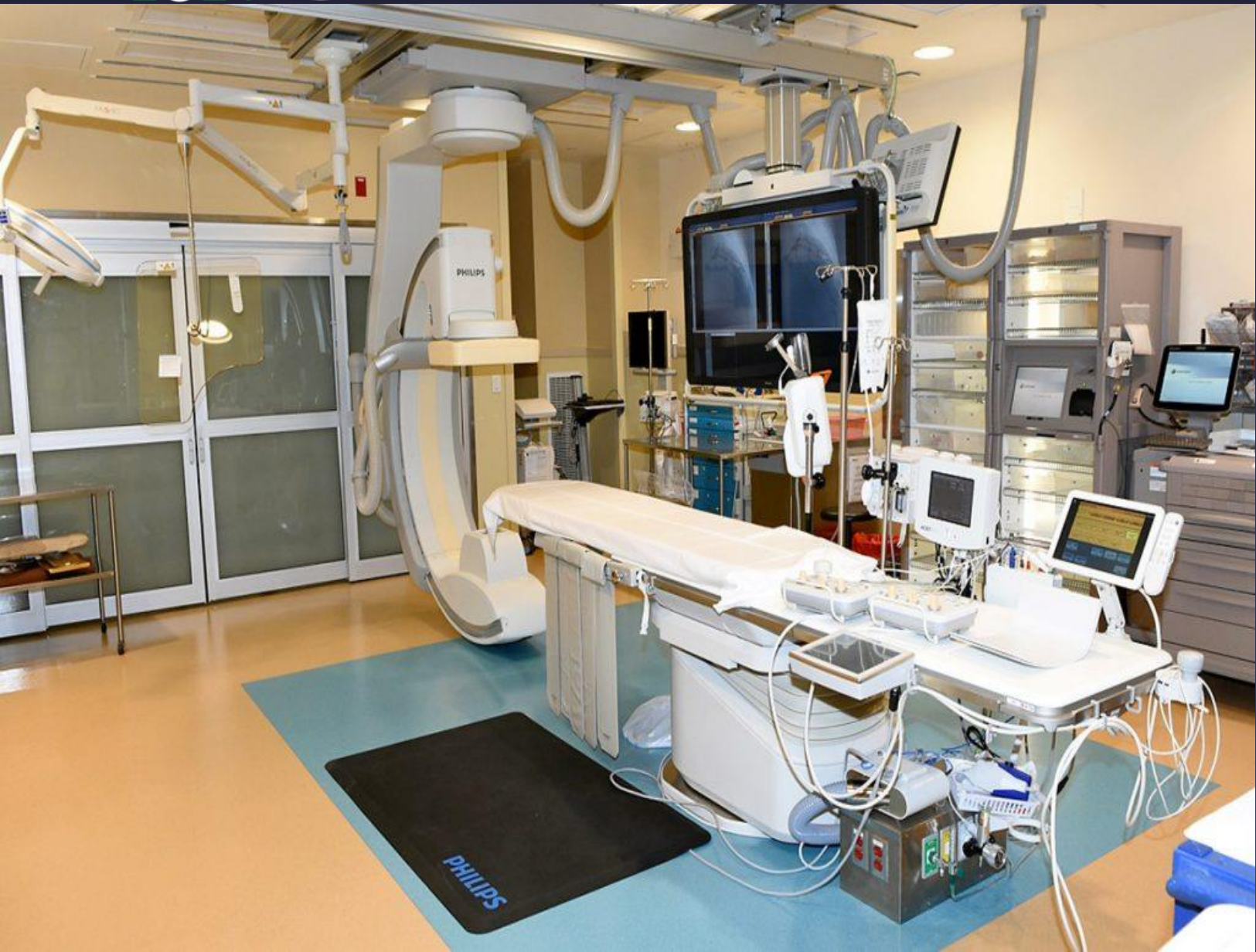




DEDICATED, YOUNG, DYNAMIC BUT  
**INEXPERIENCED** TEAM IN PPCI  
READY TO TAKE THE CHALLENGE TO  
START PRIMARY PCI 24/7 BASIS

- 6 CARDIOLOGISTS
- 1 CIC
- 2 CONSULTANTS
- 3 SPECIALISTS





9 YRS, STK, TNK USED, NO 1ARY PCI  
DONE

01/09/2020  
1ARY PCI 9 – 16 HRS

21/06/2021  
24/7 1ARY PCI AS A PILOT  
PROJECT BY MOHW AT DR A.G.  
JEETOO HOSP





M 40, DM UNCONTROLLED

SMOKER 10/D

EPIGASTRIC DISCOMFORT LAST NIGHT

CENTRAL CHEST PAIN 1 HR

MALaise/LOC

UNABLE TO SPEAK

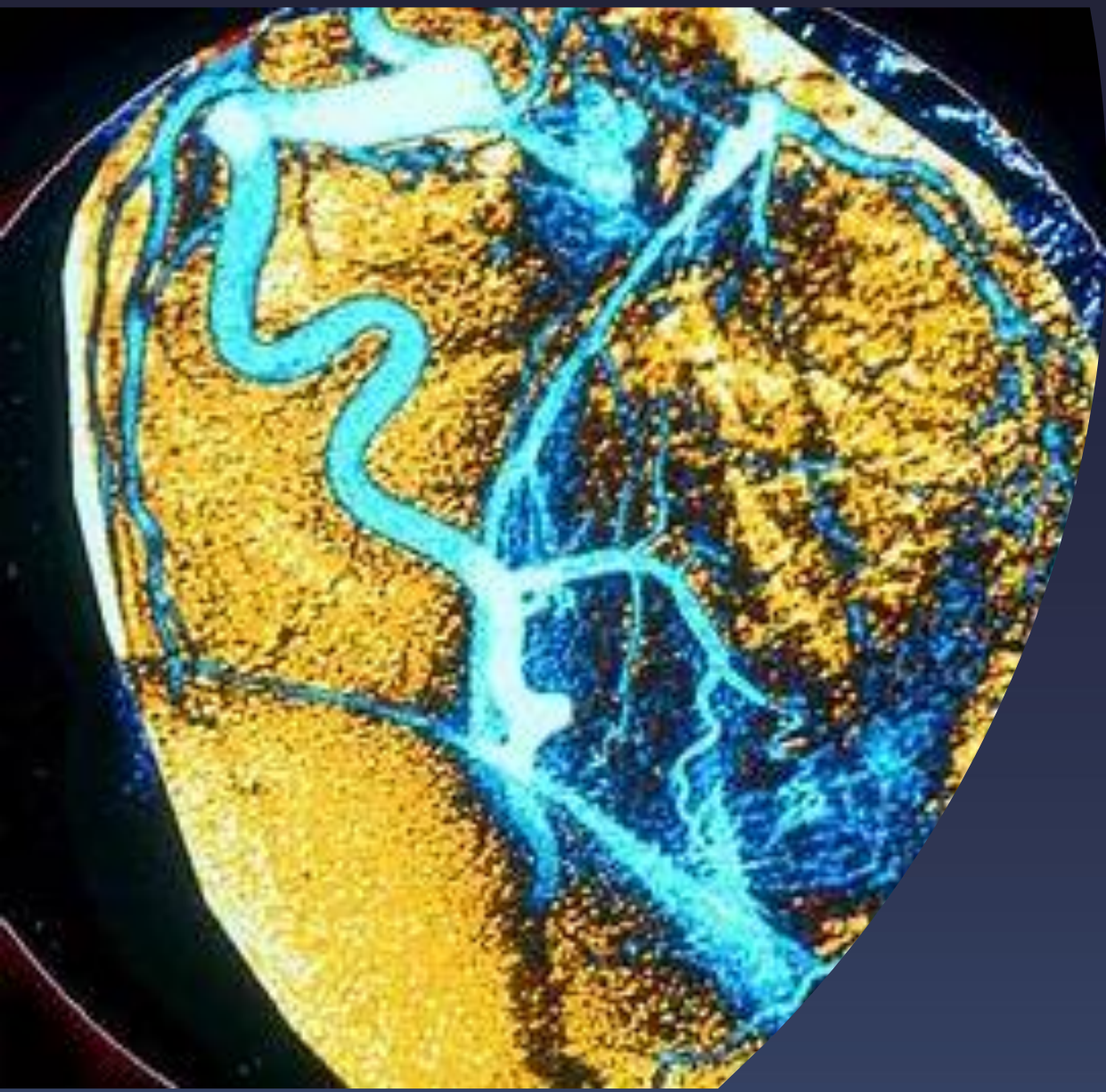
REGAINED CONS

HOSP BY COLLEAGUES

01/09/2020







CAG





RAWA, SURAJ  
JH496/20 J126218 M/40

Dr AG Jeetoo  
01 Sep 2020  
11:47:27



Lao 47.8 Cran 1.0  
Zoom (1.000x)

C:128 W:189  
1/58

JH496/20 J126218 M/40

Dr AG Jeetoo

01 Sep 2020

11:50:44

JH496/20 J126218 M/40

Dr AG Jeetoo

01 Sep 2020

12:35:58

Rao -0.8 Cran 31.4  
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C:128 W:189 Rao -0.3 Cran 30.9  
1/52 Zoom (1.000x)

C:128 W:189  
1/61





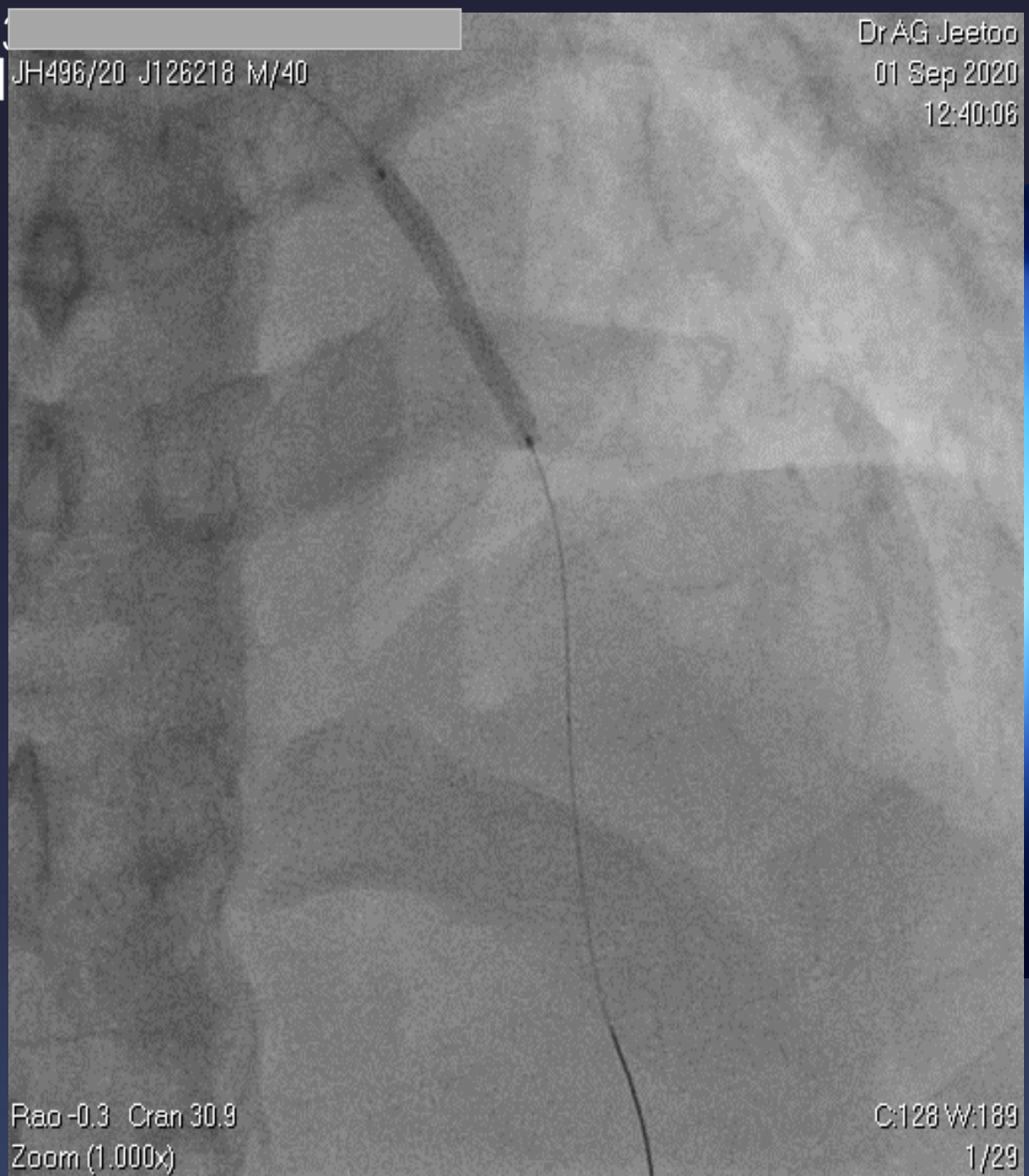
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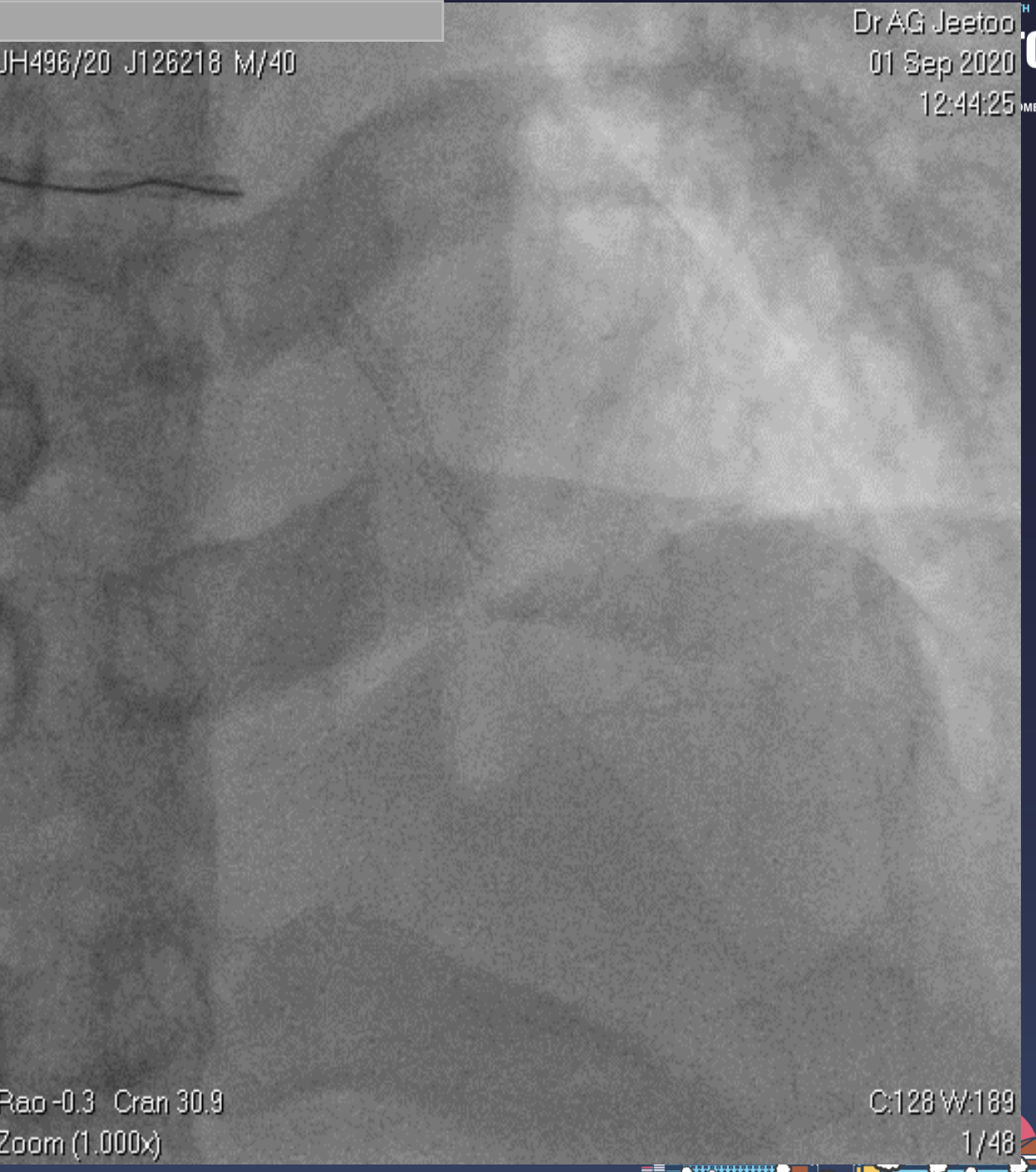
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Dr AG Jeetoo  
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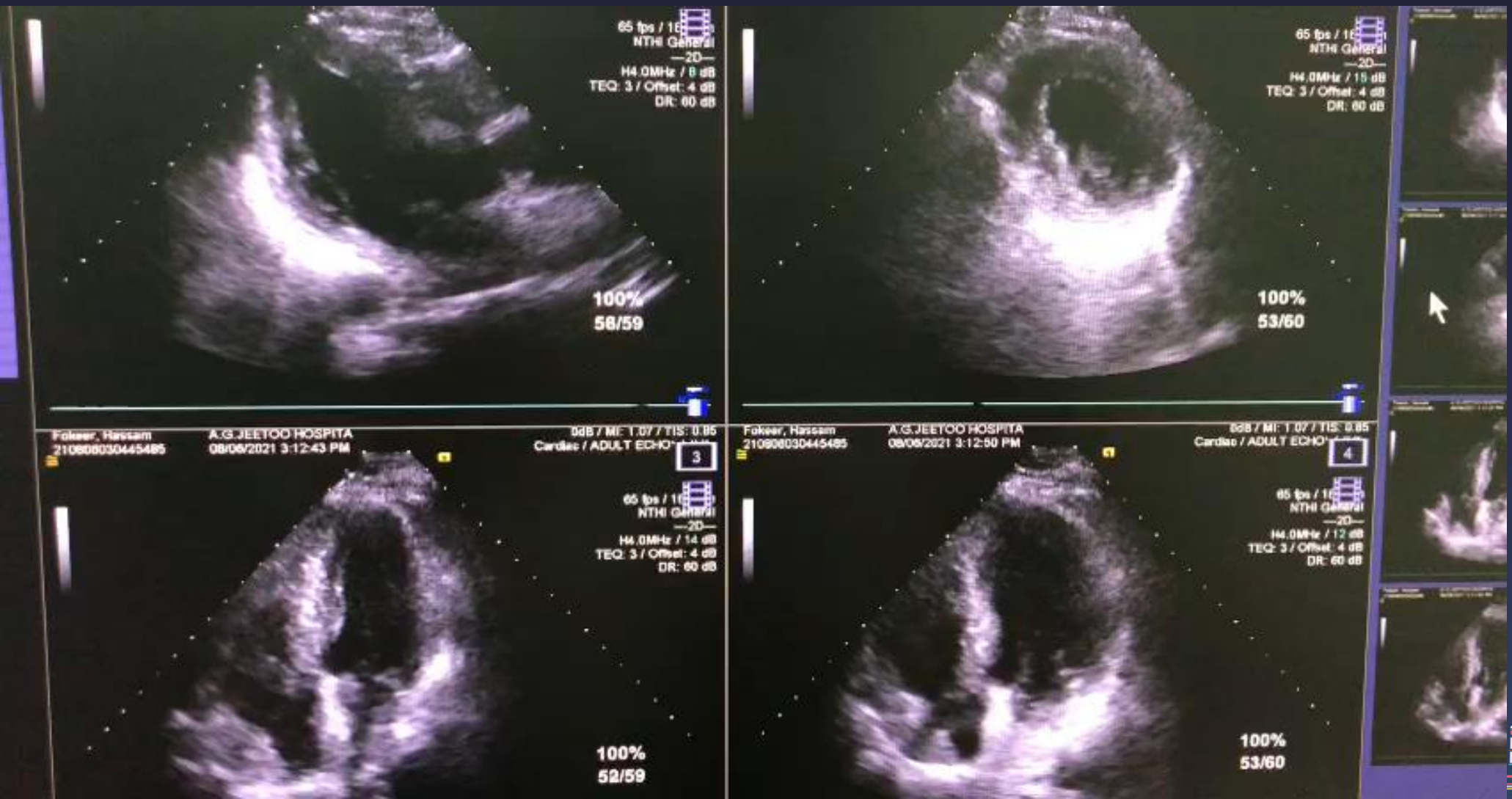
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# ECHOCARDIOGRAPHY



# ECHOCARDIOGRAPHY





- PT WAS D/C 3RD DAY
- REV 2 WKS
- STABLE
- NO CHEST PAIN
- LEADING A NORMAL LIFE TILL NOW



## 24/7 Tary PCI experience



### Advantages

#### Patient

- Artery opened under vision so chances of success high
- Pain and ST elevation subsides as soon as the artery is opened
- No thrombolytic used, risk of bleeding complications..ZERO
- EF of pt preserved, personal, professional and family life preserved, productive in all aspects.
- Days of hospitalisation in most cases 3 instead of 6
- No. of meds reduced so side effects less

• Early return to professional, personal and family life as damage to myocardium less



## 24/7 Tertiary PCI experience



### Advantages

#### Hospital and system

- Days of hospitalisation half the normal course as compared to thrombolysis so bed turnover doubled
- 1 dose Tenecteplase cost 50,000 Rs, stent costs 7,000
- Thrombolysis leads to bleeding complications  
CVA, GIT bleed (fatal or serious handicaps)..avoided
- Heart failure in case of failed thrombolysis adds up to the burden of CVD and heart failure..many meds..expense and side effects..vicious cycle..Rs ??





## 24/7 Tary PCI experience

- MOHW purchases TNK as follows:
- FH 420/YR
- SSRNH 600/YR
- JH 400/YR
- VH 550/YR
- JNH 520/YR
- ROD 12/YR



## 24/7 1ary PCI experience



- TOTAL  $420+600+400+550+520+12 = 2502$
- $2502 \times 50,000 = 125 \text{ M Rs/YR ( 2.8 M USD )}$
- 1 CATHLAB COSTS AROUND 35 M
- 3 LABS/YR CAN BE ADDED TO ANY HOSP JUST BY DOING 1ARY PCI ROUND THE CLOCK IN OUR EXISTING 3 CATH LABS
- Rs SAVED CAN BE USED FOR OTHER DEVELOPMENTS IN HEALTH SECTOR





## Implementation

- Acceptance
- Preparation of team and their approval
- Aneasthetists
- Radiographers
- Place to rest, mess, payment issues, etc..
- Multiple meetings at the MOHW
- Settled and program started on 21<sup>st</sup> June 2021



## 24/7 1ary PCI experience

### Vision

- Every pt presenting with STEMI benefit with 1 ary PCI 24/7
- 1ary PCI be extended to all 3 existing centres and get 1 more at JNH, 1 at FH
- Every citizen has the right to get the best t/t in case of STEMI.... 1ary PCI.



## 24/7 Primary PCI

### ACTUAL STATE OF AFFAIRS

- AFTER THE TREMENDOUS SUCCESS OF INITIAL PILOT PROJECT AT JEETOO HOSPITAL THE MOHW DECIDED TO EXTEND THE PROJECT NATIONWIDE
- SINCE JUNE/JULY OF 2022 OTHER 2 CENTRES OF ISLAND HAVE ALSO STARTED PPCI ON A 24/7 HR BASIS
- PATIENTS FROM ALMOST EACH HOSPITAL ESP THOSE WHERE CATHLAB IS ABSENT ARE BEING TRANSFERRED AS FAR A POSSIBLE TO A PCI CENTRE FOR PPCI..DEPENDING ON CCU BEDS
- A SMALL SPARK THAT STARTED AT JEETOO HOSPITAL HAS TAKEN A NATIONWIDE DIMENSION
- INTRODUCTION OF PPCI IN OUR HEALTH SYSTEM HAS BROUGHT A PARADIGM SHIFT IN THE T/T OF PTS PRESENTING WITH STEMI
- AT PAR WITH THE LATEST MODE OF T/T AS ANY DEVELOPED COUNTRY FOR STEMI PTS



# CAG





CCU OF DR A.G. JEETOO HOSPITAL, ONLY  
PUBLIC SECTOR TO WIN THE COMPETITION OF  
AFRICAN KAIZEN SPECIAL MENTION AWARD  
2021 SET UP BY THE JAPANESE AUTHORITIES ( JAICA )

21/10/202



06/10/20  
22

## SINGAPORE

APSIC (Asian Pacific Society of Interventional Cardiology)  
Honoured me with a Fellowship and official Board member  
of their society for the paradigm shift in the t/t of STEMI pts in  
Mauritius, and I dedicate this to the whole team of  
Dr A.G. JEETOO HOSPITAL and all those involved in the success  
story



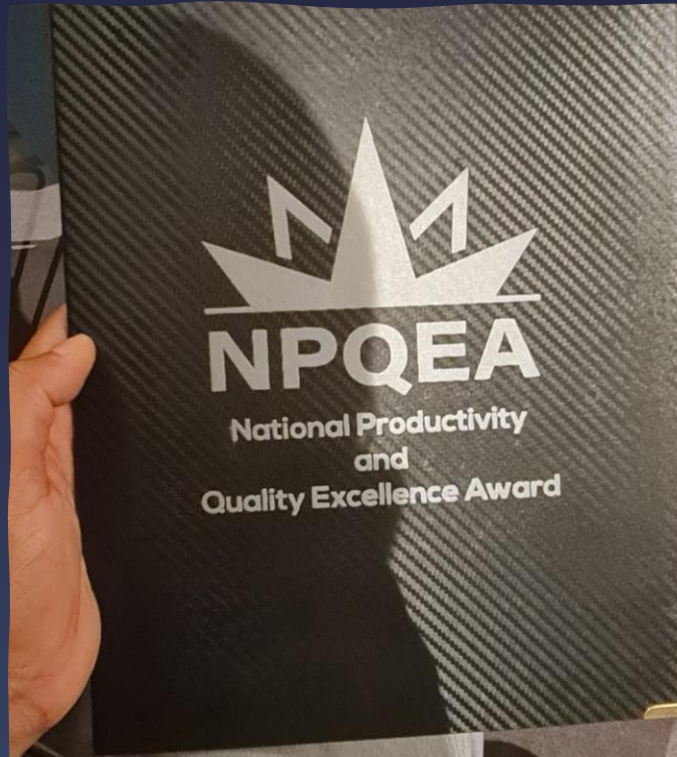
17/03/2023

PUBLIC SERVICE EXCELLENCE GOLD AWARD





28/07/2023



NPCC





EhJ...AFTER THEIR RESEARCH AND CONSULTATION WITH THE PRESIDENT OF CVS OF MAURITIUS AND OTHER SENIOR COLLEAGUES PUBLISHED AN ARTICLE THAT READ..

.. AND I DEDICATE THIS TO MY SENIOR CARDIOLOGIST COLLEAGUES WHO TOILED OVER THE YEARS ON WHICH I ADDED MY SMALL PIECE OF BRICK OF PPCI AND ALL THOSE WHO WERE DIRECTLY OR INDIRECTLY RELATED TO THE PROJECT TO MAKE IT BECOME A REALITY..

..AND IT IS A MOMENT OF PRIDE FOR ALL OF US TO HAVE SUCCESSFULLY ACHIEVED IT.



# Small country big difference: how one physician's vision became a reality and transformed acute myocardial infarction management in the Republic of Mauritius

FREE

Judith Ozkan [Author Notes](#)

*European Heart Journal*, Volume 44,  
Issue 14, 7 April 2023, Pages 1197–1198,  
<https://doi.org/10.1093/eurheartj/ehad012>



- PPCI IS THE UNDENIABLE T/T OF CHOICE FOR STEMI CASES WORLDWIDE ACCREDITED BY ALL REKNOWNED INTERNATIONAL GUIDELINES SINCE YEARS..**IT IS THE BEST GIFT THAT CAN EVER BE PROVIDED TO A PT PRESENTING WITH STEMI**
- IT HAS ADVANTAGES NOT ONLY FOR THE PATIENTS BUT TO THE HEALTH SYSTEM AND SOCIETY AS A WHOLE
- THERE SHOULD BE A POLITICAL AND PROFESSIONAL WILL TO IMPOSE SUCH DECISIONS IN THE BENEFIT OF ALL AND THE SYSTEM
- MTIUS HAS THE ADVANTAGE OF BEING A SMALL COUNTRY AND ANY CORNER OF IT IS REACHABLE IN LESS THAN 120 MINS AS RECOMMENDED BY ALL INTERNATIONAL GUIDELINES.
- AFTER DOING AROUND 450 CASES OVER 3 YEARS I CAN SAY OUR SUCCESS RATE IS MORE THAN 99 % AND PPCI, THOUGH MORE RISKY, IS EASIER TO DO THAN MANY OTHER INTERVENTIONS AND IS THE **ONLY** PROCEDURE THAT SAVES LIVES IN IHD PTS..**LEARNING CURVE..**
- **IMPLEMENTATION OF 24/7 PPCI HAS BEEN THE MOST REWARDING PROGRESS IN CARDIOLOGY IN THE PAST 20 YRS**



