

# ***Preporuke za daljnji rad PCI u okolnostima pandemije COVID-19***

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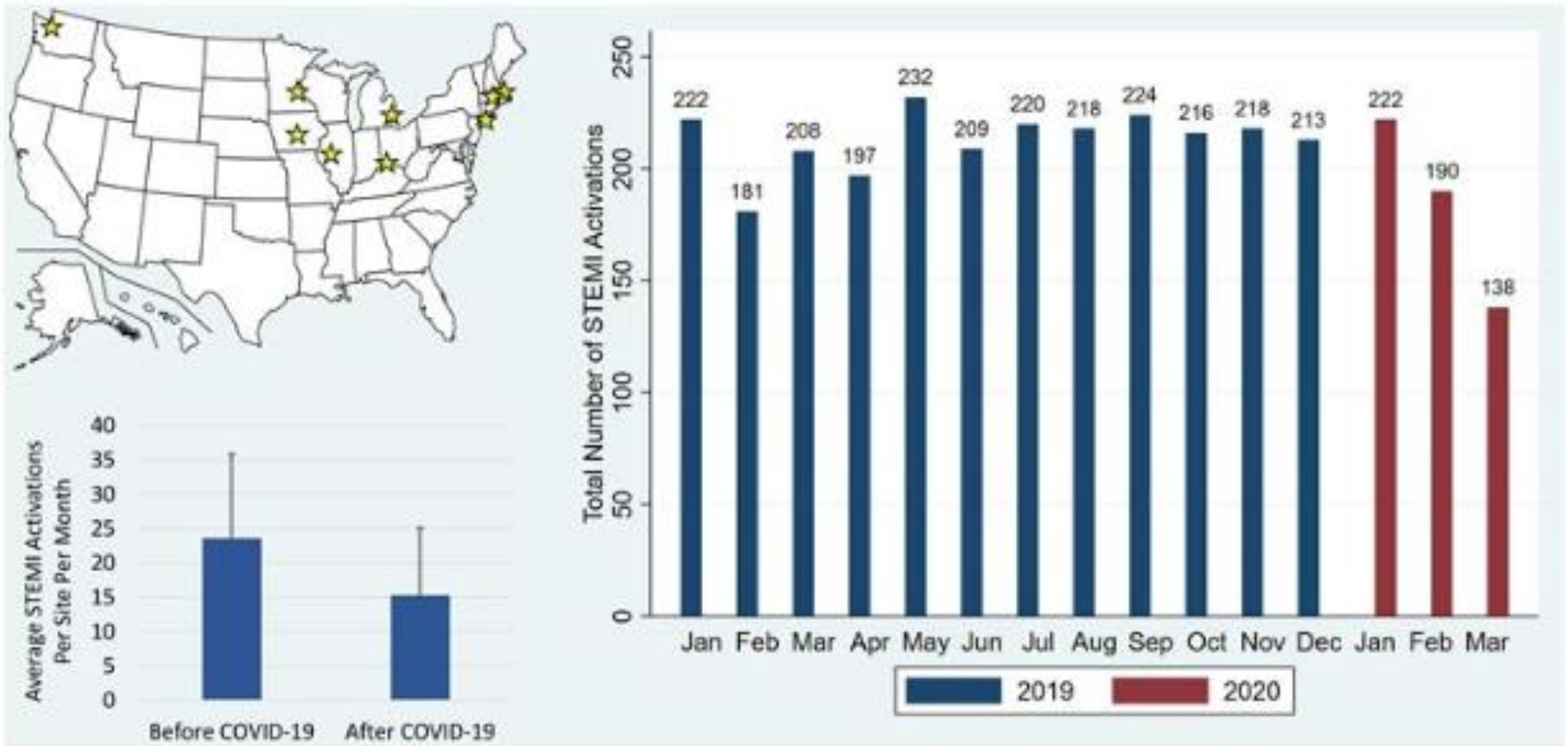
***Webinar: PCI u okolnostima pandemije COVID-19***

***Zagreb, 16.04.2020.***

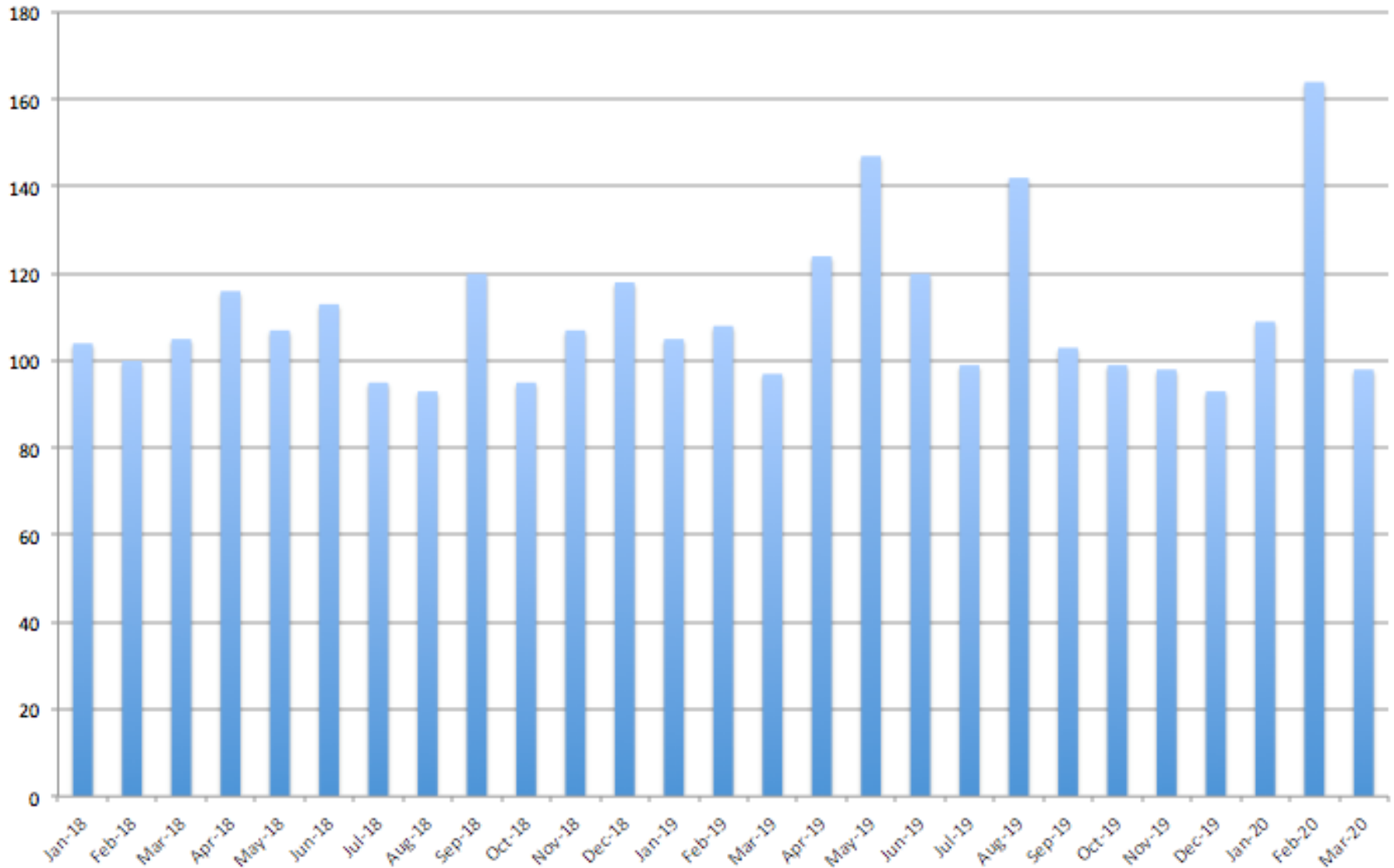
# *Where have all the STEMI's gone?*

- ✓ *In the Lombardy region of Italy STEMI cases are down by an estimated **70%**, the number of hospitals offering 24/7 cath lab services has been reduced from **55 to 13***
- ✓ *Spanish Society of Cardiology shows a drop of STEMI cases by **40%**, in Madrid close to **80%***

# COVID-19 Linked to **38%** Drop in US STEMI's after March 1, as compared with the 14-month period prior



# ***No drop in Croatian STEMI after March 1 compared with the 26-month period prior***



# *What could possibly drive STEMI rates down*

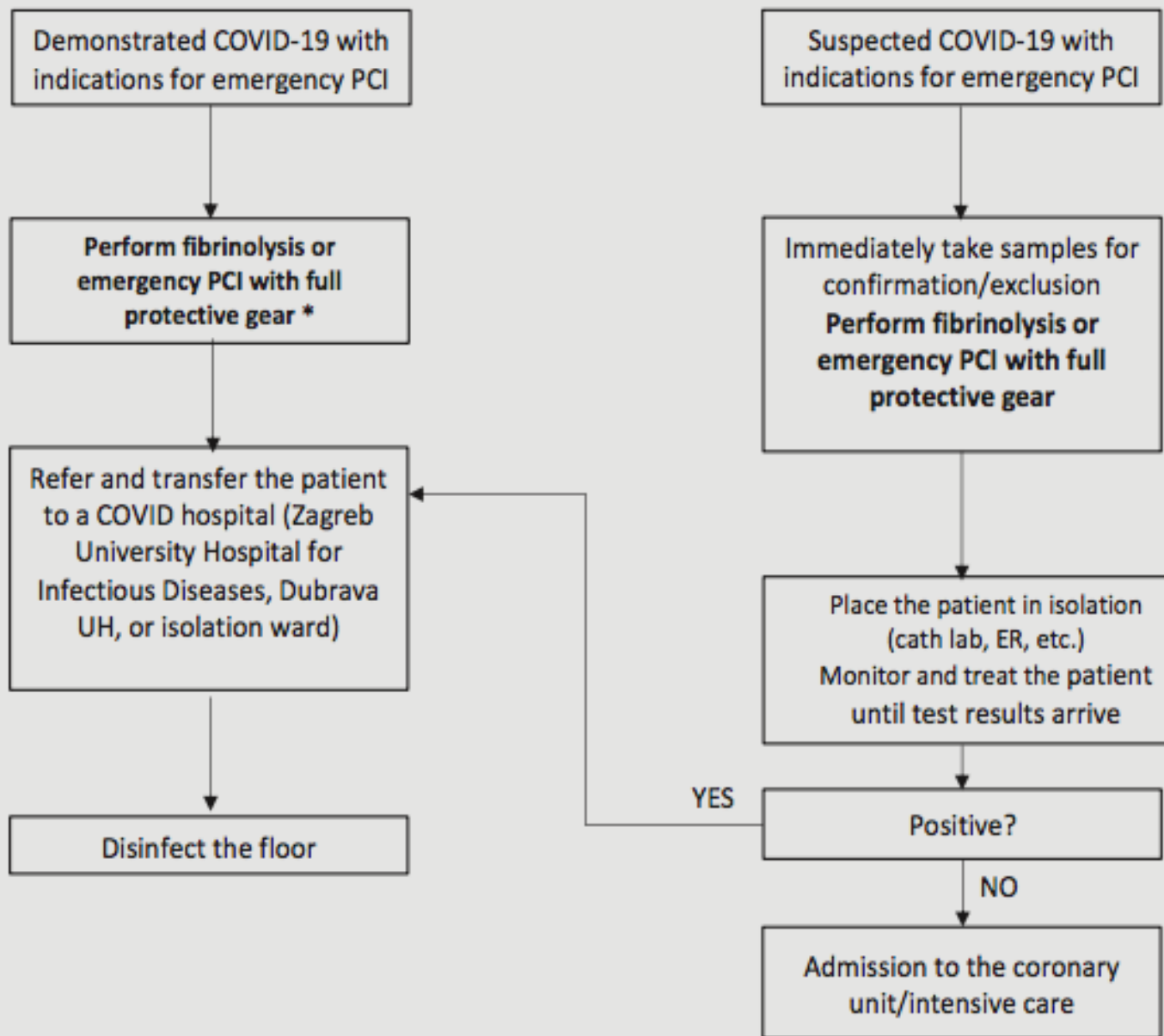
- ✓ ***Pollution levels** are dramatically **reduced** with so many cars off the road*
- ✓ ***No stressful commutes** to work in traffic or on mass transit may also be reducing daily stressors*
- ✓ *Patients, trapped at home, are **less physically active** and are **sleeping more, taking their medications, having** lower blood pressures*
- ✓ *Maybe people are **dying at home***
- ✓ *But if you look at mortality curves in the United States in March 2020, **mortality is down***

# **Who Should Head to the Cath Lab in the COVID-19 Pandemic (SCAI recommendations)**

- ✓ **Primary PCI should be *first-line therapy***
- ✓ **As systems get overrun you'll have to make that decision to give *thrombolytics***
- ✓ **Fibrinolytic therapy may be considered in *low- risk STEMI cases*, such as those with an inferior STEMI without right ventricular involvement or lateral MI without hemodynamic compromise**
- ✓ **Each hospital will need to address how “overwhelmed they may be and what they can do”. This decision ultimately depends on the availability of staff**

# Who Should Head to the Cath Lab in the COVID-19 Pandemic

- ✓ **Avoid endotracheal intubation in the cath lab** as much as possible, but if it must be done, to remove all nonessential personnel from the lab to avoid potential exposure to aerosolized virus
- ✓ If a COVID-19-positive/suspect patient is brought into the **cath lab**, the lab requires **extensive cleaning**, something that can decommission the room for many hours
- ✓ **Single procedure room should be designated** for care of COVID-19 patients
- ✓ Anything that isn't needed in the lab should be **removed** and the **number of staff should be limited** as much as possible.



**FIGURE 2. Protocol for emergency percutaneous intervention in patients positive or suspected of COVID-19 infection. \*University Hospital Dubrava for Zagreb and northwestern Croatia**

PCI = percutaneous coronary intervention; UH = University Hospital; cath lab = cardiac catheterization lab; ER = emergency room.



# ***What should we expect in the future?***

- ✓ ***We need to think about what's going to happen from the **absence of elective procedures**:***

***outpatient activity is being curtailed  
people aren't being assessed  
elective procedures aren't being performed***

- ✓ ***Hospitals will see a **resurgence of acute conditions** largely "cured" by primary PCI programs in recent years:***

***mechanical complications  
ventricular septal defects post-MI  
papillary muscle rupture  
LV thrombus***

# Conclusion (pPCI)

- ✓ *Balance between the risks of staff exposure and the potential for patient benefit*
- ✓ *Necessity of **rationally selecting patients** for interventional cardiologic treatment*
- ✓ ***All patients** with suspected COVID-19 infection should be **tested** immediately*
- ✓ *pPCI only in case of STEMI or hemodynamical instability in NSTEMI*
- ✓ *Acquisition of all necessary **protective gear** and their proper use*
- ✓ *Formation of **active and reserve cardiological teams** that guarantee uninterrupted work in case of infection*
- ✓ *Sometimes accept a **less than perfect primary result***

# Conclusion (fibrinolysis)

- ✓ *In case of STEMI and pPCI being impossible to perform under the conditions described above, **fibrinolysis** should be applied*
- ✓ *it is likely that fibrinolysis will be the therapy of choice for most patients **positive** for COVID-19 but also for those in whom infection is **suspected**, especially if emergency PCI requires **transport** from the county hospital to a PCI center*
- ✓ *In case of unsuccessful fibrinolysis, **rescue PCI** can be considered*

***The decision on applying acute interventional treatment should be made individually for every patient and under full authority of the interventional team responsible for their treatment***