

## Break the Chain of COVID-19 Transmission: Perspective from A Cardiologist-in-practice

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Dear Editor,

The world, also Indonesia, is currently suffering through a pandemic outbreak of severe respiratory syndrome coronavirus 2 (SARS-CoV-2) known as Coronavirus Disease 2019 (COVID-19). COVID-19 is a newly recognized viral infectious disease that has spread rapidly throughout Wuhan, Hubei, China and several countries around the world.<sup>1</sup> Many countries in the world have developed several community policies to control and contain the outbreak. The United States (US) Centers for Disease Control and Prevention (CDC) gives advice to medical facilities to reschedule non-urgent outpatient visits.<sup>2</sup> The European CDC, United Kingdom National Health Service and other international agencies around Asia, North America and most countries in the world have recommended policy such as social distancing to break the chain of COVID-19 transmission.<sup>3,4</sup>

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Health communities in Indonesia have launched joint statement of guidance to protect and prevent the transmission of COVID-19. Indonesian Heart Association (IHA) have also stated the importance of prevention in the era of outbreak.<sup>5</sup> Most of the policies are highlighting the social distancing, using personal protective equipment and rescheduling non-urgent visits in outpatient clinic. We, as cardiologists, should know and aware the transmission of COVID-19. This letter gives a general information about the prevention of COVID-19 in cardiology department.

COVID-19 can cause acute cardiac injury and chronic damage to cardiovascular system.<sup>6,7</sup> The mechanism of acute myocardial injury caused by SARS-CoV-2 infection might be related to Angiotensin Converting Enzyme 2 (ACE2).<sup>6</sup> Chronic cardiovascular disease may become unstable because of this viral infection due to cytokine storm.<sup>6,8</sup> These cardiac implications need us to modify practice for standard cardiac patients, those who are suspected COVID-19 patients, and those patients with confirmed COVID-19 who have either unrelated cardiac conditions or cardiac manifestations of the disease.

Approach to break the chain of COVID-19 transmission in cardiology department

- Physical distancing<sup>9</sup> means keeping distance at least six feet (1.8 meters) apart between individuals in waiting rooms, clinics, elevators, pharmacist, laboratory or between hospital staffs. We are using

this term instead of social distancing, because of misleading term.

- Moratorium for cardiac services such as echocardiography<sup>10</sup> (transesophageal or transthoracic), electrophysiology, cardiac angiography<sup>11</sup>, and cardiac imaging (computerized tomography, CT<sup>12</sup>).
- Self-quarantine or isolation for hospital staff that contacted with confirmed COVID-19 without PPE.<sup>2</sup> 14 days of self-isolation will be needed to flatten the transmission curve.
- Encourage sick staffs to stay at home. Personnel who develop respiratory symptoms (e.g., fever, cough, shortness of breath) should be instructed to stay at home.
- Encourage senior staffs with or without comorbidities (hypertension, type 2 diabetes mellitus and heart problems) to stay at home. Senior staffs (more than 65 years old) are recommended to stay at home due to high risk to be infected with COVID-19.
- Screen patients and visitors for any symptoms of acute respiratory disease (e.g. fever, cough, shortness of breath) with laser thermometer and one door hospital policy (way in and out in one way).
- Consider using a standard personal protective equipment (level 1-3) in outpatient clinic, echocardiography<sup>10</sup> laboratory, cardiac catheterization<sup>11</sup> laboratory and cardiac CT or isolation ward.
- Waive attendance policy. Hospital will waive attendance for staff due to outbreak of COVID-19.
- Tele-medicine<sup>13</sup> or e-learning about COVID-19 and cardiovascular disease at hospital from other center such as National Cardiovascular Center of Harapan kita.

In general, medical community in Indonesia should prevent, break and contain the transmission of COVID-19 using several policies. Physical distancing, moratorium most of cardiac services and use of PPE are the best option to break this COVID-19 pandemic in cardiology department.

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