

A commentary on “A grand plan for health equity: Philosophy of health equity”

Wei-Ching Chang^{1,*}

¹Department of Medicine, University of
Alberta, Edmonton, AB, Canada

*Author for correspondence:
Email: weichingchang7@gmail.com

Received date: September 29, 2025
Accepted date: November 26, 2025

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Commentary

In his renowned song “Imagine,” John Lennon famously sang about a world where all people live in peace and harmony. As a researcher focused on health outcomes, particularly cardiovascular health, I have a similar dream for “health equity”—the idea that everyone should have access to good health. This concept is at the core of my article, “A Grand Plan for Health Equity: Philosophy of Health Equity [1].”

While the goal of achieving health equity is noble, it is essential to recognize that true equity does not mean everyone will have the same level of health. Individuals are influenced by various factors, both inherent and environmental, making it unrealistic to expect complete equality in health outcomes. Instead, the goal should be to help individuals reach their optimal health potential based on their unique circumstances. Distinguishing between “equality” and “equity” is crucial in understanding this concept. While equality aims to eliminate health disparities, equity focuses on ensuring that everyone is able to achieve their best possible health. This nuanced difference underscores the importance of providing support in genetic, social, technological, and environmental factors to enable more individuals to reach their health potential.

However, achieving health equity faces obstacles, largely stemming from societal norms that prioritize competition over cooperation. Ideologies like neoliberalism, nationalism, and personal callousness contribute to social inequality and hinder progress towards health equity. Overcoming these barriers requires a paradigm shift towards collaboration and compassion on a global scale. In my article, I emphasize the need for global cooperation, echoing the United Nations’ call for collective action to address health disparities. Proposing frameworks like doughnut economics, planetary health, and universal basic income, I advocate for a more holistic approach to achieving health equity. By fostering a culture of cooperation and empathy, we can work together to implement these frameworks and promote global health equity.

Inequity in Acute Myocardial Infarction Care

Our worldviews are continually shaped by our learning journeys, so mine is also shaped by my research on acute coronary syndromes and my personal experience with acute myocardial infarction (AMI).

Not surprisingly, AMI care at present is NOT equitable. Using the Government of Alberta health care database, I demonstrated with my colleagues that in patients belonging to the lowest versus the highest socioeconomic status (SES) quartile, the risk of presenting to the emergency department was 72% higher; at 1 year, revascularization was lower (36% vs 48%), and mortality higher (19.1% vs 9.1%). Socioeconomic status was independently associated with 1-year mortality even after adjustment for baseline characteristics and 1-year revascularization, and was especially influential in non-revascularized patients [2]. The above conclusions were confirmed in a more recent systematic review of 19 Canadian studies, 11 of which were included in a meta-analysis. As Moledina and Tang [3]

concluded: “Low SES is associated with not only increased mortality post-AMI but also reduced access to cardiac interventions that have demonstrated benefits for mortality and morbidity. Interventions that improve access to catheterization, revascularization, and cardiac rehabilitation for low-SES populations are needed if true equitable care in Canada is desired.” Internationally also, low-and-medium-income countries (LMICs) had lower revascularization rates, higher mortality, and a substantially greater burden of AMI overall—although there was important regional heterogeneity [4–8].

Heart disease, moreover, affects men much more than women, since they differ genetically, physiologically and culturally. We demonstrated using Alberta data that, compared with men, women tended to develop an AMI later in life and therefore were older, but with more baseline comorbidities, more frequently had a diagnosis of unstable angina (UA), and had 30% lower relative odds of undergoing revascularization. Interestingly, women had a survival advantage when afflicted with UA but lost that advantage with AMI [9]. Recent global systematic reviews also tended to confirm our findings, that women generally showed higher unadjusted long-term mortality after AMI than men, but after multivariable adjustment (age, comorbidities, presentation, treatment), the excess mortality in women was often attenuated or absent in many pooled/adjusted analyses [10,11]. Moreover, younger women (<55 years) had relatively worse short- and long-term mortality compared with age-matched men [12]. Because of non-specific symptoms of AMI among women as compared to men, we also demonstrated, using Alberta data, that women were more likely than men to present multiple times pre-AMI, with approximately 22% in women vs. 15% in men [13]. More recent research by Moller and Moser [14] confirmed that women tended to report less chest pain and sweating than men, but more likely to report dyspnea, nausea and vomiting, fatigue, palpitation, jaw/neck/shoulder/arm/back pain, mild or non-specific pain, and anxiety/stress.

There are great many other causes of inequities in AMI care, some are less controllable by humans, e.g., family history, age, sex, ethnicity; while other causes are more controllable, e.g., education, physical/mental activity, smoking, alcohol consumption, etc. Nothing will change, unless we undertake a cultural transformation, and a paradigm shift from competition toward cooperation. Social inequality would get worse, and so would health inequity in general, and heart health inequality in particular [15,16].

Toward Equity in AMI Prevention and Care

To work toward equity in AMI prevention and care, we need, first of all, to educate ourselves, e.g., follow “Strategies to prevent heart disease” that Mayo Clinic has been posting on their website: 1. Don’t smoke or use tobacco. 2. Get moving: Aim for at least 30 to 60 minutes of activity daily. 3. Eat a heart-healthy diet. 4. Maintain a healthy weight. 5. Get quality sleep. 6. Manage stress. 7. Get regular health screening tests. 8. Take steps to prevent infections. Even then, a heart attack can occur, as I had a ST-elevation MI in 2020. If that happens, it’s imperative to get reperfusion therapy as soon as possible, ideally within 30 minutes but no later than 1 hour. In fact, we at the Canadian VIGOUR Centre at the University of Alberta sponsored a clinical trial [17] to assess the outcomes of testing troponin in the ambulance (for identification of ST-elevation cases), and administer the fibrinolytic therapy immediately if eligible: after ambulance arrival, the first troponin was available in 38 minutes in the

experimental group and 139 minutes in the usual care control group. The primary endpoint (time from first medical contact to discharge from ED or admission to hospital) was shorter for patients in the experimental group (median 8.8 hours) compared to the usual care control group (median 9.1 hours). However, there was no difference in repeat ED visits, hospitalizations, or death within 30 days.

More recently, however, Saeedi *et al.* [18] conducted a systematic review of fibrinolytic therapy administered immediately after symptom onset and before hospital transfer and found to have reduced mortality by 36% (OR = 0.64, 95% CI: 0.45-0.91). In addition, the American Heart Association established a benchmark for door-to-needle times to be less than 30 minutes for in-hospital fibrinolysis in cases of AMI, and 90 minutes to primary percutaneous coronary intervention (PCI) [19,20].

The implications are clear. If you have a heart problem, be sure to access hospital emergency and receive reperfusion therapy without delay, in case your chest pain conditions turn out to be STEMI. I used to live close to the University of Alberta Hospitals, so when I experienced chest pains, it only took a few minutes to walk over to the hospital emergency and got immediate treatment. When I had a STEMI later in a small city of Courtenay, British Columbia on my way home after playing tennis, I made it home quickly, phoned my daughter and had my son-in-law drove me to a local hospital. I was treated immediately with fibrinolytic therapy following a troponin test and was transferred to the Royal Jubilee Hospital in Victoria for angiography and PCI. I recovered well, although I also got teased that I should have called an ambulance to take me to the hospital ASAP! Needless to say, therefore, both personal initiatives and effective societal support are necessary to promote good and equitable AMI care.

Clearly, rapidly advancing beneficial medical technologies and devices should be made accessible to all. My heart attack in 2020, for example, came from a blockage in the left circumflex artery (LCX). For treatment, the second-generation drug-eluting stent (DES2) were placed in LCX, and a drug-eluting balloon was used to perform angioplasty of the restenosis segment of mid-LAD. This DES2 is more effective than the first-generation DES’s I had before, since I have been symptom-free for the last 5 years. By comparison, I had experienced chest pains every 3–4 years with the previous PCIs using the first-generation DES’s, which are associated with higher long-term risks.

Therefore, we can hope for better AMI care in the future through better medical technologies—such as gene and stem cell therapies [21,22], artificial intelligence [23], etc.—BUT only if these technologies are equitably accessible to all of us. This is less likely to happen in the short run especially to the socially disadvantaged, therefore our priority is to narrow and eliminate the “digital divide” by educating ourselves to empathize and care for each other globally, so that fewer and fewer people will be left behind.

Conclusions

Health equity is crucially important to all of us, as my own personal experience and all the scientific research emphatically show. Since our society is grossly unequal, leading to inequity in health care and health in general and inequity in AMI care in particular, it is incumbent upon us to make our society more equal in order to promote equity in health, including in the prevention and care of

AMI. Although the path to a healthier, more equitable world may seem daunting—since the journey towards health equity requires a great deal of personal and societal commitments and collaboration. By embracing a philosophy of compassion and cooperation, we can work towards a world where everyone has the opportunity to achieve their best health. “A Grand Plan for Health Equity: Philosophy of Health Equity” is my analysis and contribution to what, why and how concerning this important journey for the future of humanity.

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