CRiHSP-WEF Policy Dialogue

Digital Health and Prevention: Advancing Health for All in Singapore, Asia, and Beyond

21 October 2026

Q&A

Chair: **Prof Nicholas Goodwin**
NUS Centre for Research in Health Systems Performance (CRiHSP)

Speakers & Panellists

Prof Jose M Valderas
NUS Centre for Research in Health Systems Performance (CRiHSP)

Dr Shyam Bishen
WEF Centre for Health & Healthcare

A/Prof Carolyn Steele Gray
University of Toronto

Mr Terence Ng
Health Promotion Board

Mr Sebastian Slijderink
Philips APAC and Growth Region

A/Prof Dewi Nur Aisyah
University College London

A/Prof Wee Hwee Lin
NUS Saw Swee Hock School of Public Health

Audience Questions:

Question: I'm trying to understand how this applies across Asia and beyond. These studies and pilots involve certain countries and groups. How do we know whether the same approaches will benefit patients elsewhere? Once the findings are published, people may use them more widely. How do you make clear what still needs to be tested in their own setting?

A/Prof Dewi Nur Aisyah (UCL): It really depends on the design of the pilot. If the pilot also carried out in several different settings, we might get some insight whether these digitals will work not only in urban area, but also in rural. In Indonesia, we have remote and very remote areas, so it really depends on how the settings of the pilot has been established. When we have already designed a pilot to represent different various geographical locations, including the capacity of the health care workforce, we might have some insight differently. For the urban, it might be the challenge not coming from the internet connections, but when we are talking about very remote settings, even the availability of internet and electricity might become one of the challenges. So, I think pilot is important to gain some insight, but also, we need to ensure that the pilot is carried out in different settings to give us more comprehensive overview and feedback.

Standardizing the core is important, but localizing the implementations is also critical. Countries will need to have a common standard governance and interoperability, but the implementations still need to adapt to the local workflows, workforce capacity, infrastructures, and community needs.

Question: My second question is Impact for whom? If digital health is truly successful, the benefit should reach everyone, everywhere.

A/Prof Carolyn Steele Gray (UoT): This is a really important question about who you're serving. Embedding [this question] into the way things have been designed by asking people and thinking about its reach is crucial. It allows you to think about different modalities in order to actually get to an outcome or an impact that you're looking for. But it also embeds most of the implementation challenges really early in the design, and what we've learned from implementing not just technologies, but a lot of things, is they're most successful the more adaptable they are. [Otherwise] you're going to be 5 steps away and unable to adapt to the environment, to the people, to the communities for it to be successful, not just for everybody, but successful at all. So the closer we bring the people who are using it through our communities into the design process early, alongside implementation considerations, you can address equity, and you can address a lot of implementation considerations, really early.

We have a framework that we built to think about equity in the development of technology right through to implementation. One of the critical reasons for thinking about it really early is it's actually also an implementation challenge down the line. Equity should be kind of the foundation of what we're doing. A lot of folks have talked about how it's not the fifth pillar of quality. It is in the Institute of Medicine's quintuple aim, but it's actually the underpinning of the quadruple aim, that you don't actually achieve any of those outcomes unless if you're equitably doing so.

Mr Terence Ng (HPB): We [at the Health Promotion Board (HPB) of Singapore] grapple with this every single day when it comes to the rollout of digitally enabled health prevention with equity. Part of the design process definitely has to include that. I'll give you an example. Quite a number of years ago, as wearables started, they were very expensive. As we were pushing out personalized physical activity nudges to people, we realized that we had to equalize that playing field as much as possible. We were fortunate in Singapore that we were able to procure wearables that around 20-30 dollars each and provide them on a mass scale to everybody.

That's where I think that partnering of community actually comes into play. There is a huge effort at HPB just looking at how we do outreach and work with our community partners, be it the Active Aging Centres, Agency for Integrated Care (AIC), the clusters themselves, or where the elderly folks come down on their daily basis or weekly basis to meet their friends, to play mahjong, to have meals together. That's where we embed some of these learnings and interactions with our senior citizens, to encourage them to come on board. We show them what the benefits are, and over time they are the best supporters of some of these programs.

Question: In a location where standards are dictated by those who govern it, instead of letting the community define these for themselves, what's your advice for a solution to this scenario in order to arrive at a truly workable, community-embraced digital healthcare solution?

CSG (UoT): This, so not just for Asia, but for anyone, I often suggest having very clear, collaborative sense-making work toward what your shared aim is across everybody involved, whether they're policy, to frontline, to communities. If everyone knows they're pulling in the same direction, you're more likely to get there.

TN (HPB): At least in Singapore for lifestyle related digital interventions, it's actually important for HPB or a central agency to set standards in order for citizens to benefit. If we let private companies or the community run with varying standards, the percolation of benefits will not occur till much later on.

A/Prof Wee Hwee Lin (SSHSPH): There is increasing involvement of consumer groups or patient groups in various health systems. Not as advanced as in Europe or Australia but it is an emerging trend.

Depending on the health system referred to, there are opportunities for consumers/patient groups to chime in, not necessarily on standards but on user experience. For several health technology assessment (HTA) agencies whom I have worked with, user experience with digital health technology (DHT) is considered critical because they are aware that adherence to DHT depends substantially on user experience.

Question: A question for HPB: what other types of digital biomarkers would HPB want to look at (apart from the current ones) that are not currently easily available due to data interoperability?

TN (HPB): On biomarkers, we face data interoperability issues on both physical and digital markers. An example of a physical biomarker would be muscle mass. There are currently a variety of body compositions out in the market, but their accuracy varies due to a variety of reasons. It's not that they are not accurate, but they are made for different purposes (home use for basic monitoring and trending vs clinical use for diagnosis). On digital biomarkers, heart rate variation or SpO2 usually vary greatly between devices and sometimes even within devices so it can be quite difficult to compare and contrast between different people wearing different devices at different times. Thus, for lifestyle interventions that HPB does, it's actually more important to monitor the trend lines rather than data points. As we go more into precision, the trending within a single person (with the assumption that the same device is used) can be used to engage with an individual based on their data, rather than a general population or segment aggregated data.

Question: Would you be able to share your publication of the equity framework that you have developed?

CSG (UoT): Consolidated Principles for Equitable and Inclusive Digital Health and Virtual Care Co-Design https://pubmed.ncbi.nlm.nih.gov/38482654/