Recent advances in science and technology give us hope that it is possible to develop, manufacture, and deliver effective vaccines before a pandemic outbreak occurs. These adjuvanted vaccines offer cross-strain protection and require a low dosage, thereby increasing vaccine production capacity threefold. As a result of such advances, we can begin to execute pandemic prevention and preparedness strategies instead of focusing all our energy and resources on response to inevitable disaster. But with these new opportunities come new policy challenges.

For example, if adjuvanted vaccines mean that sufficient manufacturing capacity is no longer the insurmountable challenge we once believed it to be, then local, national, and global health policies should now begin to address infrastructure, production, and delivery problems, with regard to both vaccine stockpiles and more immediate pre-pandemic vaccination strategies. Additionally, stakeholders must develop international transport agreements for goods that will be essential for the survival of the economy and the provision of health in emergency situations and examine demand and supply issues for seasonal influenza vaccines.

Policymakers should explore incentives for appropriate behavior change among individuals, as well as education campaigns to prepare populations for pre-pandemic vaccination and other strategies. Finally, international organizations, governments, and local institutions must identify ways to finance the activities that translate prevention and preparedness plans into reality across borders, making the case to those who hold the purse strings for necessary investments in appropriate technology, improved infrastructure, and training for health workers.

While an effective pre-pandemic vaccine could hold the key to a safer future, the global community must also improve other technology tools and systems—in both developed and developing economies—to strengthen preparedness for additional threats. For instance, effective, far-reaching biosurveillance will require improvements in IT infrastructure, as well as new forms of coordination among many different stakeholders. Furthermore, we need affordable, easy-to-use, rapid response diagnostic tools.

Importantly, while emerging science may not solve all our problems, it allows us to move away from fear as our primary motivator—towards hope and confidence in our ability to prevent and prepare effectively as driving forces. Emerging science provides the building blocks a healthier world.

What we desperately need is an entirely new architecture of global health that involves a vast array of institutions that are not now formally involved.

- Laurie Garrett

For further information, please visit: www.pacifichealthsummit.org. Summit photos by Mark Weeks.