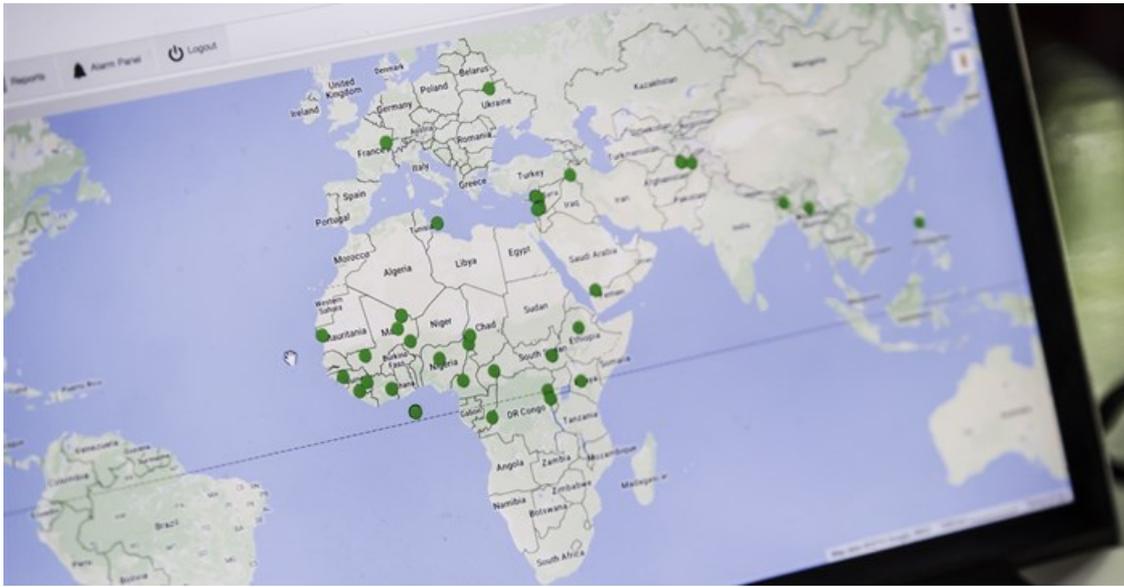


Preserving the vaccine cold chain is essential in saving lives

According to the International Vaccine Access Center (IVAC), rolling out childhood immunisations against Hib, pneumococcal and rotavirus diseases in the world's 73 poorest countries over the next decade will result in an estimated \$63bn in treatment and productivity savings and avert 3,7m deaths. The challenge, however, is that these countries are often ill equipped to transport, store and distribute vaccines.

Governments around the world are focusing on legislation that aligns their pharmaceutical industries with international best practice, which includes requiring constant temperature monitoring at every leg of the cold chain.



Because vaccines must be stored between 2-8°C, temperature excursions, outside of this band can reduce and even destroy the effectiveness of vaccines,” says Ian Lester, founder and CEO of [Beyond Wireless](#).

“Imagine – you think you’ve immunised your child against pneumococcal disease, but because the vaccine has got too hot or too cold, it’s actually ineffective. It’s a scary thought, but a reality in many poor regions. Even if people have access to vaccines, which is a challenge in itself, are those vaccines effective in combating disease?”

Lester, along with his clients like the World Health Organisation (WHO), UNICEF and the International Committee of the Red Cross, believes that improving immunisation is thus a catalyst to solving broader issues, from healthcare through to poverty.

“Ideally, consumers and patients should be able to request proof of compliance from clinics, doctors’ rooms, pharmacies and other medical suppliers to show that vaccines have remained within the required temperature band,” says Lester. “This would significantly boost the efficacy of immunisation efforts.”

Fixing the vaccine cold chain

Global best practice suggests automatic temperature monitoring of vaccine and other temperature-sensitive drugs as the best option for maintaining the cold chain, yet many countries in the developing world still lag behind in this regard.

“Across the entire length of the cold chain, but especially at the last mile, it’s extremely difficult to ensure that the vaccine cold chain is properly maintained,” Lester says. “If for instance your power goes off in the middle of the night or if a door is accidentally left open, you’re not going to know whether the vaccine in the fridge has gone outside of its temperature range or not.

A battery-operated monitor, which doesn’t require any external power source, is a major advantage in the developing world where power can be both unreliable and dirty, especially one that sends alarms via SMS and email if things start going wrong in the fridge, such as a change in temperature.

“If you’re working for a health NGO that has vaccine fridges in far-flung locations around the world, our system allows you to pull out your phone or tablet wherever you are, log in, and check on the status of every fridge being monitored, as well as pulling up historical data, which allows you to see trends and make informed decisions. I truly believe that by improving the monitoring and control of vaccine cold chains in vaccine distribution points around the world, we can save millions of lives, as well as improving the health and economies of entire societies.”

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