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How Technology Can Speed Up Attainment of Universal Health Coverage

Information and communication technology solutions are key to helping countries achieve universal health coverage.

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Introduction

Almost all countries in Asia and the Pacific have embraced universal health coverage (UHC) as a pathway to greater national prosperity. Information and communication technology (ICT) is key to attaining and sustaining UHC as well as strengthening health-system accountability. ICT innovations in health—or e‑health—are already in place in many countries in Asia and the Pacific offering lessons that can be replicated.

What is Universal Health Coverage and why is it important?

The goal of UHC is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them.[1]

Achieving UHC is important as the objectives of inclusive growth, sustainable economic development, and national and regional health security cannot be achieved without a healthy population.

What is a digital health infrastructure?

What is digital health infrastructure...
and why should we invest in it?

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[1] World Health Organization. http://www.who.int/mediacentre/factsheets/fs395/en/

How can ICT help countries achieve UHC?

ICT innovations in health—or e-health—can help ensure that resources mobilized in the health sector are used more efficiently and effectively. This means reduced waste of resources, maximized coverage, and better quality health care provided at a lower cost.

ICT solutions can also help empower patients and communities to engage at all levels of the health system, as well as efficiently link health systems with important social protection programs.

Some examples of ICT in action include:

- **Short messaging service (SMS).** The ICT equivalent of the complaint and suggestion box, SMS systems enable a direct feedback link between patients and health authorities, with grievances or suggestions documented instantly and easier to track.
- **Dashboards.** Akin to car dashboards, these visual devices help policy makers and implementing agencies identify programmatic areas in need of improvement. Dashboards can also be designed to alert concerned bodies about unmet goals or operations that have veered off-course.
- **Geographic information systems (GIS).** These mapping devices are an invaluable means of analyzing UHC inefficiencies. Designed to depict geographically referenced data in a way that helps users visualize relationships, patterns and trends, GIS systems provide accurate information about access to quality health care services with data that is sufficiently granular to expose disparities.
- **Mobile data collection.** Mobile applications can improve the tracking of health conditions in remote populations, enabling fieldworkers to upload data to a central server and then be easily

retrieved for analysis.

Where has ICT enhanced health systems?

<u>Bangladesh</u>

In Bangladesh, routine data from 7,000 health facilities are linked through a National Data Warehouse. Datasets that were once fragmented are now integrated, enabling better tracking of patients, reducing administrative responsibilities of health care workers, and providing more accurate information to policymakers.

The Directorate General of Health Services uses the SMS platform to ensure accountability in public hospitals, with the main complaints expressed through SMS including negligent staff and poorly maintained facilities. Click <u>here</u> for an example of how grievances have been tracked—and addressed—in a health district of Bangladesh's capital, Dhaka.

<u>Lao PDR</u>

In Lao PDR, health facilities rapidly and accurately report routine health information using the open-source, web-based District Health Information Software reporting system. This enables the government to address inequities for targeting maternal and child interventions to reduce mortality.

<u>Mongolia</u>

In Mongolia, national ICT budgets coupled with new grants, loans, and development partner technical support adhere to the e-health architecture to ensure all ICT investments are harmonized and aligned with the national e-health strategy.

<u>Philippines</u>

In the Philippines, an e-health program management office now coordinates health, ICT, social protection, finance, and planning sectors enabled with staff trained to internationally recognized standards and fully functioning IT governance practice with enforceable key performance indicators.

The Department of Health has adopted the dashboard to monitor and evaluate its Kalusugan Pangkalahatan (Universal Health Care) program. Click <u>here</u> to view the indicators listed by the department.

<u>Thailand</u>

In Thailand, patients are managed through a unified ICT system. A chip embedded in the patient's health ID card allows medical staff to access data on the patient's profile, medical history, and insurance type. This helps determine the best options for treatment and reinforces quality and safety in care.

What are the steps to introduce ICT into health systems?

The *iCTen!* is a series of common priority next steps for countries to use ICT to enhance their efforts to reach UHC.

Know your baseline.

Without ICT gap analysis it is impossible to know what policy and strategic changes need to be made.

Get everyone on board and bring your best team.

Political will and commitment is vital, e.g., through the establishment of an inter-ministerial committee on UHC to advocate for ICT investments in health.

Adapt, adopt, or develop tools.

Rather than reinventing the wheel by, e.g., developing new software or creating a mobile app when a solution already exists, it is better to identify tools available in the market, including technology based on open source software that allow for adaptation. For costlier solutions, joining forces with other agencies can yield economies of scale. Developing customized software and applications should be a last resort.

Commit to UHC, commit to integrated ICT systems.

This requires an ICT framework based on the principles of interoperability, with data sharing under agreed standards so systems and solutions can be interoperable.

Invest in unique ID systems and link CRVS to UHC.

Civil registration and vital statistics (CRVS) systems, whereby all live births result in the allocation and use of an individual unique identifier that remains with a person their whole life, and mortality data that includes the cause of death, are essential data for monitoring the health of the population.

Build institutional readiness and a skilled workforce.

Commitment at the highest level is vital for UHC with ICT, but capacity development is a process that must occur at all levels. Joint learning networks and communities of practice are essential to share knowledge both nationally and with peers overseas.

Keep data safe and secure.

It can be a delicate balance between data sharing and individual privacy, but the two can both be comfortably accommodated as long as there is a sound policy for data security, privacy, and confidentiality in place. Systems can be set up in such a way that keeps private health information

private and ensures data centers are adequately protected so only those that need access to any person's health record have it.

Plan for sustainable financing mechanisms from the start.

ICT pilot projects in isolation are not helpful. Investing now in ICT with a rollout and scale-up plan from the start can enable a health care system to reap ongoing efficiency improvements.

Get concrete: have an implementation plan with quick successes.

To get started, first it is necessary to articulate the value on investment—including the direct costs and benefits but also costs that might be avoided or benefits that can be monetized, e.g., burden reduction and task shifting.

Define success and measure progress based on M&E criteria.

Existing data can often be used to define measures of success. The process of monitoring and evaluation should be determined at the outset, and should be an ongoing process in order to tilt towards expected outcomes and impacts, learning the lessons quickly from what is not successful.

Resources

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