

# Digitalising Nepal's health sector

## A country's journey towards an interoperable digital health ecosystem

A publication in the German Health Practice Collection

### Key learnings

The Government of Nepal has made remarkable progress on its journey towards the creation of an interoperable digital health ecosystem, and is at a pivotal moment in its digital health development. The Nepali-German Health Programme acts as an effective catalyst in several important ways: bringing together the many digital health processes and initiatives into a coherent and integrated programme; building consensus among Nepal's digital health stakeholders; and working towards the delivery of a more harmonised and aligned digital approach in the health sector.

Analysis of key learnings from bilateral cooperation on digital health in Nepal has highlighted the following as drivers of progress and national ownership in digital health development:

**An overarching vision for a digital health ecosystem.** Such a vision is essential for developing a national digital health strategy and guiding its implementation. In Nepal, the introduction of the OpenHIE framework has helped to articulate this vision, which is set out in key policy and strategy documents such as Nepal's National e-Health Strategy (2017).

**The development of digital capacities, knowledge and understanding among key health sector stakeholders.** A combination of high-level and timely advocacy, strategic and technical advice, mentoring and coaching, and the facilitation of peer-to-peer learning have proved effective at enabling government stakeholders to take the lead in Nepal's digital health development, becoming strong advocates for the potential of digitalisation to empower decision-makers and to drive health reform.

**Taking a systems approach to digitalisation in the health sector.** The Nepali-German Health Programme works with partners to identify health system challenges that can be addressed through the intelligent adoption of open-source digital technologies, and supports their introduction and scale-up. The systems approach is iterative and places a high value on reflection, ensuring learning is continually incorporated into strategies and plans.

This case study documents Nepal's journey towards the achievement of an interoperable digital health ecosystem. It aims to highlight how digitalisation is strengthening Nepal's health system and enabling health sector reform, and to provide insights based on Germany's support for digitalisation in Nepal that are relevant for health sector managers and decision-makers, as well as development partners supporting digital health in other low- and lower middle-income countries.

### The challenge

Rising IT literacy and digital capacities, digital infrastructure investments, and the prioritisation of digital solutions by the government and its partners have combined to create a dynamic digital environment in Nepal. Digital health initiatives have proliferated over the past decade and now support multiple aspects of health system functioning and service delivery, from health service data and human resources for health to health financing and quality of care. However, many of these applications were developed without considering the need, or indeed the potential, for exchanging data. The resulting difficulties in aggregating data, and in creating synergies between different digital systems, pose a barrier to realising the potential of digital technologies to strengthen health systems and provide better health care.

### The response

The German Development Cooperation approach to digitalisation in Nepal's health sector builds on long experience of supporting policy development and health systems strengthening in Nepal, and insights gained from supporting the development of digital



→ Patients are registered into the EHR at Trishuli Hospital, Bidur Municipality, using a laptop and label printer.

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health systems in other countries. The Nepali-German Health Programme demonstrates how digitalisation can strengthen health systems and accelerate health sector reform in Nepal, through:

- optimising and strengthening existing digital systems and supporting the introduction of better digital techniques. For example, through support for the roll-out of electronic reporting using the DHIS2 platform and the introduction of Electronic Health Records (EHR).
- working with government partners to demonstrate that open-source, interoperable digital solutions can operate at scale. For example, through support to the national scale-up of the digital social health protection management system OpenIMIS, and the Planning and Management Assets in Health Services (PLAHMAS) software for managing the maintenance and repair of hospital equipment.
- developing digital capacities among key health sector stakeholders at all levels of the health system, while using expert judgment as to when and how to provide this support based on long experience of health systems strengthening and digital capacity building across many countries. This is enabling a sustainable approach to digital health development in Nepal that is government-owned and -led.

## What has been achieved

With support from Germany and other development partners, strong foundations have been laid for the continuing adoption of digital technologies in Nepal's health sector, with the Government of Nepal firmly in the driving seat. The National e-Health Strategy (2017) **sets out an overarching vision for an interoperable digital health ecosystem**, and investments in the digital infrastructure are facilitating the scale-up of interoperable digital solutions, and underpinning a steep rise in IT literacy. Ministry of Health officials are now talking the 'language of interoperability' and are actively participating in broader government initiatives to strengthen 'digital Nepal', including the formulation of digital governance and regulatory frameworks.

Digitalisation in Nepal's health sector is leading to **greater transparency and accountability and empowering decision-makers**. The provision of reliable, timely data and development of digital capacities is enabling new insights and analytical possibilities, strengthening the role of the government as policy-maker and steward of the health sector. This is particularly important in the context of Nepal's federalisation, where responsibilities for budgeting and planning health service delivery are being devolved to the local level.

The **Government of Nepal is allocating its own budget** to the national scale-up of several interoperable digital health initiatives, including the digital health information management system DHIS2 (electronic or e-reporting), and the IMIS digital software platform for managing Nepal's social health insurance. In the context of limited resources, this is an important indicator of success. Furthermore, Nepal is unique in implementing an open-source software for managing national social health protection programmes (OpenIMIS): The country's contributions to the development of this software through the OpenIMIS global community will benefit social protection programme implementers everywhere.

The Nepali-German Health Programme is **continuously pushing the boundaries of interoperability**. The introduction and linking of interoperable digital health initiatives at Trishuli Hospital is demonstrating how digital solutions can strengthen hospital management, and has led directly to a commitment by the Ministry of Health to introduce a new post of (non-clinical) hospital manager in all public hospitals with a capacity of 50 or more beds, aptly showing how interoperable digital solutions can drive health system reforms. With financing from the Global Fund, the Nepali-German programme team is setting up an Interoperability Lab, which will demonstrate how digital technologies can be deployed to solve larger and more complex health challenges, bringing data from different systems seamlessly together to help decision-makers see the bigger picture.

These milestones are critical to development of a sustainable approach to digital health and have helped to place interoperability centre-stage in Nepal.

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