

## TECHNICAL BRIEF

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# Strategic health infrastructure investments to support universal health coverage

Investing in clean, safe, agile and environmentally friendly health infrastructure can help achieve universal health coverage (UHC), restore trust in public services, and promote social and economic development. Policy-makers are faced with investment decisions today that will strongly impact health systems economic sustainability and capacity to respond to technological changes, epidemiologic trends and a variety of shocks, ranging from climate-related hazards and epidemics to population shifts and financial crises. Sound planning processes and programmes are needed to retrofit, refurbish and maintain health facilities, aligned with other interventions such as the development of health and care workers.

## Key messages

- Appropriate infrastructure is the foundation for UHC. Well-structured, equipped and clean health facilities give local communities a sense of security and thereby encourage people to confidently access health care. The right facility structure is also necessary to optimize patient and health worker flows, including adequate spaces for patient cohorting and isolation for infection prevention and control purposes.
- However, health care infrastructure is often insufficient or inadequate. Existing facilities are often in very poor condition, with limited water, sanitation and hygiene and energy services, so the need to refurbish and retrofit is as important as building new facilities.
- Investing in health infrastructure today can support systems transformation and create sustainable health services. Conversely, poorly planned and conceived infrastructure bear a costly legacy for the long term.
- A gap in one area constrains the whole system through a domino effect. Hence, a comprehensive and balanced approach is needed across the entire scope of service delivery infrastructure. Nationally owned health infrastructure plans should be aligned with national health plans and be included as key components of social and economic development strategies.
- Fit-for-purpose health facilities now and in the future must be clean, functional, climate resilient, and well prepared for disasters and other emergencies. This requires the systematic adoption of maintenance budgets and environmental impact assessments, as well as a flexible approach to infrastructure design to adapt to future needs.

## Background and challenges

Health care infrastructure includes all buildings where health services are delivered as well as those that support health-care delivery, such as laboratories and blood banks, and the underlying systems needed to support these facilities, including water and electricity. It also encompasses associated capital assets such as large-scale equipment and digital technologies.

Health care infrastructure is too often insufficient or inadequate to meet health needs and achieve UHC, especially for rural and remote populations. Many existing facilities have inadequate or lack basic utilities such as water, sanitation, electricity and waste services (1). One fifth of health-care facilities lack basic water services (1) and more than 1 billion people worldwide are still served by health-care facilities with unreliable or no electricity (2). Limitations such as these hamper facilities' capacity to deliver safe services (3), including infection prevention and control measures. The situation also negatively impacts health workforce retention, which in turn compounds these problems.

Funding models and policy can also exacerbate these challenges. The political choice to reorient health systems towards primary care often remains uncoupled from overall health infrastructure planning, which has traditionally focused on hospitals. Investment decisions can be skewed by high-profile projects and funding opportunities with short-term benefits, undermining equity and efficiency in the long term. Fragmentation is another significant issue: in many low- or middle-income countries, primary care planning is channelled through funding streams dedicated to population-specific or disease control programmes. This leaves gaps in the ability to provide integrated, high-quality primary care as well as in the essential secondary-level capacities that support the core functions for primary care and ensure readiness for surges in demand.

The COVID-19 pandemic dramatically demonstrated how gaps in one health care resource or platform can threaten the capacity of the whole system to deliver. Potentially life-saving emergency, critical and operative care interventions suffered increased service disruptions during the pandemic, likely resulting in substantial near-term impacts on health outcomes (4).

The need to refurbish and retrofit existing facilities is as important as building new ones, especially when ensuring health systems are safe and climate resilient. Decentralized renewable energy solutions, such as those based on solar power, are not only clean and cost-effective but rapidly deployable and independent of diesel or electrical grid supply chains. Furthermore, overproduction of off-grid electricity by health facilities can create additional third-party revenue, further supporting economic sustainability of public assets. However, the full potential of climate-resilient retrofitting and construction has not yet been achieved.

## Key actions and policy recommendations

### A national infrastructure investment plan

A plan setting agreed investment priorities in health care infrastructure helps align resource allocation to needs. This plan should be nationally owned, incorporating private-sector contributions, and be embedded in the overall national health sector plan and in national and local development strategies. All partners should then be called on to align with this plan.

### Health needs and capacities, not beds

Hospitals beds are not a sufficient metric for assessing and planning capacity across a defined population. These decisions should instead be based on a national UHC service package (5), functional role definition and linkages across facilities, and be tailored to local specificities. Information on vulnerability to the impacts of climate change will also shape needs.

### National capacities for evidence-informed decisions

Ministries of health, finance, local development and related agencies should have enhanced capacity to lead evidence-informed policy dialogues. This requires skills and tools development, including the development of information systems. Decisions to invest should include assessment of health, social, economic, and environmental impact.



## Innovative and flexible space designs

Optimize care space designs to facilitate the delivery of safe and quality health services and to promote agility and adaptability to new needs, new knowledge, and new technologies. Infrastructure design choices drive patient flow, creating improved efficiency when done well, and bottlenecks and congestion when treated as an afterthought.

## Functional and safe facilities

Support large-scale retrofitting, refurbishing and maintenance programmes to help ensure functional, safe and user-friendly health-care environments (3) and to enhance climate resilience (6). Promote carbon emissions reduction, improved energy performance, the use of environmentally friendly materials and efficient waste management (7, 8).

## Disaster-proof health care

For a health facility to remain intact, accessible and functional at maximum capacity before, during and immediately following an emergency or disaster, health-care infrastructure must be prepared for all types of hazards. Community infrastructure and critical services, including water, food, electricity and medical supplies, must also remain available to support the delivery of health services (9, 10).

## References and resources

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