



Disease, devices and development: creating a national eHealth strategy in 2019

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Executive Summary

In this brief, we outline the key considerations for creating and implementing new national eHealth strategies, thereby addressing siloed infrastructures that prevent information flowing. The key focus for strategic thinking is that eHealth strategies should bolster the “[enabling eHealth environment](#)” and ICT environment – with balanced concern given to both, as this is vital to success. We argue for an architectural approach towards digital infrastructure and a cultural shift from project-based eHealth to a more centralised strategy. Even though national eHealth strategies are becoming more commonplace, they are not present in all countries and should therefore be a priority, particularly as eHealth advances rapidly. Similarly, regional delivery of healthcare will benefit from such a strategic approach to eHealth.

Taking stock of the nation’s healthcare

Digital technologies are widely recognised as holding valuable potential for healthcare globally. The term eHealth has been defined as “[the use of information and communications technology in support of health and health-related fields](#)”. The importance of having a national strategy for eHealth is to outline the wider context or vision for healthcare and [provide the rationale for where and how](#) technologies fit into this. It is vital to spend limited health budgets effectively, preventing funds being inappropriately diverted from worthwhile areas and protecting the population being served. A request from member states to the [World Health Organisation \(WHO\)](#) asking for guidelines on eHealth in 2013 demonstrated the desire of decision makers to make sense of this relatively new field. Several documents were then published by the WHO and related

agencies for supporting eHealth development. The [WHO aims](#) for countries to achieve universal healthcare coverage, and emphasises that eHealth is both necessary and a catalyst for achieving this in a cost-effective way. [The toolkit for developing national eHealth strategies](#) produced by the [International Telecommunications Union \(ITU\)](#) and the WHO dedicates its first section to developing a national vision that responds to health and development goals. The 'Why?' section looks at population health, the goals, and the priorities. 'What?' considers how eHealth will help policy makers to reach those goals. Finally, it goes on to outline what to consider when developing eHealth strategically.

The population of a nation must dictate the type of technologies developed. However, internet connectivity is not universal and there is even further variation in the types of device and mode (SMS, web etc) used for accessing information. For example, in Global North countries, apps on mobile devices are a popular mode of healthcare intervention delivery. Yet, in the Global South, where mobile phone penetration also continues to be high, it would be unwise to utilise the same intervention as mobile device

functionality remains more basic and connectivity less reliable. It is this context of technology penetration in addition to the overall ICT market that the toolkit labels as "[ICT environment](#)".

Stakeholders also need to ensure that as technologies advance and the country implements eHealth initiatives, and that members of the population are not left behind. The digital divide could further restrict someone's basic access to healthcare, particularly if they live in a rural or unconnected area. Highlighting this issue, the ITU/WHO toolkit explains how eHealth must fundamentally empower – "[informing choice for citizens and health professionals alike](#)". It also emphasises that a successful vision for eHealth relies upon an honest assessment of the ICT environment within which the strategy is implemented.

Understanding a "developing and building" context

Therefore, it is vitally important when developing an eHealth strategy that national leaders step back and assess the current context they are active in. The following example explores eHealth

initiatives that are already underway, but with limited success.

The national eHealth environment currently has initiatives that are largely siloed interventions, meaning that little information flows between them. They are either unfinished or 'failed' pilots that suffer from continually fragmented approaches to new eHealth developments. In these cases, users often have to create multiple identities or logins due to little regard for [interoperability](#); the 'right' data is inaccessible by professionals where and when they need it, creating increased work burden; and the data that is produced and collected is of poor quality and not secure.

These issues are caused by insufficient progress in the [enabling eHealth environment](#). Aspects that bolster the enabling environment include a combination of governance processes to create policies around issues such as investment; legislation towards increased safety; and infrastructure such as workforce.

The example describes the result of the most commonly used project-based approach to eHealth activity.

Development so far has created several 'vertical' standalone initiatives within a population that are not addressing the fundamental characteristics laid out by WHO as "[scalability, replicability, interoperability, security and accessibility](#)". It seems unlikely that the introduction of these initiatives took place mindfully within the context of the wider healthcare system. This situation is particularly true of those populations that fall within the ITU/WHO toolkit definition of "[developing and building up](#)": countries where the projects themselves may be large-scale, (e.g. supply chain management) but they are still fragmented and unconnected to other significant eHealth projects. In the next section, we will explain how to begin connecting these initiatives by creating a foundation to the digital infrastructure.

Building horizontally and the enabling environment

A "horizontal" foundation as emphasised by WHO representatives during the [2019 WSIS Forum](#) forms the mainstay of recommended eHealth delivery. They explained that taking an architectural approach means planning digital technology implementation before

creating the technologies by considering how all users and applications across healthcare delivery would be accessing eHealth data. In other words, the planning stage needs to ensure that technology is fit for purpose, that where possible and appropriate data flow is common, shared, and, in turn, systematic. A good 'architect' will create a blueprint that uses a horizontal approach – addressing the above WHO fundamentals – with vertical interventions embedded in this foundation. This has the effect of maximising the ICT environment to support the sustainability of the existing eHealth initiatives.

However, this requires a cultural shift in strategic priorities. Decision makers must improve the enabling eHealth environment. With national coordination, lead stakeholders in government and healthcare need to identify and align financial priorities with the burgeoning eHealth strategy. Governance and funding that currently focuses on vertical silo projects should move to crosscutting initiatives, for example, investing in a platform that can flexibly address pharmacy management as well as electronic prescription. Before developing initiatives, leaders need to understand the

workforce delivering the eHealth strategy to the population. An action plan should also consider addressing the future healthcare workforce while in training, where it can be helpful to establish the required digital skills. Capacity-building is fundamental to building the enabling environment and involves building leadership, governance and education for eHealth at all levels within the workforce. In addition to a good digital infrastructure, such strategies will improve efficiency and the ability to scale and sustain the previously siloed interventions.

Key approach to strategy development for decision makers

With eHealth being in its relative infancy, and health interventions taking some time to be measured, information is still being collected at national level. This is where guidance such as the ITU/WHO toolkit and the [WHO 2020 Global Digital eHealth Strategy](#) is of great value to decision makers and should be further explored.

Assessing the health needs of a nation drives innovation appropriately in the sector. This means that the knowledge held by clinical stakeholders – particularly in public health – should be an integral

component of eHealth strategy development. However, this should not be to the detriment of other key players interested in eHealth. All stakeholders should be involved from conception of the strategy or new policies, with sufficient respect given to healthcare leaders and both the ICT environment and enabling eHealth environment. As we have discussed here, these are inextricably linked for success and progression with eHealth nationally. The collaboration of ITU/WHO on [the toolkit](#) is demonstrative of how consideration to both environments is a basis for deliberate and strategic eHealth decision-making.

Conclusion

Global funding mechanisms increasingly recognise the potential value of digital health, but as yet interventions often lack wider strategic thinking. At national or regional levels, strategic development is

paramount towards making eHealth a priority. Such planning would allow decision makers to take stock of the current contexts of healthcare more widely and the exciting opportunities that eHealth can provide for obtaining a wider health vision. It is already an important step in the right direction that WHO and ITU are producing international guidance for nations on this rapidly expanding area. Such guidance will allow countries within the 'developing and building up' status to address the progression of eHealth nationally with consideration to building a foundation for the digital infrastructure and bolstering the enabling environment.

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