

HEART

HIGH-QUALITY TECHNICAL ASSISTANCE FOR RESULTS



Telehealth and Digital Inclusion in Indonesia

Executive Summary



Background

This study is part of the work undertaken by the Digital Access Programme (DAP) which is a UK Government partnership between Foreign, Commonwealth and Development Office and the Department for Digital, Culture, Media & Sport. The Programme aims to support inclusive, affordable, and safe digital access for underserved communities. These priorities have become particularly relevant with the spread of the Covid-19 pandemic, which has highlighted both the digital divide in Indonesia and the importance of telemedicine. Addressing this challenge is an urgent policy priority for the Government of Indonesia, and this study contributes findings in the area of telehealth and digital inclusion.

The Indonesian Ministry of Health (Kemenkes) is developing two complementary telemedicine systems, Temenin and Sehatpedia, and this study is to provide it with some in-depth analysis and research which addresses how to overcome the challenges for telemedicine that relate to digital inclusion. This has been helped by taking a broader telehealth perspective when addressing the overarching research question “How can digital inclusion for telehealth be improved in Indonesia?”

Telemedicine between medical professionals has been an element of health service provision in Indonesia (since 1985), but always a relatively minor one. However, COVID-19 has led to an upsurge of interest in its potential. This has been particularly true in the private sector where the market has been flourishing. But this growth has been largely in the cities, where people feel more comfortable in using digital technologies, and appreciate the convenience of getting the information they need whilst at a distance from the provider. In rural areas, where the potential benefits for people living in remote and hard to reach areas are high the take up has been low. In large part this has been inevitable – as 26% of the population are currently unable to have internet connectivity. But it also reflects lower levels of digital literacy, and confidence. Many people, despite the risks of COVID-19, still prefer to see their healthcare provider face to face.

Whether in terms of its physical geography with 6000+ inhabited islands, or its 700+ languages and many cultures, Indonesia is a country of great diversity. There are some large cities, and over 80,000 villages. In terms of digital adopters, there are many young people who are digitally savvy, and many elderly people, and remote communities, who are technology averse. But this study confirms that such generalisations are dangerous. For example, there are people working in Puskesmas¹, and small villages (rural and urban) who are digital innovators and have a great deal of practical knowledge to share. What did we find?

Key Findings

Firstly, this was a qualitative piece of research that was guided by questions which explored different facets of the overall research question, and by the findings of desk reviews of international and national best practices. What we were able to find out was limited by needing to conduct the whole research online, with all the interviews conducted via Teams or Zoom. The selection of interviewees was guided by the DAP team.

Overall, there were 5 broad findings:

- 1. Digital inclusion is a cross-sector issue and needs to be addressed as such.** This has different perspectives:
 - From the **digital** point of view, the tech sector is strong, but there are major challenges in providing both power and connectivity in many rural areas. With 26% of the country still without internet access, it will take some time to provide the coverage that will underpin development in general and the delivery of Universal Health Care in particular. What is

¹ Government-mandated community health clinics

important is being able to increase the usage of that connectivity. However, there is an increasingly widespread use of both smart phones and WhatsApp.

- From the **development** point of view, digital connectivity underpins delivery of the Sustainable Development Goals. The Universal Service Obligation levied on telecommunication companies to enable rural connectivity (e.g., via the Palapa Ring, or Satria satellites) are positive contributions that support all 17 of the Sustainable Development Goals (SDGs). But Indonesia has also taken the strategic step of identifying an 18th Goal, which is to address the cross-sector needs of villages which is where all the SDGs should be making their collective impact. The Ministry of Village (Kemendesa) is in the lead on this.
- From the **health** point of view, the different aspects (such as promotion, prevention, treatment, rehabilitation) of health services that can be provided digitally need to be able to reach the currently unconnected. Otherwise, they are digitally excluded from being able to use them. Also, the social determinants of health are inherently cross-sectoral – hence the importance of SDG Goal 18.

2. Framing digital inclusion in the context of telehealth needs to focus on both Gender Equality and Social Inclusion issues as well as the engagement of communities.

A Gender Equality and Social Inclusion (GESI) perspective focuses attention on, for example, Women and Girls, Children, Persons with Disabilities, Older Persons, indigenous peoples and people living in remote areas. Health service staff need to be supported in delivering services to these groups within facilities, such as hospitals and Puskesmas. They need training to develop a detailed understanding of the different needs of different groups, and in particular the ways that digital services can help them, e.g., assistive technologies for Persons with Disabilities, (and also in non-digital ways, such as offering sign language). COVID-19 has reinforced the need to be able to complement the face-to-face work that is still the core of what health service staff do, with innovative digital ways of reaching individuals and communities. Indeed, the pandemic has reinforced the importance of the community-based work that the health service has been doing. Digital technologies offer new ways of engaging people both at home and in their local communities. There are now some possibilities emerging to take this approach to scale. For example:

- Some Puskesmas staff are embracing the use of new technologies and developing engaging content e.g., movies, that can support health cadres in communities. Many are actively using WhatsApp groups for certain conditions and use Instagram and YouTube to educate people about the “new normal”.
- Some communities are encouraging their citizens to engage with the internet, and nurturing innovation in media and apps.
- Kemendesa’s support for smart (or digital) villages is offering the potential for health content to be delivered as part of their platforms and be taken to scale.

3. Progress is being made, but health services at present do not address the issues of inclusion in a holistic way.

Indonesia is making encouraging progress towards the goal of Universal Health Coverage, with the implementation of National Health Insurance being a key driver for improvements in coverage and usage of health services. But, in terms of social and digital inclusion, there is no explicit policy guiding delivery. As a result, digital inclusion happens largely as a by-product of work being done for other reasons rather than designed in. For example:

- Temenin, with its doctor-to-doctor remit, depends on the interests of the participating expert clinicians, and at present, for example, this does not include mental health. Whilst Sehatpedia is providing a range of Communication, Information and Education materials

the scope, at present, is not large and does not address the needs of People with Disabilities in accessing it.

- The private sector telemedicine providers have no focus on digital inclusion.
- There are many condition-specific initiatives, e.g., to combat HIV/AIDs, but they are not guided by a need to include the requirements of those who may be digitally excluded.

4. There are some major cross-sectoral health challenges facing Indonesia that can demonstrate the value of telehealth and digital inclusion. We suggest focusing on two:

- Enabling every citizen to be protected from COVID-19 is a health issue that clearly has major socio-economic consequences across all sectors. The Communication, Information and Education aspects of countering infodemics² via telehealth, or the use of local facilitators to enable hesitant citizens to be able to have a teleconsultation from the home or smart village centre are examples of the opportunities to use digital technologies to support digital inclusion.
- Another key cross-sector issue is the need to reduce stunting – work that involves 22 Ministries, and has a focus on water, sanitation, behavioural change, vaccination and immunisation, and nutrition. Of course, there are many other health problems apart from stunting that will benefit from there being better telehealth support and guidance about these determinants of health being available to every citizen, health cadre, Posyandu³, and Puskesmas.

5. Bringing these findings together requires improvements in telemedicine and digital inclusion to be taken forward in the context of a digital health ecosystem. The evolution of a digital health ecosystem takes time, and opportunities should be taken to focus initially on developing a Strategy that can give some policy substance to the findings we report here, and of course address many other issues as well.

Summary

The following captures in summary form the sequence and rationale of the recommendations.

1. **Support Puskesmas.** They are at the intersection of community and hospital care and are getting increasingly involved in telemedicine and telehealth. They are building up knowledge of their requirements and these should inform how to:
2. **Develop Capacity and Content:** this is to recognise that digital health literacy and digital inclusion training is needed to support telehealth, and this requires content that helps better health-related decisions by both health staff and citizens. And this in turn will help and inform how to:
3. **Engage with Digital Villages and Communities** so that digital services which enable everybody to get (affordable) access to (affordable) health care, communication, information, and education, are available in every village. And this in turn requires action to:
4. **Implement Standards and Interoperability** so that telehealth services can be integrated across the health system and enable them to address specific health sector issues, and, to develop a:
5. **Focus on Cross-sector issues**, (such as COVID-19 and stunting) which are key to better health and development in general, and are better addressed when there is a commitment to:
6. **Foster Digital Health Ecosystems and Strategy Development** so that synergies can be identified and delivered, with a Digital Health Strategy being an initial step.

² an overabundance of information, both online and offline. It includes deliberate attempts to disseminate wrong information to undermine the public health response and advance alternative agendas

³ A Community Health Post

Six Recommendations

1. Support Puskesmas

Some Puskesmas staff have embraced digital technologies and are supportive; others have not. Recognising that Puskesmas staff have a pivotal role to play in supporting telehealth,

We recommend that Kemenkes:

Ensures that in the development of its Temenin and Sehatpedia solutions, Puskesmas staff are given digital health literacy training which also promotes digital inclusion. The opportunity to develop a unified training package for Puskesmas staff should be taken. Further aspects of this training should:

- Improve the sensitivity of staff to the needs of different GESI groups, in particular the use of sign language, and the use of assistive technologies.
- Enable staff to use media, such as WhatsApp, to provide consultations with patients at home.
- Reflect on the lessons learned from the initial training programme, paying particular attention to the challenges of staff turnover and the potential to train Puskesmas staff in how to improve their engagement with other community-based health cadres, and help them feel comfortable to use telehealth services and digital communications, information, and education.
- Ensure that there are Puskesmas where staff are trained in using both Temenin and Sehatpedia.

Promotes good practices in Digital Inclusion; for example, to support different groups of people, or to focus on a particular health concern, some Puskesmas have a team that modifies content and develops movies, and others use Instagram and YouTube to educate people about the new normal, how to use Posyandu services, have vaccinations etc.

Continues to collaborate with the Ministry of Women’s Empowerment and Child Protection (KemenPPPA) to develop more Child-Friendly Puskesmas and ensure they can provide digital support to children and their parents, and ensure health content is provided for their Child-Friendly Information Centres.

Works with Development Partners to support the use of digital technology to help Puskesmas staff engage with communities. UNICEF, for example, has shown mobile technologies can help Puskesmas staff to improve mother and child care, e.g., with immunization reminders.

2. Develop Capacity and Content

Digital health literacy and digital inclusion training is needed to support telehealth, and this requires content that helps better health-related decisions by both health staff and citizens, so:

We recommend that Kemenkes:

Commissions the development of digital health literacy training and content for all health service staff, and communities. In doing this work (which will clearly need to be phased) Kemenkes will need to collaborate with other Ministries, in particular the Ministry of Communication and Information (Kominfo) and their National Digital Literacy programme, and also the Ministry of Education, Culture, Research and Technology.

Commissions staff training in digital health inclusion. We found no training materials focused on a holistic approach to digital health inclusion. The material in this report points to many of the potential resources that can be used as a starting point, e.g., those developed by the International Telecommunications Union and the Mobile Operators. There are some issue-specific good

practices in Indonesia, for example the work of the Indonesian Telemedicine Alliance and UNDP regarding learning and capacity building to support People Living with HIV and AIDS to use telemedicine, clinical and information services. This training needs to be adapted to the needs of policymakers, hospital, Puskesmas and community health cadres.

Works with Development Partners (global, national, and local), academia, professional bodies, and Associations to determine the technical and quality criteria that content developers need to meet to enable their digital content (that supports telehealth and digital inclusion) to be delivered safely to communities and health staff. For example, this will require agreement on how best to check the quality of the content and avoid infodemics.

3. Engage with Digital Villages and Communities

To have digital services which enable universal access to health care, communication, information, and education, requires provision of such services in community, so:

We recommend that Kemenkes:

Works with Kominfo and its Telecommunication and Information Accessibility Agency (BAKTI) to connect all the health facilities in Indonesia. The roll-out of the Base Transceiver Stations and the delivery of 4G to health facilities, the expansion of small ground station satellite receivers (VSAT) and then the transition enable communities to the use of the more powerful broadband (SATRIA) satellite from 2023 should be carefully and jointly planned, and bear in mind the likely increase in bandwidth requirements as telehealth services and requirements develop. As part of this process the following issues also need to be addressed:

- The digital maturity of the health services in particular areas and their capacity to incorporate the installation and maintenance of telehealth services.
- The different demographic and geographic characteristics of the Regions, and the particularly challenging requirements of Disadvantaged areas, borders and island for telehealth services and their use of existing and upgraded technology.

Works with Kemendesa to support the development of digital villages. This should not be construed too narrowly, as other Ministries (e.g., Kominfo and, the Ministry of National Development Planning) and the World Bank are involved, but Kemendesa has the lead role in the SDGs and Smart Villages. Kemenkes can make some positive contributions by working to:

- Agree the core requirements for digital platforms that support the health requirements of inclusive communities, and how they can be sustained and refreshed. This will reflect the health content that is being developed and the requirements of health staff e.g., in Puskesmas and health cadres. The health-related work of Human Development Workers also needs digital support.
- Agree how telehealth and digital inclusion initiatives can best be introduced via village governance arrangements and supported by appropriate use of the Village Fund
- Support the development of the role of Digital Ambassadors in terms of their briefing about telehealth and digital inclusion, and the way they convey these issues to the Digital Cadres they support.
- Offer training opportunities for local digital or health cadre to be able to facilitate the setup of a teleconsultation with a local Puskesmas (or hospital) with those who would benefit but lack the necessary skills or confidence.
- Support the scale up of “digital villages” by contributing best practices concerning the provision of digitally supported health services, communication, information, and education.

Works with Development Partners and entrepreneurs to promote telehealth and digital inclusion. For example, Kapal Perempuan, with respect to the use of community radio, or Humanity and Inclusion regarding the use of sign language, or Common Room's Tech Hub for Rural Innovation, or Yakkum Rehabilitation Centre's support of women with disability and production of video tutorials and best practices, all offer some best practices in terms of innovative uses of digital technology that support community development and health. They also provide evidence that supporting entrepreneurship in village communities can also develop and provide locally relevant (but quality assured) health knowledge and products.

4. Implement Standards and Interoperability

To enable telehealth services to be available when and where they are needed requires standards so that systems and services can work together, so

We recommend that Kemenkes:

Works with Kominfo and the technology providers (and their Associations), and other relevant organisations to agree the technical standards to support telehealth services. This may be an early role for the Digital Transformation Office. The work will involve a subset of the full range of standards-related issues that are needed to support digital health systems, but will need to address:

- Bandwidth requirements for teleconsultations (e.g., for broadband, for satellites etc).
- Identity management (especially for children).
- Data, cybersecurity and risk management, e.g., concerning use of smart phones, social media, hacking, and online abuse.

Works with Development Partners and the Private Sector to understand how other aspects of telehealth are being provided. At present, and particularly in the context of the COVID-19 pandemic, there has been an accelerated growth in telemedicine and telehealth services by the private sector. But for the poor, these services are too costly to use. Also, the private sector recognises that it is not doing enough to support digital inclusion though it does have a vested interest in gaining and maintaining customer engagement. Development Partners have commented on the plethora of apps and standalone systems.

5. Focus on Cross-sector issues

With greater interoperability (both technical and in terms of governance arrangements) so the potential for addressing cross-sector issues is improved, and these are key to better health and development, so

We recommend that Kemenkes:

Contributes its expertise on telehealth and digital inclusion to collaborate with other sectors in addressing two key issues: COVID-19, and Stunting. In addressing these grand challenges, it should be seeking to learn lessons that can be applied for other cross-sectoral issues, such as reducing non-communicable diseases. For example,

- COVID-19 requires cross-sectoral changes, including those within the health system. One issue highlighted here was the lack of a real-time data about bed occupancy, and of course there are others e.g., the pressures to deliver vaccines and provide accurate information about them. Changes to the regulations concerning the use of telemedicine that have been stimulated by COVID-19 need to be kept under review.

- The high prevalence of stunting is another cross-sectoral and high priority issue. Providing engaging content about nutrition e.g., via videos and cartoons to help improve health behaviours is one aspect; another is the collaboration between development partners and the private sector e.g., KOMPAK and Sehat TeleCTG, as well as community-developed apps, e.g., Desa Bulakan's *anak bunda*. But dwarfing these initiatives is one that involves multiple Ministries that the World Bank is supporting which focuses on 5 different services that need to come together at village level (water, sanitation, behavioural change, vaccination and immunisation, and nutrition). This provides a focus for work to deliver telehealth support with digital inclusion.

Works with the healthtec innovators and nurtures innovations, in particular those that support telehealth and digital inclusion. For example, can the health sector leverage innovation, e.g., the use of simple messaging services or WhatsApp, so that services (information, consultation, drugs etc) can be ordered and provided (including in Disadvantaged areas, borders and islands) as well? There is much for Kemenkes to gain from understanding how the private sector telehealth innovators are developing their business models, e.g., managing risk and identity. Sehatpedia has the opportunity to implement with its private sector partners an inclusivity by design approach. There are a range of assistive technologies too which are needed by People with Disabilities, some of which need to be provided within Puskesmas and hospitals to make services easy to access.

Works with the Healthcare and Social Security Agency (BPJS Kesehatan), and the Professional Associations to enable health technology assessment of telemedicine and telehealth quality standards. There is a desire to better assess what the costs and benefits of telemedicine are. Also, the Indonesian Telemedicine Alliance are working together with Indonesian Healthtech Association and the Indonesian National Agency of Drug and Food Control in revising the regulations for tech products and will be working to have digital inclusion issues considered. The Indonesia Hospital Association indicated that explicit health care quality assurance standards for the care of People with Disabilities are needed, and the Indonesian Medical Association supports the advocacy for telemedicine regulation.

Works with the private telemedicine providers and the BPJS Kesehatan to monitor the use of telehealth services that they are offering so that the public sector telehealth provision is focused where effort is most needed to ensure there is both coverage and usage.

Works with the Ministry of Social Affairs (Kemensos) and the Ministry of Home Affairs (Kemendagri) to improve the processes for enabling everyone, including People with Disabilities and the marginalised, to get their national ID cards, status and be able to access digital platforms.

6. Foster Digital Health Ecosystems and Strategy Development

These recommendations show that the Kemenkes has a key role to play in orchestrating the development of a Digital Health Ecosystem within which the telehealth and digital inclusion issues of particular concern here can be considered. There are many stakeholders whose interests need to be understood, and, of course, the sort of ecosystem that could be envisaged could not be established straight away, so:

We recommend that Kemenkes:

Commissions the development of a Digital Health Strategy, with the establishment of a core group whose remit would include using the process to help foster a Digital Health Ecosystem for Indonesia. Within this, the issues of improving telehealth and digital inclusion can be developed with the informed engagement of the relevant Ministries, Development Partners and other organisations, and actions taken so that the results can be deployed at scale and sustained.