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*Economic, social and cultural rights
and the internet*



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Economic, social and cultural rights and the internet

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PHILIPPINES

HEALTH INFORMATION EXCHANGE: A TECHNOLOGY-DRIVEN APPROACH TO HEALTH PROMOTION



KEYWORDS: **health**

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Introduction

The duty to ensure the right to health lies primarily with the state – and information and communications technologies (ICTs) offer an effective way to enable this right. In the Philippines, the government has established the Philippine Health Information Exchange (PHIE),¹ which enables the exchange of patient information between healthcare providers and facilities. It is aligned with the National eHealth Vision,² which aims to promote access to healthcare services and health information to create a more responsive health system.

Despite its purported benefits, the PHIE is not without its critics. Among the issues raised are its sustainability and supposed incompatibility with data privacy. Its failure to address data ownership and the government's ability to host the system have also been questioned.

Right to health and the internet

Despite significant improvements in recent years, the Philippine healthcare system remains plagued with problems that affect its effectiveness: lack of healthcare personnel, inadequacy of health facilities, and inaccessibility of healthcare services.³ While the country welcomes at least 20,000 new health professionals every year,⁴ the healthcare worker-to-patient ratio is far from ideal, owing to the migration of healthcare workers abroad in search of better opportunities. Hospital beds are

insufficient given the total patient population.⁵ Worse, 60% of hospitals are privately owned and operated.⁶ In 2013, the average cost of treatment in a private facility was five times higher than that of its public counterpart.

The Philippines formally linked to the internet backbone in 1994. Today, despite having one of the slowest (yet quite expensive) connections in the world,⁷ the internet is surprisingly popular in the country – 46% of the population are considered active internet users, with annual growth pegged at 7%.⁸ These past four years alone, internet access increased by over 500%.⁹ Filipinos spend an average of 5.2 hours online every day (3.2 hours, when using a mobile device).¹⁰ By law, internet access is considered a mere value-added service that is largely unregulated.¹¹ This is attributed mainly to limited state resources and capacity, and the regulatory capture by two dominant market players that own most of the domestic internet infrastructure, and dictate the cost and quality of internet connectivity.¹²

The interdependence of health and technology has long been established. The technological evolution has allowed the digital processing of health information, bringing substantial changes in the

1 www.dost.gov.ph/knowledge-resources/news/44-2015-news/668-moa-signing-for-dost-s-phil-health-info-exchange

2 Department of Health. (2013). Philippine eHealth Strategic Framework and Plan 2013-2017. www.uhmis.doh.gov.ph/downloads/forms/229-philippines-ehealth-strategic-framework-and-plan-2013-2017.html

3 Bernal, B. (2013, 22 July). #SONA2013: The State of Public Healthcare in the Philippines. *Rappler*. www.rappler.com/nation/special-coverage/sona/2013/34446-public-healthcare-philippines

4 Geronimo, J. (2014, 13 February). Where are the health workers? *Rappler*. www.rappler.com/nation/50267-health-workforce-crisis

5 There were 1,800 public and private hospitals in the country with a total bed capacity of 77,000 patients in 2014, and the total population was almost 100 million. Source: Dagoooc, E. M. (2014, 5 September). PHL needs to address hospital bed shortage. *The Freeman*. www.philstar.com/cebu-business/2014/09/05/1365613/phl-needs-address-hospital-bed-shortage

6 Herrera, M. E., Roman, F., & Alarilla, M. C. (2010). *Overview of the health sector reform in the Philippines and possible opportunities for public-private partnerships*. Asian Institute of Management. www.aim.edu/files/download/131

7 Gonzalez, Y. (2015, 19 May). PH Internet 2nd slowest in Asia, one of the most expensive. *Inquirer.technology.inquirer.net/42293/ph-internet-2nd-slowest-in-asia-one-of-the-most-expensive*

8 Kemp, S. (2016, 27 January). Digital in 2016. *We Are Social*. wearesocial.com/uk/special-reports/digital-in-2016

9 Revensencio, J. (2015, 5 April). Philippines: A Digital Lifestyle Capital in the Making? *The World Post*. www.huffingtonpost.com/jonharezencio/philippines-a-digital-lif_1_b_7199924.html

10 Kemp, S. (2016, 27 January). Op. cit.

11 Sec. 3 (h) of Republic Act 7925 defines a value-added service provider as "an entity which, relying on the transmission, switching and local distribution facilities of the local exchange and inter-exchange operators, and overseas carriers, offers enhanced services beyond those ordinarily provided for by such carriers."

12 Mirandilla-Santos, M. G. (2016). *Philippine Broadband: A Policy Brief*. www.investphilippines.info/arangkada/wp-content/uploads/2016/02/BROADBAND-POLICY-BRIEF-as-printed.pdf

healthcare sector.¹³ Electronic medical records (EMRs) now make it possible to generate large datasets¹⁴ that help medical practitioners give more accurate diagnoses and treatments.¹⁵ Data collection has also improved, while minimising errors and inconsistencies.¹⁶ The internet, in particular, now allows instant sharing of medical information among health service providers,¹⁷ and encourages patient participation in healthcare by making research easier.¹⁸

For the Philippine government, the implementation of telemedicine in underserved and vulnerable communities and the mobile reporting of health data¹⁹ are but a few of its recent technology-driven health projects. Information networks have been established to provide more effective healthcare, and promote medical training, education and research.²⁰ The collection of health information is no longer seen as a mere bureaucratic activity,²¹ with the government now recognising the advantages of an efficient health information system.

Nonetheless, problems still beset the systems currently in place. Paper-based data recording and the hierarchical flow of reporting lead to delays in the submission of reports, which, in turn, exposes data to errors and mishandling, and degrades its quality and usability. Optimal use of health information is still rare, with many records ending up unused and archived. Meanwhile, issues like data manipulation by healthcare workers, system compatibility between agencies, and data portability also persist.

Policy and political background

The Philippines is a signatory to the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR).²² Its 1987 constitution makes it state policy to protect and promote the right to health,²³ including the adoption of a comprehensive approach to health development,²⁴ the development of skills and capacity, and research.²⁵ This is reiterated in various statutes such as the Responsible Parenthood and Reproductive Health Act,²⁶ the National Health Insurance Act,²⁷ and the Rare Diseases Act.²⁸

Innovative government programmes have ushered in dramatic improvements in the health sector.²⁹ The construction of specialist hospitals³⁰ and the implementation of a conditional cash transfer (CCT) programme³¹ are two oft-cited examples.³² Health-related laws have also played an integral role. The recent Aquino regime, for instance, recognised public health as a key measure of good governance³³ and pushed for the reproductive health law. The Health Department's budget was also increased to afford medical facility upgrades and the construction of health clinics.³⁴

13 Marquez, P. (2012, 16 July). Health information systems in developing countries: Star Wars or reality? *World Bank*. worldbank.org/health/health-information-systems-in-developing-countries-star-wars-or-reality; see also: World Bank. (2014). *Strategic issues and reform agenda: Georgia Public Expenditure Review, Volume 1*. documents.worldbank.org/curated/en/779561468275119198/Strategic-issues-and-reform-agenda

14 Carces, S. (2013). Electronic health records: Beyond the digitization of medical files. *Clinics*, 68(8), 1077-1078. www.ncbi.nlm.nih.gov/pmc/articles/PMC3752637

15 The Possible Team. (2015, 10 March). Digitizing healthcare: Why having an electronic medical record matters. *Possible*. www.possiblehealth.org/blog/electronic-medical-record

16 Ibid.

17 Ibid.

18 Carces, S. (2013). Op. cit.

19 Using the Health Emergency Management Staff's Surveillance in Post Extreme Emergencies and Disaster (SPEED) system. www.wpro.who.int/philippines/areas/emergencies_disasters/continuation_eha_page/en/

20 Department of Health. (2013). Op. cit.

21 Marcelo, A., & Cañero, J. (2010). Health Information Systems. *Acta Medica Philippina*, 44(4). www.actamedicaphilippina.com.ph/sites/default/files/fulltexts/vol44no4-25-29-HealthInformationSystems.indd.pdf

22 The country signed the treaty on 16 December 1966 and ratified it on 7 June 1974.

23 Art. II, §15.

24 Art. XIII, §11.

25 Art. XIII, §12.

26 An Act Providing for a National Policy on Responsible Parenthood and Reproductive Health, Rep. Act No. 10354 (21 December 2012).

27 An Act Amending Republic Act No. 7875, Otherwise Known as The "National Health Insurance Act Of 1995", as Amended, and for Other Purposes, Rep. Act 10606 (19 June 2013).

28 An Act Promulgating a Comprehensive Policy in Addressing the Needs of Persons with Rare Disease, Republic Act No. 10747 (3 March 2016).

29 McKittrick, D. (2009, 4 August). Cory Aquino: President of the Philippines who brought democracy to the islands. *Independent*. www.independent.co.uk/news/obituaries/cory-aquino-president-of-the-philippines-who-brought-democracy-to-the-islands-1766970.html

30 Samonte, J. (2015, 24 February). Infrastructures built during Marcos' time. *Hoppler*. www.hoppler.com.ph/blog/design-and-architecture/infrastructures-built-during-marcos-time

31 CCT, also known as the Pantawid Pamilyang Pilipino Program (4Ps), is a human development strategy of the national government to help the poorest of the poor improve their health and nutrition and the education of children aged 0-18 by giving them conditional cash grants. www.gov.ph/programs/conditional-cash-transfer

32 Department of Social Welfare and Development. (2009). Conditional Cash Transfer (CCT) Philippines - Improving the human capital of the poor (Pantawid Pamilyang Pilipino Program or 4Ps). unpan1.un.org/intradoc/groups/public/documents/ungc/unpano40549.pdf

33 senate.gov.ph/press_release/2009/1128_aquino1.asp

34 Rappler.com (2015, December 22). Aquino signs P3,002-trillion national budget for 2016. *Rappler*. www.rappler.com/nation/116749-aquino-signs-national-budget-2016

Unfortunately, the present administration seems too preoccupied with its war on crime, particularly the illegal drug trade.³⁵ While it has acknowledged the urgency of providing health facilities and subsidies to the poor, public health does not appear to be a major concern, least of all when it comes to the rehabilitation of drug addicts.³⁶

The Information Exchange System

The PHIE subscribes to the vision of having comprehensive but secure access to health information that will result in improved decision making in patient care.³⁷ The PHIE includes decision making in safeguards for individual privacy.³⁸ It recognises the need for a nationwide system of identifying patients, particularly those with highly communicable diseases and special health conditions. It uses a protected platform that allows electronic access and exchange of health data between healthcare providers, health information organisations, and government agencies.³⁹ The standardisation of data formats, codes, and terminologies ensures interoperability. Finally, it avoids repetitive data collection, improves data quality, monitors the efficiency of data flow, and reduces operational costs.⁴⁰

How it works

A patient's consultation with a healthcare provider is the locus of data collection. When registering with the facility, the patient is informed of the PHIE and asked to agree to participate.⁴¹ During processing, information is recorded as an EMR and sent to the PHIE, where it becomes available to all participating healthcare providers. The patient's consent form contains, among others: (a) an opt-out clause, (b) a list of information to be gathered, (c) the date and

time, (d) contact information, and (e) a provision on the protection of identity. The EMR is constantly updated to ensure accuracy. An amendment may be requested, subject to certain protocols.

When information on communicable diseases is recorded, health authorities are immediately notified. If necessary, a healthcare provider will refer a patient to another provider more capable of addressing his or her medical needs.

Key actors

To facilitate its implementation, a tripartite agreement was reached between the Department of Science and Technology (DOST), the Department of Health (DOH), and the Philippine Health Insurance Corporation (PHIC).⁴²

They were joined by the Commission on Higher Education (CHED) and the University of the Philippines – Manila, with the five institutions making up the core implementation team.⁴³ They are expected to provide overall direction, technical guidance, and the resources necessary to maintain the system. Coordination with other stakeholders is mandatory to ensure continuous development, quality assurance, and an effective monitoring and evaluation system. The team also reviews and approves all requirements for the PHIE's operations, and provides capacity-building activities. The PHIC, in particular, was tasked to replicate its database, in order to serve as the PHIE's baseline database.

There is also a National eHealth Governance Steering Committee, which is co-chaired by the DOH and DOST. It is expected to harmonise and advance the implementation and development of e-health applications and services in the country through the Technical Working Group (TWG) on eHealth and the eHealth Program Management Office (PMO).⁴⁴ It also provides, among others, direction and guidance for the finalisation and implementation of the Philippine eHealth Strategic Framework Plan.⁴⁵ Meanwhile, the TWG has three specialised sub-committees – Privacy Experts, Standards Experts, and Risk Management and IT Experts – which provide tactical input on the specific subjects they specialise in.⁴⁶ Through these groups, civil society,

35 Diaz, J. (2016, 21 August). Duterte cuts health budget by P31 B. *Philippine Star*. www.philstar.com/headlines/2016/08/21/1615704/duterte-cuts-health-budget-p31-b

36 Cerda, J. (2016, 12 May). Duterte's transition team bares 8-point economic plan. *Philippine Star*. www.philstar.com/headlines/2016/05/12/1582504/dutertes-transition-team-bares-8-point-economic-plan; see also: Ansis, J. (2016, 12 February). What is your presidential candidate's platform of government? *CNN Philippines*. www.cnnphilippines.com/news/2016/02/12/presidential-candidates-platform-of-government-elections.html

37 Philippine Health Insurance Corporation. (2015). National eHealth Program Briefer.

38 Department of Health, Department of Science and Technology and Philippine Health Insurance Corporation. (2016). Joint Administrative Order No. 2016-001. www.ehealth.doh.gov.ph/index.php/transparency/annual-accomplishment-report/fiscal-year-2015/104-jointao2016001

39 Ibid.

40 Philippine Health Insurance Corporation. (2015). eHealth – PHIE (Public) 03092015.

41 Department of Health, Department of Science and Technology and Philippine Health Insurance Corporation. (2016). Op. cit.

42 Ibid.

43 Ibid.

44 Department of Health and Department of Science and Technology. (2013). Joint DOH-DOST Department Memorandum No. 2013-0200. www.ehealth.doh.gov.ph/index.php/component/jdownloads/summary/4-department-memorandum/9-joint-doh-dost-dm-2013-0200-creation-of-joint-doh-dost-national-governance-steering-committee-and-technical-working-group-on-ehealth

45 Ibid.

46 Department of Health, Department of Science and Technology and Philippine Health Insurance Corporation. (2016). Op. cit.

academia and the private sector contribute towards the development of regulations and standards that guide the PHIE. The eHealth PMO, on the other hand, provides the overall management of the planning and implementation of the PHIE and ensures continuous engagement and collaboration between the proponents.⁴⁷

Finally, healthcare providers, software developers, and EMR and health information service providers are expected to: (a) comply with the requirements and operational mechanisms of the PHIE; (b) ensure the integrity, security and confidentiality of data; (c) report issues, concerns, and/or problems; and (d) provide inputs to further improve the system.⁴⁸ Participating healthcare providers, in particular, must exercise a range of functions, including: (a) limiting the use of the system to treatment and care coordination; (b) securing the patient's consent to participation in the system; (c) correcting or editing information in the system; and (d) providing patients with information regarding PHIE protocols and their rights as information owners.⁴⁹

Issues and concerns

Several issues have been raised in the course of the PHIE's development:⁵⁰

- **Possible data privacy violations:** The system requires the PHIC to process its members' health information for purposes outside its primary mandate. It currently does not seek consent for purposes such as research or data sharing. PHIE proponents argue, however, that the PHIC's participation is consistent with its declared principles⁵¹ and functions.⁵² The Corporation recognises the need to align with other government health programmes and the overall policy direction of the government regarding health services, while adapting to emerging trends. At any rate, the PHIE requires that consent be obtained from patients prior to the processing of their health information.

- **Data custodianship and accountability:** For some, ownership over information processed by the PHIE and accountability in the event of data loss or breach are grave concerns. They point to the PHIE being a non-legal entity as enabling the evasion of potential liabilities. The ownership of health data is a point of debate among PHIE supporters. However, the status of data ownership beyond the PHIE's lifetime has already been clarified – provided the data used is made anonymous or aggregated, it may be stored and used for public health purposes. Accountability is also ensured given the joint responsibility of the agencies in the system's operations, including data security. The criminal prosecution of individuals in the event of a breach is always possible when warranted. The PHIE's lack of legal personality has also been dismissed as a non-issue since the PHIC and participating healthcare providers ultimately bear the burden of obtaining patients' consent, as required by law.
- **Government hosting capacity:** With DOST already providing multiple services to other government agencies, its ability (and to a lesser extent, the PHIC's) to take on the weight of hosting a major project like the PHIE has been called into question. It is worth noting, however, that providing physical and technical security measures to other government institutions forms part of the department's primary mandate. It is therefore logical that it be asked to provide hosting service to the PHIE. In any event, there has yet to be an analysis of the DOST's hosting capacity *vis-à-vis* the PHIE.
- **Sustainability:** The tripartite agreement central to PHIE operations is effective only for three years, raising doubts as regards the system's longevity. News of the current administration substantially reducing the state's budget for health⁵³ only served to heighten fears. A major shift in state priorities – one that veers away from health and social welfare – is certain to impact on the system and its future. Proponents disagree and point out that the PHIE is a long-term programme whose lifetime can always be extended through contract renewal. Distress over a potential shift in state policy, however, has been more difficult to quell.

47 Ibid.

48 Ibid.

49 Ibid.

50 Philippine Health Insurance Corporation. (2015). Primer and Potential Issues of the PHIE and Comments re: Privacy Guidelines.

51 An Act Instituting a National Health Insurance Program for All Filipinos and Establishing the Philippine Health Insurance Corporation for the Purpose, Rep. Act No. 7875, § 2, (10 February 2004).

52 An Act Amending Republic Act No. 7875, Otherwise Known as the "National Health Insurance Act Of 1995", as Amended, and for Other Purposes, Rep. Act 10606, § 16, (19 June 2013).

53 Diaz, J. (2016, 21 August). Op. cit.

Conclusion

The internet and information technology have become indispensable to public and private actors seeking to uphold and promote the right to health and other ESCRs. Nonetheless, sans appropriate safeguards and proper planning, their potential to inhibit the realisation or full enjoyment of these rights is also ever present.

With the PHIE, the Philippine government is firmly on track towards achieving its primary objective and the realisation of its e-health aspirations. However, it would do well to maintain its commitment by securing the necessary resources required by the system. It should also install security protocols and infrastructure against possible malfunctions and security breaches and resolve all lingering issues if it is to bring itself closer towards affording Filipinos the full enjoyment of their right to health.

For those advocating for the PHIE, they must remain vigilant and ensure the evolution of the system into a more effective and secure data exchange mechanism.

Action steps

On that note, the following recommendations are made to ensure the responsible implementation of the PHIE:

- The system must undergo gradual implementation. The current pace and approach must be sustained to ensure that all necessary components are in place, significantly decreasing the risk of unwarranted exposure of sensitive health information in the event of loss or a breach.
- The technical and managerial capacity of the different implementing agencies must be enhanced.
- Clear organisational structures and guidelines for an efficient implementation of the system must be developed and constantly updated.
- For proponents and implementers alike, there should be greater responsibility geared towards the proper balancing of all human rights involved (e.g. health, information and privacy).

Economic, social and cultural rights and the internet

The 45 country reports gathered here illustrate the link between the internet and economic, social and cultural rights (ESCRs). Some of the topics will be familiar to information and communications technology for development (ICT4D) activists: the right to health, education and culture; the socioeconomic empowerment of women using the internet; the inclusion of rural and indigenous communities in the information society; and the use of ICT to combat the marginalisation of local languages. Others deal with relatively new areas of exploration, such as using 3D printing technology to preserve cultural heritage, creating participatory community networks to capture an “inventory of things” that enables socioeconomic rights, crowdfunding rights, or the negative impact of algorithms on calculating social benefits. Workers’ rights receive some attention, as does the use of the internet during natural disasters.

Ten thematic reports frame the country reports. These deal both with overarching concerns when it comes to ESCRs and the internet – such as institutional frameworks and policy considerations – as well as more specific issues that impact on our rights: the legal justification for online education resources, the plight of migrant domestic workers, the use of digital databases to protect traditional knowledge from biopiracy, digital archiving, and the impact of multilateral trade deals on the international human rights framework.

The reports highlight the institutional and country-level possibilities and challenges that civil society faces in using the internet to enable ESCRs. They also suggest that in a number of instances, individuals, groups and communities are using the internet to enact their socioeconomic and cultural rights in the face of disinterest, inaction or censure by the state.

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