# Formulating the National Policy on Telehealth for the Philippines through Stakeholders' Involvement and Partnership

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**ABSTRACT**

The Philippine Department of Health (DOH) recognized the potentials of information and communication technology (ICT) as a valuable aid to achieve *Kalusugan Pangkalahatan* (KP) or Universal Health Care for all Filipinos. In 2011, the *Development of the National Telehealth Service Program (NTSP) in the DOH* Project was proposed and implemented as a collaborative and developmental project of the DOH, with the University of the Philippines-Manila through the National Telehealth Center. The Project defined operational and policy issues critical in incorporating telehealth as a standard program, service delivery and information management mode in the DOH. To sustain this beyond the current Project financing and political leadership, as well as to provide a policy framework to guide the implementation of telehealth in the country, a DOH administrative order (AO) was proposed. Stakeholder feedback was sought to surface views and concerns to ensure better relevance and effective policy implementation. Four public fora were held from 2012 to 2014 participated in by 241 individuals from the national agencies and local governments, project implementers, academe, and the private sector. General comments centered on governance and ensuring representation by patient advocate groups and the local governments. Capacity building and financing of telehealth, and regulation especially with regards to ethical use and protection of patients' privacy were prominent concerns. Participants affirm the preference for the poor and marginalized, although envision that telehealth and digital health information systems should be standard components of health care in the country. Other comments were specific to telemedicine and using mobile phones to report on health services from the frontline clinics. Recommendations are presented.

*Key Words: Telehealth policy, stakeholders, telemedicine, eHealth, mobile phone-based reporting, ICT in health*

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## Introduction

The Department of Health recognized the potentials of information and communication technology (ICT) as a valuable aid to achieve *Kalusugan Pangkalahatan* (KP) or universal health care for all Filipinos. The country faces persistent health inequities due to geographic isolation and other social adversities. As a lower middle income country in Southeast Asia, the Philippines is archipelagic with many difficult to reach areas. More than ten Filipino mothers die every day unnecessarily, leaving more than 30 children motherless.[1] The *Development of the National Telehealth Service Program (NTSP) in the Department of Health (DOH)*, or the NTSP Project, was proposed and implemented as a collaborative and developmental project of the DOH and the University of the Philippines-Manila through the National Telehealth Center, (UP-NTHC). The NTSP is cited as part of the National Objectives for Health for 2011-2016, an indicator of the specific objective: "Increased efficiency of processes and systems in health care delivery and administration". Specifically, telemedicine and mHealth are listed as among five priority focus areas where ICTs can help support KP. Whereas telehealth collaboration between the UP Manila and the DOH began with the very first nationwide telemedicine implementation in 2004[4,5], telehealth became an expressed and clear part of the national health agenda only in 2010. Through the NTSP Project in 2011, the DOH provided funds for development and implementation of telehealth in priority rural remote communities to define operational, training and policy issues critical in incorporating it as a standard program of the DOH. (Telemedicine, telehealth, mHealth, and the NTSP Project are briefly described further in Box 1; Project outcomes are discussed in separate journal articles.)

Institutionalization of the NTSP especially for geographically isolated and disadvantaged areas (GIDA) was pursued within the Project period to further promote collaborations and processes envisioned to be a lasting part of the country's health system. Since 2004, telehealth has been funded through grants and research funding of national government, including the Department of Science and Technology (DOST)(Box 2). To sustain this beyond the current financing mode and political leadership, passage of a DOH administrative order (AO) on the NTSP was initiated

within the Project. The AO intended to provide a policy framework that will guide the implementation of all telehealth initiatives in the country. Other policy documents were already in place, but not necessarily intended to sustain the NTSP for GIDA; additional instruments were also proposed (Box 3).

Cognizant that broad participation is essential to good governance, consultative meetings were held to engage various sectors relevant to telehealth to ensure representation of views in the crafting (and eventual implementation) of the telehealth AO. Participatory approaches in policy making are mainstreamed and premised to develop policies that are better conceptualized; stakeholders appreciate being asked and engaged in the design and management of regulations that affect them. When involved in the process of policy development, people become more supportive of the policy and more likely will act to make them effective.[5]

**Box 1.** Telemedicine, telehealth, mHealth, eHealth and the NTSP Project

*Telemedicine* is the "practice of medicine over a distance, in which interventions, diagnostic and treatment decisions and recommendations are based on data, documents and other information transmitted through telecommunication systems".[2] It is within the concept of *telehealth*, scoped under *eHealth* which in turn covers medical care, health promotion, education and research, as well as surveillance using ICTs. *mHealth* refers to "the use of mobile and wireless technologies to support the achievement of health objectives".[3]

The NTSP Project had two main components – telemedicine and regular real-time routine reporting for health (R4Health). The initial year of a five-year project began in 2011 and was conceived to provide telemedicine services to all the poorest 606 4th, 5th, and 6th income-class municipalities, and R4Health would cover all 1010 towns and cities with beneficiaries of the government's conditional cash transfer program. It is governed by the Project Steering Committee chaired by the DOH Undersecretary of Health, and managed by the NTSP Project Management Committee consisting of various relevant units in the DOH. The Bureau of Local Health Systems Development (BLHSD) leads the Committee; the UP-NTHC is a member as primary implementer of the Project.

Telemedicine in the NTSP is essentially a teleconsultation process, where rural physicians seek expert opinion of the hospital-based clinical specialists on difficult cases encountered. The patients are ambulatory and seen on an outpatient basis. The Project built clinician capacities the ethical management of electronically recorded and transmitted patient information as well as on the ethical use of the telehealth tools. Teleconsults use store-and-forward modalities: specialists respond with 30 minutes for SMS-based consults, and 12-24 hours for web-based and image-based consults. The referring physician remains the primary physician and is directly accountable for the care of patients; patients are not named in the information exchange. For the 18 months' duration of the Project, telemedicine was implemented in 389 priority municipalities identified by the DOH including those where DOH Doctors to the Barrios (DTTBs) serve.

R4Health is a mobile phone-based reporting system on selected KP-related, maternal and child health services as well as on the availability of essential drugs received at the front lines of health care (see below). R4Health was envisioned to be an alternative system for data collection and presentation of fresh key health information on routine health services for the Secretary of Health, and other decision makers at various levels of the health sector – a solution to the existing almost-two-year process of health services reporting and validation from the municipal to the national levels of the health system. For the Project duration, R4Health was implemented in 246 or targeted 259 priority municipalities in two regions (Cordillera Administrative Region and Eastern Visayas) and three provinces (Romblon, Masbate, Tawi-Tawi) identified by the DOH with high maternal deaths and other social challenges. Health indicators measured through the R4Health reporting system include:

1. Number of Conditional Cash Transfer (CCT) beneficiaries facilities enrolled in PhilHealth availing health services in the health center every month
2. Number of infants immunized (Fully Immunized Child rate) every quarter
3. Number of women with complete prenatal check-ups every month
4. Number of births attended to by skilled health professionals every month
5. Number of facility-based delivery every month
6. Number of current contraceptive/family planning users (Contraceptive Prevalence Rate) every quarter
7. Number of maternal deaths every month
8. Number of neonatal deaths every month
9. Availability of medications from RHU

**Box 2.** National Government Funding for Telehealth for GIDA through the UP Manila - NTHC

| Year granted | Government Agency | Telehealth Project Name |
|---|---|---|
| 2004 | Commission on Information and Communications Technology | Design and Implementation of BuddyWorks: Using Telehealth Network Services in Community Partnership Programs (BuddyWorks Project) |
| 2007 | Department of Science and Technology (DOST)–Philippine Council for Health Research and Development (PCHRD) | Instituting the National Telehealth Service Program (NTSP) |
| 2010 | University of the Philippines - System | The National Telehealth Service Program (NTSP) |
| 2011 | Department of Health | Development of the National Telehealth Service Program (NTSP) in the DOH |
| 2012 | DOST-PCHRD and Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) | RxBox2: Integrating Medical Devices in the NTSP |
| 2015 | DOST-PCHRD | (RxBox2: Integrating Medical Devices in the NTSP) Field Deployment of Telemedicine Devices – RxBox2 Augmentation |

**Box 3.** Current and Proposed Policy Instruments to Sustain and Institutionalize Telehealth especially for GIDA

*Law*

**Republic Act 10606, National Health Insurance Act of 2013**

Section 10, enhancing the powers and function of the Philippine Health Insurance Corporation: "(w) To endeavor to support the use of technology in the delivery of health care services especially in far-flung areas such as, but not limited to, telemedicine, electronic health record, and the establishment of a comprehensive health database;" and Section 26 where..“ LGUs are empowered to invest their capitation in information technology..”

*House Bills*

**House Bill 4199, filed on 2014 March 13** by Representative Rogelio J. Espina, in the 16th Congress, “An Act Promulgating a Comprehensive Policy for a National Telehealth System with the Use of Advanced Communications Technology in the Philippines and to Provide Funds Thereof “. This was presented to the House of Representatives Committee on Health on 2015 January 28.

**House Bill ___ (in substitution of HB 4199),** was proposed by the DOH in July 2015 to Representative Rogelio J. Espina, as a more fundamental and enabling law on eHealth, “An Act Promulgating a Comprehensive Policy for a National eHealth System in the Delivery of Health Services with the Use of Advanced Communications Technology in the Philippines and to Provide Funds Thereof “. As of this writing, this is still being circulated among stakeholders for critique. Telehealth is discussed in several provisions.

**House Bill 6336 was filed on 2012 June 06** by Congressman Joseph Emilio Aguinaldo Abaya in the 15th Congress, “An Act Promulgating a Comprehensive Policy for a National System for Telehealth Service in the Philippines”

*Draft Executive Order*

**Draft Executive Order on Telehealth** was presented and submitted on 2012 for consideration to the Office of the Executive Secretary in 2012 September, through the guidance of the DOH-BLHSD, and UNICEF.

*Draft Administrative Order*

The **final form of the Draft Administrative Order, Institutionalizing National Telehealth Services under the DOH,** was submitted to the DOH NTSP Project Management Committee in 2014 April,

*Joint Department Memorandum*

The **DOH and DOST Joint Department Memorandum No. 2015-097 and No. 2015-098** on the Reorganization of the National eHealth Governance Steering Committee, and National eHealth Technical Working Group (TWG), respectively. It updates and supersedes the Joint Department Memorandum on eHealth, DM 2013-2000 signed by the DOST and DOH in July 2013 which created both national eHealth governance bodies. The National eHealth Steering Committee is the governing body over eHealth development and implementation in the country and is co-chaired by the Secretaries of the DOH and DOST (Department of Science and Technology). The UP Manila is part of the Steering Committee and the TWG.

**Philippine eHealth Strategic Framework and Plan, 2015-2020**, was developed, presented in public fora for critique in 2013 – 2014 and approved by the National eHealth Steering Committee in 2014. It discusses the road map of eHealth development in the country; telehealth is cited in specific provisions.

**National Unified Health Research Agenda, 2011-2016**

The National Unified Health Research Agenda or the NUHRA, for 2011 to 2016, identified *information and communication technology for health* as among its priority research areas – i.e. the development of user-friendly ICT solutions to accelerate the gathering and processing of health and related information for policymaking, and to deliver quality healthcare services. Among others innovations are sought in Public Health Surveillance/ Health Intelligence Systems, Telehealth services and systems, Interface for ICT-enabled medical devices, and ICT-enabled health services.' The NUHRA was produced through a consultative process by the Research Agenda Committee of the Philippine National Health Research System, which includes the DOH, DOST and UP Manila.

**National Objectives for Health, 2011-2016,** specifically cites the National Telehealth Service Program, and was made by the DOH also through a consultative process.

**Box 4.** Salient points of the draft AO presented for critique

The draft the AO, finalized by the DOH NTSP PMC is entitled *Institutionalizing the National Telehealth Services under the Department of Health.* The four-page document covers general provisions: rationale (achieve universal health care, overcome Philippine health challenges by tapping on potentials of ICT use, expanding scope of telehealth – i.e. in terms of technology solutions, geographic coverage), scope (the entire health sector), definition of terms, guiding principles (support the national health and development agenda, priority given to GIDA, partnership and shared responsibility, upholding ethical practice and confidentiality of patient information, adherence to existing laws including the Data Privacy Act), implementing mechanisms and funding (DOH, PhilHealth and local governments). Implementing mechanisms define the governance structure (shared leadership, membership, term of office, and the creation of a technical committee), and mandate (policy design, setting standards, ensuring capacity building, and regulation).

**Box 5.** Mandate of the Telehealth Steering Committee (as proposed in the Telehealth AO)

Formulation of telehealth standards, policies, guidelines,

- Development of appropriate or applicable accreditation or certification standards.
- Development, management and maintenance of applications, and registries or databases on telehealth.
- Development and implementation of capacity building plan for health providers on the use of telehealth services.

Organizational structure with focus on duties, roles, responsibilities, and lines of leadership shall be identified.

This paper presents stakeholder views on the proposed AO culled from four public fora conducted over two years. It discusses concerns most imminent in the minds of the participants, of valuable consideration by the DOH and national leadership, in general, seeking ways to achieve *Kalusugan Pangkalahatan*.

**Objectives**

This paper seeks to answer the question 'what are the concerns and views of stakeholders on the proposed administrative order on the National Telehealth Service Program?' to sustain telehealth especially for GIDA. It presents the stakeholders' most prominent views and concerns on the proposed AO.

## Methods

To answer the research question, a qualitative research design was chosen in order to obtain a full range of participant views and identify key themes. (Figure 1).

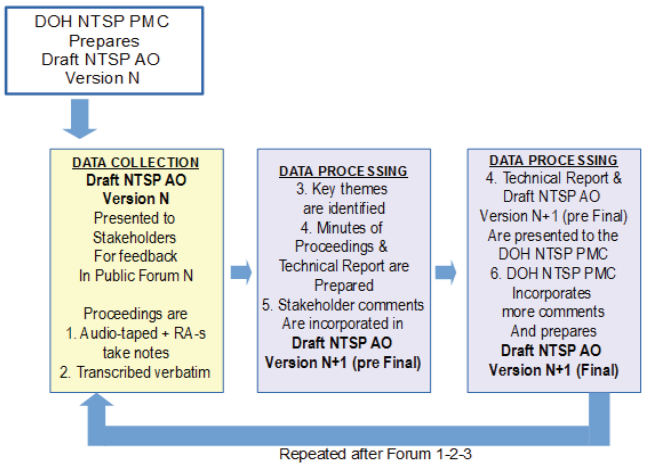


**Figure 1.** Data collection & processing.

### Participants

The participants were purposefully identified and invited by the hosts of each of the fora: UP NTHC NTSP Project team for the first and third consultations, and the DOH and DOST on the second and fourth fora, respectively.

### Data collection

The first draft of the administrative order was crafted by the DOH NTSP Project Management Committee (DOH NTSP PMC), comprised of representatives from various units of the DOH. Regular monthly meetings were held throughout the duration of the project, a venue for discussions of this proposed policy on the NTSP.

Four public fora were held on the AO over two years; relevant stakeholders were invited. Each forum was held within a three-hour period and began with an orientation on the NTSP Project. The fora began with an orientation on the NTSP Project, the proposed AO on the NTSP was presented, then an open forum would ensue. In two of four consultations, small group discussions followed the draft AO presentation, a group representative would present salient comments, then the plenary open forum is held. The forum master of ceremony would synthesize and close the consultative session.

In the initial public forum, the draft created by the DOH NTSP PMC was presented. In the next three consultations, the latest version of the draft of the AO arising from the previous public forum was presented for critique.

### Data processing

Project research assistants audio-taped the discussions, transcribed the exchanges verbatim, identified the themes, and organized them according to the sections of the draft AO and form the minutes of the consultative session. The authors check and finalize this output, prepare the technical report based on the forum minutes, and edit the draft AO to incorporate comments raised. This 'pre-final' revised version of the draft AO along with the minutes and technical report are then discussed with and submitted to the DOH NTSP PMC. The documents are then circulated among members of the Committee, who would provide their own written critique of the revised AO within a designated period. These are incorporated likewise into the 'final' revised version of the draft AO. This documentation and processing of discussions were done for all public fora, until the final draft AO was produced.

### Limitations of the study

While due diligence was made to invite as many relevant organizations, the consultations were most accessible to those from Metro Manila, where all four public fora were held. NTSP implementers (especially those from the participant municipalities) were represented only in the first two fora when Project funds were available to subsidize their travels.

The participants did not have a copy of the draft AO for their perusal prior to the consultation and would see and read the document only during the forum.

In the second and fourth session, other draft eHealth related policies were also presented and discussed which even more limited the participants' time to study and provide comments specific to the telehealth AO.

The documentation and transcription of the discussions were done by different Project research assistants although the authors were consistently supervising the process over the two-year period of the consultation process.

## Results and Discussion

### Participants in the consultative fora

Four public fora were held on the draft AO from September 2012 to March 2014. These were participated in by at least 241 individuals from various relevant sectors (Table 1). The participants were purposefully identified and invited by the hosts of each of the fora. The UP NTHC NTSP Project team hosted the first and third consultations; participants consist of the DOH NTSP Project Management Committee, NTSP Project implementers, other LGU partners who are field testing or using NTHC technologies, students and faculty who participated in an eHealth research competition organized by the NTHC, UP Manila and members of the expanded ICT4Health Technical Working Group (ICT4HTWG – a public-private partnership established to propose recommendations to the DOH on its eHealth efforts). The DOH organized the second forum also participated in by a broad group of stakeholders including ICT4HTWG), private sector, local governments, NGOs and

**Table 1.** Public fora on the draft NTSP Administrative Order, 2012 to 2014

| | Date | Venue | Total # participants | Type of organization represented |
|---|---|---|---|---|
| 1st | 2012 September 24 | NIH Conference Room, UP Manila, Manila | 12 | DOH-Central offices/ bureau (including NTSP PMC)<br>Other NGA: DSWD, NCIP<br>Academe<br>NTSP Implementers: clinical specialists, referring physicians |
| 2nd | 2013 April 25 | City State Hotel, Manila | 80 | DOH-Central offices/ bureau (including NTSP PMC)<br>Other NGA of the networks/ coalitions listed below, PhilHealth,<br>Academe<br>Development partners<br>Philippine Network for Injury Data Management System<br>the Philippine Health Information Network<br>ICT4Health expanded TWG including private sector (private information technology (IT) companies, IT system developers / consultants, HMOs and hospitals), NGO, academe, and local governments |
| 3rd | 2013 July 3 | Bayview Hotel, Manila | 81 | DOH-central offices/ bureaus (NTSP PMC)<br>Academe – UP Manila, including NTHC, SMU, MIU, CPH IMS; Lyceum of the Philippines University – Batangas, Manila Central University, Mapua Institute of Technology<br>NTHC partner LGUs – Pasay City, Navotas City, Quezon City<br>NTSP Implementers: DOH Regional Offices, Provincial Health Office, referring physicians/ R4Health reporters from priority towns<br>ICT4Health expanded TWG (private sector, NGO, local government) |
| 4th | 2014 March 14 | Makati Shangri-La Hotel, Makati | 68 | DOH-Central offices/ bureaus including NTSP PMC<br>Other NGA: DOST, PhilHealth<br>Academe<br>ICT4Health expanded TWG (private sector, NGO, local government)<br>Professional societies<br>Media Development partners |

the academe. The DOST-sponsored public forum was specifically for the private sector, media, academe and medical professional organizations.

The DOH NTSP PMC, other national government agencies, and the academe are represented in all four sessions; the private sector and non-government organizations (NGOs) in three; and NTSP implementers from the priority regions and municipalities were in two fora, funded through the Project.

The stakeholders represent the fast-growing eHealth community in the Philippines – the government, academe, private sector, NGOs, local government units who are implementing eHealth solutions, and development partners.

## Stakeholder Views and Concerns

### *Strengths of the proposed Telehealth Administrative Order*

Participants identified the strengths of the AO, which include clear and detailed guiding principles, implementing mechanisms, and definition of terms (although, these have been tapered down in the final AO and details are relegated to the implementing rules). Participants were satisfied that there is enough evidence that telemedicine is ready for use in the Philippines and this "should encourage funding". The focus on GIDA, essential in reaching the poorest and underserved populations, is laudable, and a needed step to ensure equity in health. Yet, telehealth and modern information systems, in general, should also be available even in non-GIDA communities, and eventually be standard to healthcare delivery in the country. Stakeholder representation, including patients and the private sector, is important and central to successful implementation. Nonetheless, the role of the eventual Telehealth Steering Committee need to be further defined particularly on how it relates to stakeholders. A choice between a centralized or devolved approach of implementation must be made. The local government units (LGUs) should be encouraged to adopt the AO as a local ordinance.

### *Effects of the proposed Telehealth Administrative Order*

Telehealth for the country is unanimously deemed timely, although impeded mainly by poor infrastructure in the countryside. Perceived positive effects of the NTSP AO on the country's health care system are myriad: more patients with complex conditions are expected to receive more immediate attention in health facilities near where they live; faster diagnosis for patients can be attained. Patients will be more confident as the "best" consultants are reachable "at the palm of your hand". This is thus expected to strengthen the referral system, widen the coverage of service delivery, and, eventually result in better patient outcomes. More physicians, not only the DOH Doctors to the Barrios, will be encouraged to work in GIDA as they will be linked with hospitals or tertiary medical centers and supported through the use of ICT tools. Connectivity would mean there will be "no more one-way referrals", health practitioners expect that learning from each other can be more of a reality. Information on services delivered in the front lines will be made more available to various stakeholders.

**Table 2.** Summary: Stakeholder views and recommendations on the NTSP Administrative Order

| | Themes / Salient Points raised on the Telehealth AO | Stakeholder comments/ details and particulars | Recommendations |
|---|---|---|---|
| 1 | **Rationale of NTSP** | ▪ Affirmed the value of telehealth in the country;<br>Acknowledged rapid expansion in the recent year's scope (geographic area, providers, implementers and technology options) warrant a national policy framework for guidance of all | Pursue the policy on Telehealth through this AO |
| 2 | *The intent of telehealth: use of more timeless term vs a political "tagline"* | Use of the term *Kalusugan Pangkalahatan* vs universal health care, the latter is viewed to be more generic and timeless, not tied with strategy adopted by present administration | DOH NTSP Project Management Committee decided to use KP |
| 3 | **Scope: Target Community/ Population** | ▪ Some suggested that the language be "open" – that telehealth is not only for the poor and GIDA<br>▪ Affirmed emphasis be given to GIDA, and the poor who do experience good health<br>Expect that telehealth and modern information systems will be typical features of the country's health care system in the future | The final draft AO cites directions for the entire health sector involved in telehealth |
| 4 | *Involvement of medical experts* | ▪ Agreement that medical experts need to be adequately compensated in a telemedicine / telehealth transaction<br>Participants view the | Health providers to be systematically engaged for telehealth specially for GIDA; compensation is discussed below (section on Financing) |
| 5 | *Telehealth as a public good* | The regional approach in implementing the NTSP Project introduced telehealth for GIDA as a public good (thus the fee-for-service model is ill-fitted) – all health providers (referring physicians and clinical experts) can be provided a standard fee to attend to all patients who may need clinical referral | Preserve the concept of T*elehealth as a public good* in the operations of the NTSP as well as its financing |
| 6 | **Implementing mechanisms:**<br>*Needed are improvements in telehealth, i.e. NTSP Project, that recognize local conditions and support more localized strategies* | Telehealth can be incorporated into the service delivery network the DOH and local governments should organize; funds thereof incorporated into the budget of the DOH Regional Hospital specially for the specialists | Align the NTSP and embed telehealth into the local service delivery networks,<br>▪ Enculturation of the telehealth system<br>Choice of priority implementation sites should be better informed by better knowledge and conditions of the locale, the natural referral process, and with special consideration for indigenous peoples |
| 7 | I**mplementing mechanisms – Governance**<br>*Convergence of efforts targeting the poor* | Need for convergence of initiatives specially at the municipal level for efforts directed at the poor | Governance mechanisms have to be in place to ensure integration at (national and) local levels of efforts with similar objectives |
| 8 | **Implementing mechanisms – Governance** *infrastructure development in GIDA* | Telehealth as an additional impetus for national government to improve ASAP infrastructure in GIDA – electricity, telecommunications and internet connectivity | Pursue advocacy on this, continue engagement of other sectors, elevate the concern to DOH and DOST leadership |
| 9 | **Implementing mechanisms – Governance**<br>*Extracting best practices from telehealth initiatives as input to technologies that will be scaled nationwide* | Harmonizing efforts and ensuring no duplication of electronic information systems<br>four DOH-funded telehealth or mHealth systems were in place or being developed other than the NTSP R4Health system; three are maternal and child health related | ▪ Need for governance of electronic information systems being developed for the health sector<br>Need to extract lessons from all three DOH funded mHealth, MCH-related, field-based reporting systems before any of this is scaled: R4Health, WOMB and MNDRS |
| 10 | I**mplementing mechanisms – Governance**<br>*Representation by key stakeholders* | ▪ Patient groups must be represented<br>Local government units are primary health providers, implementers and managers of telehealth; they should be represented likewise | Ensure views of various stakeholders, i.e. patient groups of various socioeconomic strata are represented in governance bodies<br>Local governments must have key roles in telehealth design and implementation |
| 11 | **Implementing mechanisms –**<br>*Concern for patient privacy* | Affirm that the AO should be in consonance with the Data Privacy Act, and that security of digital health information systems, including telehealth should protect patient's rights to privacy | Continue and have more discussions on the Data Privacy Act and how this affects health care delivery |
| 12 | *Review of relevant laws* | Need to review relevant related laws such as the Philippine Medical Act of 1959, which does not include telehealth | ▪ Continue review of existing laws and policies relevant to eHealth and telehealth → to revise existing or enact new ones<br>Pursue discussions on the Telehealth Bill |

| | | | |
|---|---|---|---|
| 13 | *Doctor-to non-physician or Doctor-to-patient teleconsultations* | Current NTSP clinical specialists are reluctant to address referrals from non-physician health providers or directly from patients –<br>▪ adherence to the existing Medical Act<br>▪ reluctance because of unclear responsibilities in addressing referrals from non-physician health providers or directly from patients<br>This model has to change, considering the following<br>• Private sector initiatives on telehealth already link patients directly with doctors<br>• Telehealth must be specifically declared "a compensable benefit"<br>Some GIDA are / remain doctor-less, only nurses or midwives are available to address community health concerns, thus these providers need better support | For further evaluation, as part of review of existing laws, and pursuit of discussions on the Telehealth Bill in Congress |
| 14 | **Implementing mechanisms – Capacity building** | Clinical specialists raised the need to train more (clinical specialists and referring physicians) as the NTSP expands | NTS Program should ensure a mechanism for continuous training and accreditation of Clinical Specialists as well as Referring Physicians. |
| 15 | **Implementing mechanisms – Funding Telehealth**<br>*Financing through PhilHealth* | Telemedicine and technologies for health care specially for remote communities are cited in Section 10 of RA 9241, updated PhilHealth law<br>The law "sound vague" | Lobby for specific Telehealth package to be funded through the PhilHealth (as specified in Section 10 of RA 9241, updated PhilHealth Law) |
| 16 | **Implementing mechanisms – Funding Telehealth**<br>*Telehealth as a public good vs fee-for-service compensation scheme* | Telehealth as a public good<br>▪ Telehealth AO is intended to improve access of GIDA communities to specialists<br>▪ RA 9241 empowers local government to use "capitation funds for information technology"<br>Telehealth in the private sector: must be specifically declared "a compensable benefit" | Further studies needed since current modality of PhilHealth is fee-for-service, except for the capitation or primary care benefit package |

The NTSP Project, and discussions on its sustainability through policy development has facilitated discussions on how the practice of medicine in the Philippines should evolve in order to ensure true *Health for All* – true equity in health care is achieved. Telehealth to reach GIDA should thus be another impetus for government to improve the country's current ICT infrastructure, with or without investments from the private sector.

Patient information encoded and exchanged in digital format is not without concern, however. The AO should thus assure the privacy of patients with measures on information security in place, and accountability of stakeholders and liabilities are spelled out. The process of training, accreditation and regulation of practitioners shall have to be defined, and ethical - legal considerations elucidated.

Among concerns raised during the four public fora, three related papers have been developed for publication: the legal framework for telemedicine, ethical consideration for telehealth practice, and financing options for telehealth in the country. The outcomes of Telemedicine and R4Health components of the NTSP Project are also described in separate documents also submitted for publication.

Specific stakeholder views and interests raised in the public fora are discussed in more detail below, following the sections of the final draft of the Telehealth AO. (Table 1)

**Rationale of the AO**

Participants were all in agreement regarding the value of telehealth in the country; its rapid expansion in the recent years in terms of geographic scope, players and technology options, warrant a national policy framework to guide its growth and implementation.

***Improving access***

Participants affirm that telehealth for GIDA should be sustained: the government has the primary role to ensure that communities in difficult circumstances have access to health services they deserve. While some discussants expressed exasperation with the slow progress in improving infrastructure in the countryside, everybody agreed that the telehealth policy proposed is timely. The NTSP Project and other telehealth experiences outside the country are sufficient to promote telehealth in an archipelagic country such as the Philippines.

***What's in a name: Kalusugan Pangkalahatan or Universal Health Care***

Representatives of the Central DOH Office raised two contrasting views about the use of the current DOH leadership's strategy, *Kalusugan Pangkalahatan (KP).* A counter proposal was simply to use the term *Universal Health Care* (UHC), deemed to be a more generic term, more general and timeless, less political and applicable across changes in leadership. This was considered, but the DOH NTSP PMC decided to use KP in the final form of the draft AO. Policy making is not executed in a vacuum; after all, the campaign for telehealth to achieve KP or UHC within the DOH was spearheaded by the current leadership, which is also expected to enact the proposed AO.

**Table 3.** Points of convergence and divergence in stakeholder views on the Telehealth Administrative Order

| | Themes / Salient Points raised on the Telehealth AO | Points of Divergence | Points of Convergence | How Issues were Resolved in the final policy | Final Provision in the Policy |
|---|---|---|---|---|---|
| 1 | Rationale of NTSP | None raised by the stakeholders | Address inequity in access to health care specially in GIDA | Acknowledged comment, and incorporated – see Section I Introduction, II Objectives, V Guiding Principles 1, 2 and 3 | Section I Introduction, II Objectives, V Guiding Principles 1, 2 and 3 |
| 2 | *The intent of telehealth: use of more timeless term vs a "political tagline"* | *Use of more timeless term (Universal Health Care) vs a "political tagline" (Kalusugan Pangkalahatan* – the strategy of current Administration) | Universal health care as a concept and goal is clear and accepted by all | 'Kalusugan Pangkalahatan' was deemed the term to be adopted, recommended by the DOH Health Policy Development Bureau to the NTSP Project Management Committee | Section I Introduction, II Objectives, V Guiding Principles 1 |
| 3 | Scope: Target Community/ Population | None raised by the stakeholders | GIDA and the poor as bias<br>Entire health sector will be guided by the policy | Affirmed bias for the GIDA but the policy guides the entire health sector | Section I Introduction, II Objectives, V Guiding Principles 1, 2 |
| 4 | *Involvement of medical experts* | None raised by the stakeholders | All health providers in the telehealth system must be compensated | Acknowledged the suggestion, and incorporated – see Section VI-2d. Implementing mechanisms, Development and implementation of capacity building plan for health providers<br>Section VII-3 and 4 Funding: PHIC and LGUs | Section VI-2d. Implementing mechanisms, Development and implementation of capacity building plan for health providers<br>Section VII-3 and 4 Funding: PHIC and LGUs |
| 5 | *Telehealth as a public good* | None raised by the stakeholders | Telehealth as a means to provide access where there is none; it is the government" s responsibility to initiate telehealth for GIDA. It mobilized resources, i.e. regional medical centers and their clinical experts to support respective municipal referring physicians. | Acknowledged the comment/ suggestion, and incorporated – see Section I Introduction, II Objectives, V Guiding Principles 1, 2 and 3 | Section I Introduction, II Objectives, V Guiding Principles 1, 2 and 3 |
| 6 | Implementing mechanisms:<br><br>*Needed are improvements in telehealth, i.e. NTSP Project, that recognize local conditions and support more localized strategies* | None raised by the stakeholders | *Needed are improvements in telehealth, i.e. NTSP Project, that recognize local conditions and support more localized strategies* | *Suggestions / recommendations are noted: incorporate telehealth and strengthen the service delivery network, enculturate telehealth system, build on natural referral system* | Provisions not in final draft AO since these are operational details. These were recommended to be included in the implementing rules and regulations (IRR) instead. |
| 7 | Implementing mechanisms – Governance<br>*Convergence of efforts targeting the poor* | None raised by the stakeholders | *Convergence of efforts targeting the poor at the municipal level* | *Suggestions / recommendations are noted, and incorporated – see Section VI-1b. Implementing mechanisms, composition of the NTS (National Telehealth Services) Steering Committee* | Section VI-1b. Implementing mechanisms, composition of the NTS (National Telehealth Services) Steering Committee |
| 8 | Implementing mechanisms – Governance<br>*Convergence of efforts targeting the poor: infrastructure development in GIDA* | None raised by the stakeholders | *Need to step up efforts in infrastructure development in GIDA* | *Suggestions / recommendations are noted, and incorporated-- see Section VI-2a. Implementing mechanisms, Formulation of telehealth policies, including improvement of current ICT infrastructure* | Section VI-2a. Implementing mechanisms, Formulation of telehealth policies, including improvement of current ICT infrastructure |
| 9 | Implementing mechanisms – Governance<br>*Extracting best practices from telehealth initiatives as input to technologies that will be scaled nationwide* | None raised by the stakeholders | *Extracting best practices from telehealth initiatives as input to technologies that will be scaled nationwide*<br><br>Use of *field mobile health reporting system instead of R4Health* | *Field mobile health reporting system or R4Health, or telemedicine were not specifically cited, but subsumed into the Telehealth Services* | Section VI-2a Implementing mechanisms. Formulation of telehealth policies... monitoring and evaluation, including research and development |

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|---|---|---|---|---|---|
| *10* | Implementing mechanisms – Governance<br><br>*Representation by key stakeholders* | None raised by the stakeholders | *Representation by key stakeholders: patient advocate groups and local governments* | DILG, LPP, LMP AMHOP are cited as members of the proposed Steering Committee<br><br>Patient advocate groups still not included | Section VI-1b. Implementing mechanisms, composition of the NTS (National Telehealth Services) Steering Committee |
| *11* | Implementing mechanisms – *Concern for patient privacy* | None raised by the stakeholders | *Concern for patient privacy and need to learn more how the Data Privacy Act impacts on health care* | *Suggestions / recommendations are noted: more discussions on how the Data Privacy Act impacts on health care* | Section V-5 Guiding principle.. ensure compliance with the Data Privacy Act |
| 12 | *Review of relevant laws* | None raised by the stakeholders | *The Philippine Medical Act needs to be reviewed in the light of developments in technology and practice* | *Suggestions / recommendations are noted – see Section VI-2a Implementing mechanisms. Formulation of telehealth policies... including research and development* | Section VI-2a Implementing mechanisms. Formulation of telehealth policies... including research and development |
| 13 | *Doctor-to non-physician or Doctor-to-patient teleconsultations* | None raised by the stakeholders | *Doctor-to non-physician or Doctor-to-patient teleconsultations* | *Suggestions / recommendations are noted: review of laws and policies see Section VI-2a Implementing mechanisms. Formulation of telehealth policies... including research and development* | Section VI-2a Implementing mechanisms. Formulation of telehealth policies... including research and development |
| 14 | Implementing mechanisms – Capacity building | None raised by the stakeholders | *Need* to ensure capacity building for younger professionals as well as those already in the clinics | *Suggestions / recommendations are noted: targeted are pre-service and in-service health professionals – see Section VI-2d. Implementing mechanisms, Development and implementation of capacity building plan for health providers* | Section VI-2d. Implementing mechanisms, Development and implementation of capacity building plan for health providers |
| 15 | Implementing mechanisms – *Financing through PhilHealth* | None raised by the stakeholders | *Financing through PhilHealth* | *Suggestions / recommendations are noted: develop specific PhilHealth benefit package – see Section VII-3 and 4 Funding: PHIC and LGUs* | Section VII-3 and 4 Funding: PHIC and LGUs |
| 16 | Implementing mechanisms – Funding Telehealth<br><br>*Telehealth as a public good vs fee-for-service compensation scheme* | Current clinical specialists in the NTSP recommend a standard rate rather than fee-for-service to allow access to telehealth services to all.<br>Some private sector telehealth initiatives use the fee-for-service scheme. | Medical expertise must be compensated | *Suggestions / recommendations are noted: study further and develop specific PhilHealth benefit package* | Section VII-3 Funding: PHIC<br><br>Section VI-2a Implementing mechanisms. Formulation of telehealth policies... including research and development |

The advocacy for UHC/ KP is not new; DOH is tasked to fulfill the State's constitutional mandate to 'protect and promote the right to health of all Filipinos'.[6] In 1978, the Philippines became a signatory to the World Health Assembly's Alma Ata Declaration for *Health for All*. Social health insurance coverage was incorporated into the concept of UHC beginning the year 2000, through the *Health Passport Initiative* (where universal social health insurance within a geographic area was among critical targets); this was expected to scale nationwide. This current administration's health platform is UHC for all Filipinos or *Kalusugan Pangkalahata*n. The term translates into the local language UHC and was envisioned to make the concept better understood, thus more relevant to the populace, and not only the health technocrats.

**Scope and target community**

The proposed AO is intended for "the entire health sector involved in the development and implementation of telehealth services in the country".

Some stakeholders suggested that the language of the policy be more 'open', underscoring that benefits of telehealth are intended for all, not just the poor. Across all four consultations, this aspect of target population / community was most discussed. There were two points agreed on thus: first, participants deem that telehealth and ICT-enabled health information systems should eventually become standard features of quality health care in the country, regardless of locale or payor for the health services.

Second, that bias for the poor be rightfully emphasized. The preference for ensuring access of GIDA to telehealth is stated in clearly in the rationale and guiding principles in the final draft AO. Consequent to the discussion on GIDA are issues about ensuring continued participation of clinical experts, convergence of similar efforts of various national government agencies through better governance. The concern for improving ICT infrastructure specially in GIDA is identified to be cross-cutting.

***Engaging medical specialists***

38 clinical specialists involved in the recent NTSP Project receive a modest research honorarium to respond to teleconsults from the participating referring physicians. Stakeholders in the public fora, agreed, however, that expert advice must be adequately compensated after this research phase, as telehealth/ telemedicine becomes a standard health care modality. Thus, retaining and engaging more clinical specialists to participate in NTSP is a task that the proposed AO seeks to institutionalize.

There are varied levels of sensitization, openness to and actual practice of telehealth among medical experts in the Philippines. Medical specialists in the Philippines are essentially hospital-based clinicians in urban centers; a substantial part of their professional lives is spent serving in the private sector. On one hand, some feel that telehealth for GIDA to be irrelevant since most private hospitals do not serve the GIDA populations.[7] Yet, on the other, medical experts who have busy schedules also as private practitioners, serve in large government hospitals and choose to be involved in the NTSP. A large private hospital in Metro Manila with a string of primary care clinics in shopping malls in the country is systematically evaluating how telemedicine can be implemented efficaciously and with efficiency in their defined network of clinicians[8]; some telehealth initiatives by the private sector have been launched.

Because telehealth as a modality of health care is still an emerging practice in the Philippines, the campaign for telehealth and telemedicine especially for GIDA had to be led by government whose mandate is to serve all, especially the poor: i.e. government hospitals and rural remote communities where government is essentially the only health provider. For the NTSP clinical specialists, telehealth presents another way to serve remote communities. In the developed world, telemedicine has become among typical modes of health care with incentives for providers woven into the health insurance program.[9] For instance, specialists who serve Canada's First Nations (indigenous peoples of Canada) receive specific professional fees in addition to what they receive in a typical face-to-face clinical consult (K. Waite, Ontario Telemedicine Network, personal communication, May 2015). On that note, Filipino medical experts who elect to serve our GIDA through telehealth should also be systematically engaged beyond the volunteerism and research-mode of the current NTSP project.

***A Regional Approach to Telehealth and Local Service Delivery Networks***

The DOH pointed out that telehealth services should eventually be considered to be part of the local service delivery network; conversely, this should also be regarded as a means to institutionalize telehealth.[10] During this NTSP Project, teleconsultations for GIDA communities expanded through a regional approach. Aside from 196 DOH DTTBs, municipal health officers serving priority 193 GIDA municipalities were trained and enrolled in the NTSP telemedicine system. These priority towns would be supported by their respective regional clinical specialists: seven from Eastern Visayas Regional Medical Center and eight from the Baguio General Hospital & Medical Center.[11] The clinical experts, employed by these government hospitals, expressed openness and volunteered for the NTSP. They thought it would be beneficial to "locals (the patients in the region), and the local doctors".[10] These affirm what the DOH leadership envisioned stronger regional centers at crux of the health service delivery network, i.e. regional experts can best serve their locale because of their familiarity with local traditions and conditions, and proximity to the target municipalities. Telereferral can facilitate transfer of care of patients with more complex conditions to a physically accessible and equipped health facility in the region.

The service delivery network (SDN) is defined in the Responsible Parenthood and Reproductive Health Act of 2012 as "the network of health facilities and providers within the province- or city-wide health system, offering core packages of health care services in an integrated and coordinated manner." SDNs should be established and organized by local government units (LGUs) in coordination with DOH to effectively deliver *reproductive* health care services to priority populations.[12] However, the NTSP Project sprung from telemedicine to help rural physicians with *all* their clinical dilemmas, and not necessarily focused on obstetric or reproductive health concerns alone. Because of the country's campaign to step up maternal and child health (MCH), NTSP expanded to encompass a field-based and mHealth-based reporting system (R4Health) as a mechanism to track the poor's use of routine MCH services. Because both the NTSP and SDN were still at its incipient stages when the proposed telehealth AO was being discussed, the next phase of the Project should deliberately weave telemedicine seamlessly into the SDN to improve MCH services, and, when needed, substantiate the teleconsults or telereferrals by patient data collected from the mothers using the R4Health. Likewise, the concept of SDN should also expand beyond MCH, and facilitate timely referral of *any* complex case to better equipped and physically more accessible health facility.

***The need to converge government efforts at the municipal and national level***

Representatives of the Department of Social Welfare and Development (DSWD) and the National Anti-Poverty Commission (NAPC) recognized opportunities for synergy with their efforts in leading the Conditional Cash Transfer (CCT) Program. Both R4Health component of the NTSP and

CCT specially target the same poorest quintile, who are also at greatest risk of poor maternal and child health. Data from the R4Health, they deem, is useful also to the DSWD and NAPC. Further, if the R4Health reporting system is already established at the front lines, this can be the same platform for additional data sets these agencies can use. Participants of this 1st consultative forum assert that convergence of efforts especially at the municipal level is important so as to efficiently manage multiple efforts which have similar objectives.

Likewise, national level efforts to integrate approaches is also necessary. The Philippine President's Cabinet is organized into clusters and both the DSWD and DOH are part of the Human Development and Poverty Reduction Cluster. Suggested at both municipal and national levels is a forum where innovations in various sectors are presented, lessons are extracted, cross pollinate with each other and develop whole-of-government strategies to be implemented at a larger scale. (Table 3)

***The need to generate evidence from telehealth initiatives, determining best practices of what can and should be scaled***

During the first two public discussions, representatives of various units of the Central DOH office wanted to be assured that NTSP is distinct but in harmony with other existing DOH Programs. Of particular concern was the R4Health mobile reporting system which collects and reports data sets of DOH programs while there are concurrent DOH efforts in developing similar electronic information systems.

When the NTSP Project began in 2011, the DOH already had 66 electronically-enabled information systems in the DOH which are either already deployed and used, many are still under development. 22 electronic information systems are on the delivery of health services and disease surveillance. Of the latter, four are of interest because they are eHealth and mHealth modalities and/or supply the data for indicators that R4H collects and monitors. Surveillance in Post-Extreme Emergency and Disaster (SPEED) is mHealth and used by RHUs to report notifiable diseases during emergencies, epidemics, or disasters – data sets that are not MCH-specific. It uses free text with designated codes, and thus any phone can be used. SPEED is implemented nationwide but used only when disasters occur. SPEED reports are aggregated data on possible infectious disease outbreaks in the evacuation center or the affected town. The eFHSIS is a web-based software program where aggregated data of RHU services, including MCH services, are submitted monthly to the DOH. The DOH began to provide computers to all RHUs nationwide beginning 2011 to encourage the use of the eFHSIS. R4Health collects patient-level data daily, and should be used at point-of-care as health workers render routine health care. It aggregates these clinical data and displays aggregate information in a web-based dashboard. R4Health uses forms run on an Android operating system; the phones are provided by the Project.

In 2012, two mHealth applications, collecting patient-level and MCH-related data were under development. Project Watching Over Mothers and Babies (WOMB) will be implemented in Mindoro Occidental and funded by the eGov Fund, and implemented in collaboration with the PhilHealth and DSWD. In the same year, the Maternal and Neonatal Death Reporting System (MNDRS) was to be implemented in selected sites in Metro Manila and Region 4. Both WOMB and MNDRS were still under development and have yet to be deployed as of September 2012, when the first consultative forum on the telehealth AO was held. In contrast R4Health was deployed to 33 towns in August 2012 and covered up to 246 towns by May 2013; the bulk of sites were trained in November-December 2012 when DOH funds were released and began implementing R4Health.

The NTSP's R4Health, WOMB, and the MNDRS monitor maternal and child health-related data using mobile phones, although geographic implementation sites are different. Once these applications are field tested, comparison of these should be made to maximize lessons; consideration for scaling any of these systems should incorporate best features of these three systems. The concerns for duplication of efforts and waste of resources calls for a clearing house where innovations that have shown efficacy are subjected to further evaluation as steps towards wide scale adoption.

Suggested further by DOH representatives is the use of a more generic term such as *mobile field health reporting system*, instead of R4Health**.** The AO would thus encompass development and regulation of other existing and future mHealth applications.

***Improvements in Telehealth are needed with better localized solutions***

Participants recommend the more locally-focused solutions: first, that telehealth / telemedicine be deliberately linked with the emerging concept of local service delivery networks.[13] The current telehealth system also has to be enhanced to support the 'natural flow'[10] of clinical referral: it should consider the intangible trust system central to the referral process and thus involve both the government and private clinical specialists to whom primary care doctors entrust their patients to.[14] Equally, if not more important is the patients' preference based on geographic access, affordability of services, and advice of their primary doctor. Telehealth, as with conventional health services, should also be more deeply enculturated, warned by the National Commission on Indigenous People (NCIP), informed by deeper appreciation of the culture of health, wellness and help-seeking of target indigenous people's communities. It is recommended that NTSP be implemented in Mindanao,

where the IP face more challenges contributing to their continuing marginalization. Indigenous peoples perceive health and death as a communal experience and a community good, thus financing should not be transactional and fee-for-service.[15] Stronger collaboration with NCIP should be pursued in all aspects of the NTSP, including choice of priority communities, financing, and policy development.[9]

*Improving the national ICT infrastructure*

Telehealth for GIDA is brought to fore the agreement that the government still has the major role in providing the last mile infrastructure for connectivity especially in countryside. At present time, the private sector deems it not yet profitable to invest in; government has to create that enabling environment for others to bring business into the GIDA. Similarly, health is not the sole driver for improving connectivity in the communities; education and other social services would similarly benefit from this.

**Governance and management of the NTSP**

Highlighted through these various consultations is the need of a governance structure to direct and manage how eHealth is unfolding to support health objectives of the country. Finalized by the DOH NTSP PMC, the draft of the AO defined the Steering Committee to consist of 20 organizations. Along with the DOST, DOH leads and is represented by 10 central offices, including the PhilHealth. Two other national government agencies, the UP Manila (NTHC), organizations of local government officials, medical organizations and the private sector complete the national governance body. A Technical Committee is proposed to provide support.

Across the four consultative fora, no issues were raised about the composition of the governance group. However, having a 20-person Steering Committee – with 10 representatives coming from various units of the DOH – is unwieldy. The various DOH offices are best to be part of the Technical Committee.

The roles of patient groups, the private sector, and local governments were highlighted in all four public consultations, however.

*Patient groups*

Suggested staunchly in two of four events was the addition of patient or patient advocate organizations. As with the NCIP, emphasis was made about representing strongly the values and experience of population groups of various socioeconomic strata. Indeed, the subjects of development should not be regarded as mere passive recipients but be central actors in determining their future. Whereas the NCIP and academe spoke on their behalf, the voices of patients and GIDA communities should be heard throughout NTSP policy formulation and implementation; policymakers have the responsibility to make the interests of the marginalized a priority.[19]

Yet despite these assertions, the final draft AO still did not cite patient groups to be part of the governance organization. While this omission should be rectified the soonest possible time, this is not unexpected. Patients who have been involved in or used eHealth are not organized per se. What exists are patients having the same disease conditions assemble into support groups such as the Bosom Buddies for breast cancer survivors, the Autism Society of the Philippines, Pinoy Plus Association for people living with HIV-AIDS, or Alcoholics Anonymous. Little is known about the current use of telehealth or any eHealth technology among organized patient groups. The participants in the telehealth AO consultative meetings did not cite any patient association who can be engaged. This advocacy to include more deliberately patient groups in telehealth/ eHealth policy discussions need to be stepped up further.

*The private sector*

The private sector is represented in these four consultations, thus their role is discussed in all occasions. It has been supportive of the developments in eHealth in the country, shaping policy discussions in at least the last five years. With its expertise in industrial management, ICT and IT management and capacity building, they formed the core of the expanded ICT4HTWG. Whereas the private medical practitioners (who provide the clinical expertise) is represented by the Philippine Medical Association in the proposed NTSP Steering Committee, two other seats for the private sector have been allotted. This sector is broadly represented nursing practitioners (who can be health tele-educators) and other health professionals (such as counselors, psychologists), health facility / hospital owners, telecommunications companies, eHealth device manufacturing industry, electronic medical records providers, information security consultants, business processing industry in health, and the ICT industry, in general. While the question was posed specially in the private sector-dominated 4$^{th}$ consultative meeting, there was no specific suggestion as to which particular groups should be the two official representatives to the national governance body.[9]

*Local government*

Participants from national government agencies and the academe underscored the role of the local governments in as much as they provide financial and administrative control over public primary care health services, field services for national health programs and provincial / city/ emergency municipal hospital operations. Whereas in the first year of the NTSP Project, DOH was able to exercise its mandate by obliging its two regional hospitals to participate, telehealth systems should also be developed to support the local

referral system between municipals and district/ provincial hospitals. The latter are physically and geographically closer to where patients live. Policy design and implementation as to how LGUs will be specifically enjoined to invest in telemedicine should be studied. A good analysis of cost of telehealth/ telemedicine per patient (or per constituent), and local government spending, administration and management styles towards program sustainability should be part of the early years of defining the NTSP. The LGUs should be encouraged to adopt the AO as an ordinance.

The LGUs are represented in the proposed telehealth Steering Committee: representatives of the associations of municipal physicians, municipal mayors, and provincial governors, as well as the Department of Interior and Local Government.

**Mandate of the proposed Steering Committee**

The Steering Committee mandate is policy design and creating the structures to implement such policies (Box 4). Two concerns were raised in the consultations: patient privacy and capacity building of those involved in telehealth.

***Patient Privacy***

There is agreement about the need to regulate eHealth and define accountabilities. Most imminent in the minds of participants across all fora is the concern for patient privacy and confidentiality of patient information in the increasingly digitized health care environment. The concern is acknowledged; the final form of the draft AO, Section V-Guiding Principle #5: *The National Telehealth Services shall ensure compliance to the Data Privacy Act of the country to protect the privacy of the persons and confidentiality of the patient's information.*

The Data Privacy Act of 2012[16] was not discussed in the forum but was cited within the proposed AO to guide telehealth services. Some significant provisions of the law of relevance are procedures to be followed in the collection, processing and handling of personal information. The law outlines the rights of *data subjects* – in health care, these are the patients whose medical information is documented and potentially, processed and exchanged. The law requires information collectors (doctors, other health providers), holders (health facilities, IT service providers) and processors (the government, local leaders, academe and researchers, and others, including personnel in health facilities who prepare aggregated reports, as well as encoders who transcribe handwritten patient records created by the clinicians at the point of care into electronic form, IT service providers) to follow strict rules on "transparency, legitimacy and proportionality in the conduct of their activities." Once gathered, the information can be processed or used only if it is not prohibited by law and the person who provided the information (or data subject/ patient) has given his consent. The law states exceptions, however, should patient consent be not available nor given, such as "to protect the data subject's vital interests, such as life and health; to respond to the exigencies of a national emergency or public order and security." The law specifies violations that punishable by fines (minimum of P500,000 and a maximum of P2,000,000) and prison terms.[14]

The current NTSP Project digitizes patient information; collection, processing, storage, exchange and destruction necessarily require methods different from what is currently and largely a paper-based and manual manner of patient information management. It trains implementers on the ethics of patient information management and ethical use of telehealth tools. Reminders were made to the health providers of their responsibility seeking patient consent in making, keeping, and managing patient records to develop reports for the DOH and PhilHealth. The Project provided the participants sample forms on patient consent on teleconsultation as well as digital management of patient information – collection, processing and display of de-identified data in a dashboard (especially for the R4Health component). Each health facility also received signage for display to inform patients on telehealth and data management through R4Health. These operational details – queries of which were also raised during the public fora – are described in a separate operations manual on the NTSP. While these were included initial drafts of the AO, these were stricken out of the final one to conform with the general format of an AO.

Participants were unanimous in recommending that discussions continue about the law and how it impacts on eHealth / telehealth. Awareness of provisions of the Data Privacy Act on the responsibilities of health providers and data managers, among others is still low during September 2012 to March 2014 consultation period. The law warrants broad awareness building and special training for health professionals and institutions, as well as other IT providers who handle sensitive patient information. It requires institutional evaluation and specific organizational policy changes to ensure the law is upheld, patients' rights are protected and promoted. It is acknowledged that there is expertise in the private sector in managing data and information security. Consideration for the United States' Health Insurance Portability and Accountability Act was specifically raised, and evaluation of the applicability of certain provisions in the Philippines. However, to date, the National Privacy Commission has not been convened, and Implementing Rules and Regulations have not been articulated. The health sector will have to lobby more strongly about the urgency of this to protect both patients and health professionals, and the increasing number of stakeholders involved in digital health who have to manage sensitive patient information on a daily basis.

***Need for review of relevant laws related to telehealth: the Philippine Medical Act***

Participants expressed the need to evaluate current laws and policies relevant to telehealth. Of particular concern is the Philippine Medical Act of 1959 which describes physical examination of the patient as an attribute of practice of medicine. By this definition, in the current context of the NTSP project, there is no patient-doctor relationship between the clinical specialist and the remote patient whose case is presented by the referring physician. It assured the clinical specialists that there is an accountable physician in the telehealth instance – the one directly examining and attending to the patient, i.e. the referring doctor. The NTSP clinical specialists are reluctant to address teleconsults that emanate from other health professionals such as the RHU nurses or midwives at this point of the NTSP. The specialists feel that this is a difficult situation: even if they are the more knowledgeable clinician, they cannot be accountable for the care of the patient because the circumstances do not allow them to extract a more complete history and physically examine directly the patient.

Nevertheless, the current teleconsultation system is limited and will have to mature further for telehealth to be truly be useful in GIDA, including in doctor-less sites, where a nurse or midwife might be the only health professional serving the community, and thus would need support much more. Relevant laws and policies will have to be reviewed, revised or enacted in order to ensure services reach all, specifically through telehealth.

***Ensuring building capacities in telehealth***

The draft AO cites ensuring building capacities on telehealth as a mandate of the Steering Committee. (Box 5) The NTSP needs to engage and train more telemedicine clinical specialists as more regions and municipalities are covered when NTSP expands. Referring physicians including the DOH Doctors to the Barrios (DTTB) who serve in GIDA municipalities also need to be trained as they enter the DTTB program. DTTBs have a finite two-year contract of service; majority move on to other hospital or public health responsibilities after the DTTB program. They leave these GIDA towns doctor-less again, although many posts are filled anew by incoming DTTBs.

Not at all directly mentioned in any of the four consultations, however, is about capacity building on ethical management of electronically managed health information on routine health services, such as through the mHealth-based R4Health component of the Project. In an increasingly electronic environment of health care, health providers have to learn not only about the use of new ICTs but also learn new processes of keeping secure patient information recorded in digital format. They should be made fully aware and accountable about the consequences of any breach thereof. Currently, these topics are not yet covered in many if not majority of pre-service health professional education institutions throughout the country.

**Funding**

Sustainable financing of the NTSP is raised in all four public fora, a concern across all stakeholders. It should graduate out of its 'project' status and institutionalized as a standard program of the DOH. The first draft AO presented did not explain NTSP financing; this was rectified in subsequent drafts where sources of funding are now specified to come from the DOH, through the Office of the Secretary, and the DOST, and all relevant offices *"for the establishment, development, and implementation of the National Telehealth Services... The PHIC shall develop financing schemes in support of telehealth services... The LGUs shall provide counterpart funds in the implementation of NTS."*

***Financing Telehealth though PhilHealth***

PHIC is the Philippine Health Insurance Corporation which runs the country's national social health insurance program; "PhilHealth" is alternatively used to refer to the PHIC or the insurance program itself. It is a critical player in achieving universal health care. The value of PhilHealth in public health programs is illustrated in two laws: The National Newborn Screening Program and the National Newborn Hearing Screening Program, mandated by Republic Act (RA) 9288 and RA 9709 enacted in 2004 and 2009, respectively. Both laws specify the provision of fees to support operations and professional fees through PhilHealth (Section 16 for Newborn Screening and Section 14 for Newborn Hearing Screening, respectively).

In 2013, the updated PhilHealth Law (RA 9241) was passed amending the National Health Insurance Act of 1995. Of particular interest is Section 10, enhancing the powers and function of the Philippine Health Insurance Corporation: "(w) To endeavor to support the use of technology in the delivery of health care services especially in far flung areas such as, but not limited to, *telemedicine*, *electronic health record,* and the establishment of a comprehensive health database;" and Section 26 where "*.LGUs are empowered to invest their capitation in information technology*." Participants in the consultative fora on the NTSP AO observe that the law, as stated, is vague. But this is not unlike how the other two laws are worded. Proponents of both universal newborn screening and newborn hearing screening had to continue with more discussions to formulate implementing policies to ensure services are financed, a specific PhilHealth benefit package is defined. With the issue of financing clarified, the campaign continues to attain true universal coverage for newborn screening and hearing loss screening among Filipinos especially those living in GIDA. These examples should inform the telehealth / eHealth proponents how to shorten the process of developing implementing guidelines with the PHIC.

On March 15, 2012, the PHIC released a Circular on the Implementing Guidelines for Universal Health Care Primary Care Benefit I (PCB1) Package for Transition Period CY 2012-2013, stipulating: "… an additional incentive of One Hundred Pesos (P100) per family payment rate shall be released to PCB providers that will submit reports required by the Corporation *electronically* and in accordance with the format that will be prescribed." The PHIC is steadily pursuing the move to digital information systems. Thus, reports generated through the R4Health in this NTSP Project could provide additional resources to the RHU, which, in turn can provide resources such as phone credits for R4Health reporting and even the teleconsults to be subsidized. The ability to send almost-real time data on services rendered from the front-line clinics was demonstrated in the NTSP Project; linking this with PhilHealth's payment scheme should be included in the next phase of the NTSP.

***Remunerating Telemedicine / Telehealth Practitioners: A public good vs a fee-for-service financing scheme***

The current *pro-bono* and voluntary engagement of clinical experts is insufficient to sustain and scale up NTSP. The private sector has clamored to "define eHealth – telehealth as a compensable service, to define how this can be compensated in times where there are multiple providers taking care of a case / patient, as well as to declare/ recognize electronic medical records – rather than print outs that should be signed manually – as proof of services rendered"[17].

The fee-for-service financing scheme is the prevailing practice when one avails of health care in a private institution. An alternative perspective was presented during the first consultative forum: i.e. "that of telehealth as a public good. as opposed to a private good, where only those who can pay can avail of the service. Telehealth intends to provide better access to specialists where there are none." A DOH representative from the Health Policy Development Bureau cited resources intended for the Regional Hospital services can be proposed to expand to support regional telemedicine/ telehealth services in the locale. In the case of indigenous peoples, "health is communal", thus discussion of transactional fee-for-service scheme is not consistent with the culture of IPs, and this type of financing scheme is rejected outright. The concept is not limited to the IP communities; interestingly, clinical specialists from UP-Philippine General Hospital agreed and welcomed the proposal about a PhilHealth package for telehealth services, incorporated into the budget for the region or regional hospitals and corresponding LGUs. Through this "both the referring physician and the clinical specialists are paid a standard amount".

**Participatory Democracy**

The consultative process through which this draft AO on telehealth was subjected to deserves deeper evaluation. Ensuring fairly wide representation of interests presumes ownership of the policy and that individuals and organizations will more likely self-regulate once the new policy is in place.[18] Reale posits several questions of relevance: "Who are the social partners and for whom they really speak? Can they guarantee an extensive representation of interests or is the representation via the social partners just an elitist practice? Who has the task of assessing the accountability of social partners and according to which criteria?"[18] These are complex questions which this paper cannot deal with. Suffice it to say that these are considerations for policy formulation and how to ensure they will be best implemented.

As it is, this consultative process was severely limited: the fora were Manila-centric, limited by Project funds, and opportunistic when it rode on other eHealth fora of the DOH and DOST. Glaringly absent in these fora are the patients (or patient advocate groups) who are the (health) data subjects – whose health information is exchanged in the telehealth systems. And more specifically in the NTSP, these are patients in GIDA and thus are marginalized in multiple ways. The NTSP policy is best designed and participation becomes more meaningful when the key stakeholders' views are sought and integrated.[19]

Regular discussions on eHealth and related issues were suggested to be held in order to thresh out identified issues and act on these concerns systematically. Cited are two models of participatory forum is the MeTA, Medicines Transparency Alliance[20], and the ICT4HTWG. The latter took the discussion - rightfully so - to cyberspace and broadened participation beyond those who were named to the official organization. Social media is increasingly being used to ventilate issues; its utility in policy making needs also to be evaluated and tested.

**Summary**

Stakeholders perceive telehealth to be a timely intervention with eventual positive effects on the country's health care. Digital health information systems and telehealth should eventually become standard features of quality health care in the country, regardless of locale or payor for the health services. The consultations affirmed that there should be rightful bias for the poor. Rapid expansion of telehealth solutions in the recent years in terms of geographic scope, players and technology options, has engaged country leaders and especially warrant a national policy framework to guide its growth and implementation. Better governance mechanisms should be in place to ensure alignment of efforts and efficient use of resources. Convergence of efforts especially at the municipal level and national levels is important so as to efficiently manage multiple efforts which have similar objectives directed to the poor.

An oversight in this policy formulation, patient groups and local governments should be represented in the governance body. They are critical stakeholders who should

be primary movers and not mere subjects of development, representing strongly the values and experience of population groups of various cultural suasions and socioeconomic strata.

Throughout the formulation of the telehealth administrative order, other recurrent themes include the extent of involvement of various government agencies especially various DOH offices, concerns on telemedicine and telereferrals, and funding for which sustainability is anchored on. These were thoroughly discussed; some elements would find its way in final form of the Telehealth AO; other details should eventually be fleshed out through its implementing rules and regulations.

The proposed NTSP AO has facilitated discussions on how the practice of medicine in the Philippines should evolve in order to ensure true equity in health care, the avowed call for *Kalusugan Pangkalahatan*. Because telehealth as a modality of health care is still an emerging practice in the Philippines, the campaign for telehealth and telemedicine especially for GIDA is rightfully led by government whose mandate is to serve all, especially the poor. While clinicians must be adequately compensated, telehealth as a public good should be a guiding principle to ensure access to experts for those who have none. Telehealth for GIDA is thus another impetus for government to improve the country's current ICT infrastructure, with or without investments from the private sector.

Patient information encoded and exchanged in digital format is not without worries. The AO should thus assure privacy of patients, measures on information security are in place, the accountability of stakeholders and liabilities are spelled out. The process of training, accreditation and regulation of practitioners shall have to be defined, and ethical - legal considerations elucidated. The NTSP needs to engage and train more telemedicine clinical specialists, referring physicians including the DOH Doctors to the Barrios who serve in GIDA, as well as other health professionals. They, as well as students of health professions, need to be trained on the ethical use of digital solutions as more regions and municipalities are covered when NTSP expands.

## Recommendations

### Governance

Stakeholders recommendations center on stronger governance mechanisms to lead and integrate efforts using digital solutions especially intended for the poor. Local/ municipal and national level efforts to integrate approaches are necessary to ensure economy of human resource or material investments. An *innovation-for-equity* clearing house should be organized as a forum where ICT-based initiatives that have shown evidence to improve access of the poor to basic social services can be discussed and recommended to be mainstreamed and incorporated as policy. Recommended further is expanded representation in governance (i.e. patient groups, communities and local governments). Regular discussions on eHealth and related issues were suggested to be held in order to thresh out identified issues and act on these concerns systematically. (Table 2)

### Capacity building

Engaging and sustaining the involvement of medical experts, referring physicians and health workers who elect to serve especially GIDA can be done through weaving telehealth into the local service delivery network, training and education, as well as remuneration mechanisms that reinforce service, efficiency and equity values. Health providers and administrator, current and future, have to learn not only about the use of new ICTs but also learn new processes of keeping secure patient information recorded in digital format and be made fully aware about the consequences of any breach thereof.

### Design

Improvements in Telehealth are needed with better localized solutions: it has to be more deliberately linked with the emerging concept of local service delivery networks. It should support the natural flow of clinical referral, based on geographic access, trust and anchored on understanding of the cultural contexts of GIDA and providers therein.

### Laws and policies

In the realm of telehealth related laws, participants were unanimous in recommending that discussions continue about the Data Privacy Act. The health sector needs to lobby more strongly about the urgency to convene the Data Privacy Commission and articulation of implementing rules and regulation of the law to protect both patients and health professionals, and the increasing number of stakeholders involved in digital health who manage sensitive patient information on a daily basis. Relevant laws and policies will have to be reviewed, revised or enacted in order to ensure services reach all, through telehealth, including doctor-less sites, where a nurse or midwife might be the only health professional serving the community.

Noted and suggested were the use of more generic terms in the telehealth AO. Policies should be more general, encompassing and timeless, less political and applicable across changes in leadership: thus, suggested are the use of 'universal health care' (in contrast to the current administration's strategy and tagline of *Kalusugan Pangkalahatan*) and 'field mobile health reporting system' rather than R4Health.

### Financing telehealth

The 2013 revised PhilHealth Law (RA 9241) already cites telemedicine as a benefit due all Filipinos. The next step is to lobby in a focused manner to ensure services are financed, a

specific PhilHealth benefit package is defined. Local government and the private sector are enjoined to invest in telehealth. Telehealth should be regarded as a public good in the face of geographic and social challenges that GIDA communities face; this is a fundamental precept put forth to achieve universal health care.

**Improving the national ICT infrastructure**

Better access to health services is a reason why government has to step up its efforts to improve electricity, roads and ICT connectivity. Telehealth should not be seen in isolation of the overall social development efforts.

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**Post Script**

The final form of the Draft Administrative Order, *Institutionalizing National Telehealth Services under the DOH*, was submitted to the DOH NTSP Project Management Committee in April 2014; salient points of the draft AO presented for critique is briefly described in Box 4. The UP NTHC, however, did not pursue its approval nor lobbied for other policy instruments previously cited (the draft Executive Order and the House Bill on Telehealth) in view of the creation of the National eHealth Steering Committee as the national governance body, co-chaired by the Secretaries of the DOH and the DOST. The UP Manila, the PHIC and the Commission on Higher Education complete the Steering Committee. In May 15, 2014, the governance of the NTSP was proposed to be placed under the National eHealth Steering Committee; this was approved. Hence, the draft AO - the output of the NTSP Project – will be presented for consideration for policy action in the future. The Telehealth AO has not been promulgated, but issues identified by stakeholders in this article remain relevant. The draft Telehealth AO is considered in the proposed House Bill 4199 on telehealth presented by proponent Congressman Rogelio Espina (Biliran Province) to the House of Representatives Committee on Health on 2015 January 28.

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