Governance in Primary Care Systems: Experiences and Lessons from Urban, Rural, and Remote Settings in the Philippines

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ABSTRACT

Objectives. Workforce shortages, policy fragmentation, and administrative fragmentation have broadened health inequities in the absence of an effective primary care system in the Philippines. While a central component within the health system, the role of governance in strengthening primary care systems remains underexplored. Therefore, this study aims to: 1) examine governance challenges encountered upon strengthening primary care systems; and 2) provide experience-based recommendations for improving primary care services in the Philippines.

Methods. Data on governance issues were obtained from participant observation and regular meetings facilitated over one year. Conducted across urban, rural, and remote settings, the present study outlines experience-near insights throughout a hierarchy of system implementers—from those in positions of authority to frontline workers. These insights were thematically analyzed and organized following the Health System Dynamics Framework.

Results. This study identified six governance challenges: 1) establishing a health information system; 2) engaging leaders, healthcare staff, and communities; 3) assuring efficient financing; 4) assuring health workforce sufficiency; 5) addressing legal challenges; and 6) planning evaluation and monitoring. To address these challenges, this study forwards systemic solutions to advance effective governance and improve healthcare performance.

Conclusion. A renewed approach to strengthening primary care systems is fundamental to achieving universal healthcare. This entails good governance that develops strategies, equips people with tools for proper implementation, and provides data for evidence-based policies. The experiences outlined in the present study envisions guiding policymakers toward improving health outcomes in a devolved setting.

Keywords: governance, primary care, universal healthcare, health systems, interventions, participant observation

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INTRODUCTION

Background of the Study

In recent decades, the Philippines made significant health gains that have contributed to longer life expectancies.[1] Reforms to expand population coverage have been instituted primarily through the Philippine Health Insurance Corporation (PhilHealth) in 1995.[2-4] While PhilHealth accounts for the largest share of population coverage at 92%

in 2015,[5] financial risk protection and benefit utilization remain limited.[6] The majority of covered services are also hospital-centric.[7] PhilHealth's No Balance Billing policy is designed to protect the poor from excessive spending.[8] Despite this, over 55.8% of health expenditures are still shouldered out-of-pocket.[2] In effect, health equity remains elusive without sufficient outpatient coverage.

In 2019, the Universal Healthcare (UHC) Law was passed to improve health equity through strengthened support for primary care and outpatient services.[9] Under a primary care system, each Filipino is entitled access to a primary care provider (PCP). Four main functions are expected of these PCPs, namely to: 1) provide first-contact care; 2) render comprehensive services; 3) coordinate care across the healthcare provider network (HCPN); and 4) ensure continuity in care over time.[10] Should UHC be successfully implemented, the proposed system can potentially reduce unnecessary consultations, integrate service delivery networks, and provide genuine comprehensive outpatient coverage instead of diagnosis-related groups.

While the passage of UHC has provided momentum for the development of primary care, service expansion has proven to be resource-intensive. As of 2020, the Philippines is far from achieving the optimal density of 4.45 skilled health-care workers per 1,000 population.[11] This chronic deficiency is aggravated by disjointed, funder-driven, disease-centric programs – each demanding independent deliverables.[12] An already overworked and undermanned workforce is expected to respond to local executives as well as multiple program leaders, without sufficient coordination or financing.[12] The result is an inefficient and fragmented system that prevents the unification of a patient's journey.

Strengthening primary care requires adequate funding to support the needed health resources. However, ensuring good governance is equally critical for efficient resource mobilization in the long term.[13] The World Health Organization (WHO) defines governance in health as "the attempts of governments or other actors to steer communities… in the pursuit of health as integral to well-being through both whole-of-government and whole-of-society approaches."[14] Governance significantly impacts healthcare delivery through its role of structuring the whole. The three main functions of health system governance are: 1) to direct and align the system towards overall goals, 2) to regulate and coordinate all parts of the system, and 3) to provide policy guidance and options for steering the system.[10] In the present study, we use these functions to deconstruct our experience of governing a primary care network during a period of innovation across multiple subsystems. These experiences emerged during the pilot implementation of a primary care system in an urban, rural, and remote area in the Philippines.

Study Objectives

The objectives of this paper are to: 1) identify governance challenges encountered during implementation of interventions to strengthen and fund primary care and; 2) provide experience-based recommendations for improving primary care services in urban, rural, and remote settings in the Philippines.

METHODS

Study Sites

The present study was conducted as part of Philippine Primary Care Studies (PPCS), a program aimed at strengthening primary care systems in the country. The study was conducted in an **urban** setting at the University of the Philippines Health Service (UPHS), a **rural** setting in the municipality of Samal in the province of Bataan, and a **remote** setting in the municipality of Bulusan in the province of Sorsogon. UPHS is a 25-bed facility with 12 physicians servicing a population of 31,000. This comprised university-based students and employees as well as residents living within campus. Bataan is a 4th class municipality of 35,298 residents across 14 barangays, whereas Bulusan is classified as a geographically-isolated and disadvantaged area of 22,884 residents from 24 barangays.[15,16] Staffing for both rural and remote sites was limited—with only one municipal health officer, supported by a cadre of nurses, midwives, and barangay health workers (BHWs) at the start of the study.

Study Methods

PPCS initiated the pilot implementation of a comprehensive outpatient benefit package at the urban site in 2016. Following the system implemented at the urban site as a model, PPCS interventions were then introduced to the rural and remote sites in 2019. Over a one-year period for each site, several governance challenges emerged during implementation. The present study examines these challenges and proposes recommendations to address each.

Data on the governance challenges examined in this study were obtained from participant observation and regular meetings facilitated throughout the study period. Conducted across the three study settings, this study reflects the experience-near insights of a hierarchy of system implementers—from those in positions of authority to frontline workers. This included municipal health officers, healthcare workers, administrative staff, system developers, among many others. Observations were documented through minutes and reports consolidated throughout the study period. Data were then thematically analyzed to identify clusters of related problems, solutions, and explanatory or recommendatory insights. Ethics approval was annually obtained from the University of the Philippines Manila Research Ethics Board (UPMREB – 2015-489-01).

Conceptual Framework

The present study used the Health System Dynamics (HSD) Framework for organizing the emergent themes (Figure 1).[17] The HSD Framework re-structures the WHO

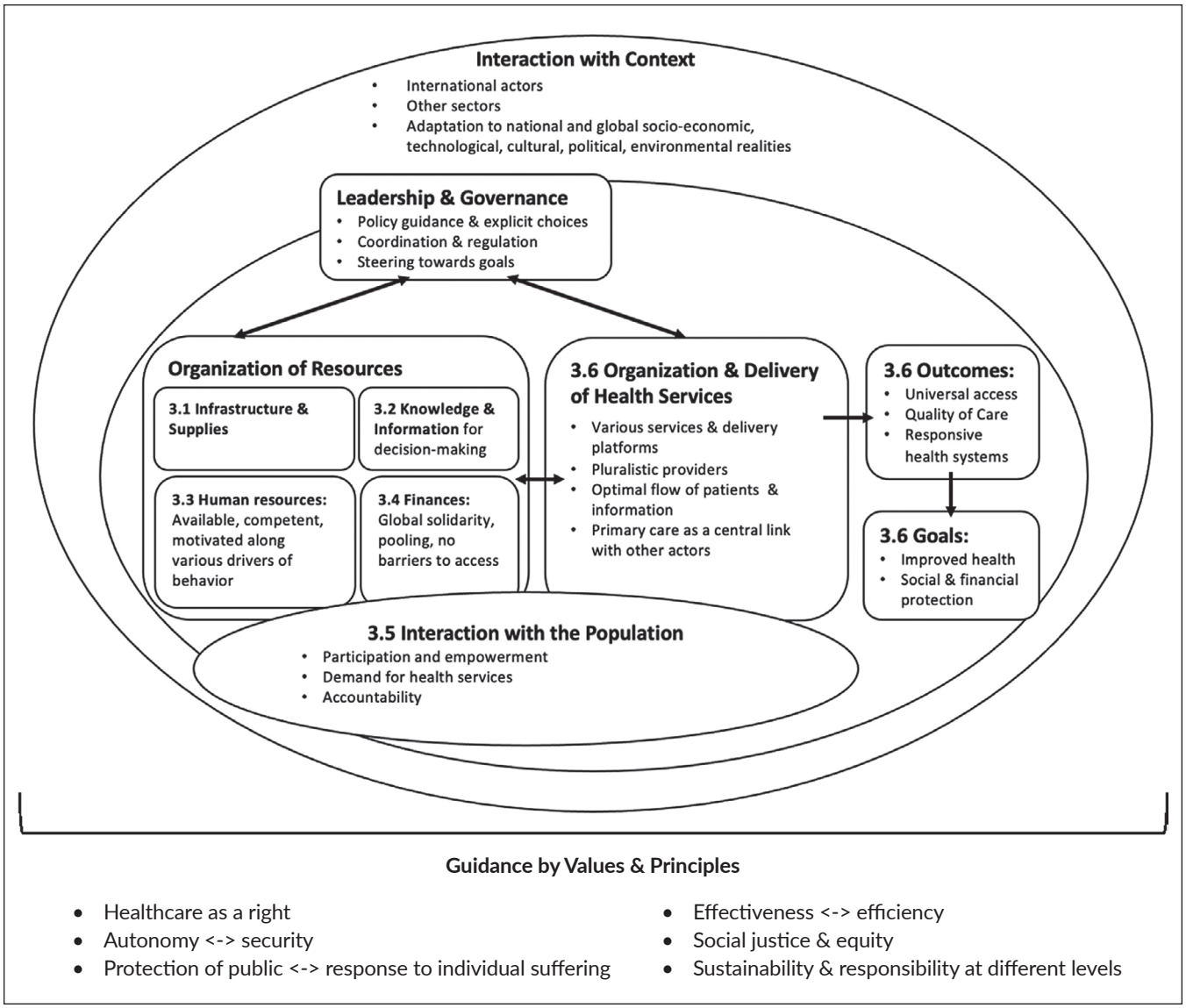

Figure 1. The Health System Dynamics Framework.[17]

health system building blocks relative to one another and within the broader social context, guiding principles, stakeholders, outcomes, and goals. These were emphasized under the headings of Leadership and Governance, Organization of Resources, and Organization and Delivery of Health Services.

The HSD Framework contrasts with the building blocks framework through the inclusion of population participation. In this study, the HSD Framework was used to examine aspects of the health care system through an interdependent lens informed by the overarching influence of leadership and governance. To address the organization of resources, prominent challenges were identified in infrastructure and supplies, knowledge and information for decision making, manpower, and financing. Population interaction was addressed as a separate element. Interventions targeted towards these challenges were then recommended based on experiences at the pilot sites. Furthermore, strategies for monitoring and evaluation were likewise presented to ensure that proposals fulfill the desired outcomes.

RESULTS AND DISCUSSION

Infrastructure and supplies

Good governance is integral to a competitive and transparent public procurement system.[18] In its absence, extensive bureaucracy is likely to discourage private contracting and inhibit the flow of health services.[19] This was observed during implementation. Procurement regulations delayed payments, impeded the delivery of medicines, and inhibited partnerships with private facilities. These issues need to be addressed to encourage collaboration with well-equipped organizations and enterprises.[20]

In the present study, private sector engagement was inevitable given the widespread supply gaps experienced at public facilities. When private laboratory and pharmacy services were finally outsourced in the rural and remote sites, logistic and supply gaps experienced by local government units (LGUs) were alleviated. In addition, supply risks were effectively transferred to private service providers, greatly reducing the workload experienced across rural health units. This experience underscores the need for complementary external support through the engagement of private facilities.

To strengthen private sector engagement, auditors must take an active role in reviewing these partnerships. The Commission on Audit has visitorial authority limited to the audit of the government's contingent liability.[21] However, efficiency could be further improved should the commission permit LGUs or autonomous bodies to independently ensure legal compliance, monitor key performance indicators, and enforce penalties for nonconformity.[22] This can potentially prevent significant delays in budget reporting needed for creating fiscal allocations.[23] Challenges and recommendations drawn to address them are summarized in Table 1.

Table 1. Challenges and recommendations for creating well-established infrastructure and supply chains

Challenges	Recommendations
Procurement systems remain inefficient due to extensive bureaucracy	• LGUs must actively engage the private sector to support the logistical limitations of public healthcare facilities • LGUs must encourage private sector engagement to improve resource supply and service efficiency • Credible third-party agencies must be permitted to independently monitor the health care financial expenditures of LGUs

LGU, Local government unit

Knowledge and information for decision-making

The establishment of an electronic health information system (HIS) was a key feature of the pilot studies. We attempted to address the gaps seen in similar eHealth initiatives by the Department of Health (DOH).[24,25] The HIS included the development of an electronic health record (EHR) system that unified patient records with a laboratory information system, a pharmacy information system, an accounting module, and a database of accredited PCPs. This platform was co-developed with the National Telehealth Center of the University of the Philippines (UP) Manila over one year before implementation in the rural and remote pilot sites.

Beyond structuring service delivery across facilities, a strong HIS can lead to policy interventions that are congruent with patient demographics and behavior.[26] The EHR employed in this study was custom-built based on user expectations and behavior. Consulting with PCPs during EHR development enabled programmers to design an application that supported existing workflows. Nevertheless, the transition from paper to electronic records was met with several concerns. The succeeding sections outline these challenges as experienced across all three study sites. These challenges alongside the recommendations drawn to address them are further summarized in Table 2.

Table 2. Challenges and recommendations for establishing a HIS

Challenges	Recommendations
Resistance to a digitized records system	• Develop an EHR system in collaboration with end-users and following facility workflows • Automate routine tasks such as censuses and reports to incentivize the use of the EHR • Regularly train facility staff to prevent the need for third-party encoders • Link payments to regulatory measures such as the use of the ICD-10, PNDF, and DPRI
Ambiguous facility workflow	• Design an EHR system suitable for the facility workflows; shared decision-making should be encouraged between developers and users • Address misconceptions to improve EHR acceptance
Duplication of medical records	• Develop biometric identification systems to limit record duplication
Responsiveness to EHR troubleshooting concerns	• Outsource IT development to ensure efficient debugging, development, and maintenance of HIS program and infrastructure
Interoperability with pharmacy, lab, and other facilities	• Implement a unified HIS for primary care centers within designated areas • Improve inter-and intra-departmental awareness on system updates to ensure databases are backed up
HIS infrastructure	• LGUs must seek internet service providers such as satellite providers to support the needs of primary care facilities • LGUs must proactively incorporate the establishment of sustainable IT infrastructure in their respective financial investment plans
Hardware security	• Store HIS hardware in secure locations and limit access to authorized personnel only • Mitigate the risk of property loss or damage by installing locks, securing offices, and implementing tracking measures • Enjoin patients to protect the equipment used in their own healthcare
Data security	• Regularly train facility staff on data privacy and the need to maintain patient confidentiality

HIS, Health Information System; EHR, Electronic health record; ICD-10, International Classification of Diseases-10; PNDF, Philippine National Drug Formulary; DPRI, Drug Price Reference Index; IT, Information technology; LGU, Local government unit

Resistance to a digitized records system

Skepticism towards EHR use was widespread at the start. This may be attributed to the belief that system digitization is likely to increase workload.[27] Existing literature suggests that hands-on training is imperative for overcoming this inertia.[28] For this reason, a series of half-day

workshops were conducted for staff in all three sites. Lectures introduced the EHR as a point-of-care tool as well as a platform through which routine tasks can be automated. Actual usage behavior was regularly monitored and feedback from PCPs was obtained. These informed subsequent EHR improvements such as contextualized service functions (e.g., automated prescriptions, medical certificates, and referrals), report-generation features, and accounting modules.

Regulatory measures were incorporated into the EHR used for the study. The 10th International Classification of Diseases (ICD-10)[29] adopts a standardized vocabulary that systematizes report generation and data extraction. All diagnoses were required to be in this format. Similarly, the use of the Philippine National Drug Formulary (PNDF)[30] was required for prescriptions. This offered reassurance that only FDA-approved drugs were paid for by PhilHealth.[31] For pharmacy dispensations, pricing was regulated using the Drug Price Reference Index (DPRI).[32] Benefit payments were tied to EHR use, ICD-10, PNDF, and compliance with DPRI. These regulatory strategies minimized the risk for over prescription among providers and overspending within the health system.[33]

By the end of the study, EHR acceptance improved among PCPs given enhanced system integration and the automation of several routine activities. This was realized through constant EHR usage across all service departments, from physicians' clinics to partner laboratories and pharmacies alike. With constant user-developer dialogue and the on-site availability of technical support personnel, PCPs were ultimately empowered to use the EHR without the assistance of data encoders which were used in previous e-health systems.

Ambiguous facility workflow

The monitoring capabilities of the EHR enabled the real-time evaluation workflow in all 3 facilities.[34] This led to the recognition of pre-existing problems and ambiguities in the patient journey. An unclear patient journey leads to time wasted navigating between different departments.[35] Across all study sites, this prevented the efficient performance of routine tasks such as patient registration, prescription refills, provision of medical certificates, and service payments. Though seemingly minor, the volume of such problems potentially contributes to staff burnout especially when facilities are at full capacity.[36] PPCS addressed these concerns by clarifying the patient journey during staff meetings and developing the EHR following actual workflows.

Duplication of medical records

Duplicate records were frequently encountered in the first year of implementation. Methods to avoid duplication, such as biometric technology (e.g., eliciting fingerprints and photographs) are presently being developed to solve this problem. This intervention was favored for its precision in matching patient identity with existing records. Studies conducted in community health centers revealed a significant decrease in duplicate medical charts[37] and an increase in accurate diagnostics history[38] through the introduction of an EHR.

Responsiveness to EHR troubleshooting concerns

Regularly monitoring EHR functions and resolving technical issues proved critical in improving HIS performance. Through active monitoring, the EHR is less likely to experience compounded system malfunctions that slow down performance.[39] The study initially used a homegrown EHR system to automate the generation of prescriptions, referrals, summaries, censuses, and reports. However, partnering with professional information technology (IT) companies became necessary as the system expanded. In-depth technological expertise was needed, and a viable health information plan to address the continuing need for system development.[40]

Interoperability with pharmacy, laboratories, and other facilities

Interoperability is a prevailing concern as HIS programs vary across HCPNs.[24] Even within the same HCPN, different electronic systems co-exist among clinics, laboratories, and pharmacies. This potentially contributes to fragmentation in health policy and data management.[41] Interoperability issues complicate the patient journey as PCPs are unable to coordinate care effectively.

Interoperability was achieved in the present study — between clinicians, laboratories, pharmacies, and the accounting services. Achieving this at a provincial, regional, or national level will pose a great challenge for UHC.

HIS Infrastructure

Improved HIS performance necessitates sufficient infrastructure and maintenance.[42] This includes computers, printers, servers, storage systems, routers, cabling, and dedicated network appliances such as network firewalls. In the present study, connectivity posed a greater challenge in rural and remote settings compared to the urban site. The rural LGU addressed this by installing additional towers with long-distance routers to unify all barangays under a single network. However, this was not feasible with the dense and mountainous landscape of the remote setting.[43]

Options for satellite providers were limited to a few franchised telecommunication providers because of the Managed Internet Service policy.[44] As a result, this study was unable to find a telecommunication provider to comprehensively address connectivity gaps in the remote setting. The differences in internet access had tremendous implications across sites. While barangay health stations in the rural site were easily utilized, barangay health stations in the remote site lacked sufficient connectivity to support consultations. This meant that patients from remote barangays had to embark on lengthy trips to avail of services directly at the rural health unit.

Table 3. Staff composition across urban, rural, and remote settings

Occupation	Urban (N=106)		Rural (N=141)		Remote (N=179)	
	n	%	n	%	n	%
Medical Doctor	36	34.0	1	0.7	1	0.6
Full-time Physician	12	33.3	0	0.0	0	0.0
Part-time Medical Consultant	4	11.1	0	0.0	0	0.0
Visiting Consultants *(unsalaried specialists)*	20	55.6	0	0.0	0	0.0
Nurse	14	13.2	16	11.4	21	11.7
Nursing Attendant	6	5.7	0	0.0	0	0.0
Midwife	2	1.9	20	14.2	13	7.3
Barangay Health Worker	0	0.0	100	70.9	126	70.4
Dentist	5	4.7	0	0.0	1	0.6
Dental Assistant	3	2.8	0	0.0	0	0.0
Pharmacist	4	3.8	0	0.0	0	0.0
Medical Technologist	5	4.7	1	0.7	1	0.6
Radiology Technologist	3	2.8	0	0.0	0	0.0
Administrative Aide	15	14.2	0	0.0	2	1.1
Others	13	12.3	3	2.1	14	7.8

**For the urban site, 'others' include a nutritionist, sanitary inspectors, institutional workers, ambulance drivers, and cooks; for the rural site, 'others' include a laboratory technician and ambulance drivers; for the remote site, 'others' include barangay nutrition scholars, a sanitary inspector, a public health associate, and an ambulance driver*

Hardware security

Equipment security required special attention in facilities without the presence of dedicated security personnel. At the start of the study, a total of 6 program-procured laptops were stolen at the remote site. To decrease the likelihood of data theft and malicious property damage, laptops were cabled down, locked in drawers, and placed in secure offices. Accountability stickers with tracking numbers were likewise placed on every laptop to remind both users and beneficiaries of the significance of the device in service delivery. Patients were enjoined to protect the equipment, which was vital to their healthcare.

Data security

Beyond physical equipment security, assuring patient privacy required staff cooperation.[45] With the continued guidance of a designated data privacy officer, staff across facilities were made aware of their responsibility to uphold patient confidentiality. In addition, access to the server and EHR equipment was limited to select staff to minimize data leaks.[46]

Human resources

Achieving the ideal patient-provider ratio[47] is necessary to support the medical and administrative duties expected from PCPs. The present study reveals that LGUs are unable to easily expand their health workforce. This may be attributed to the lack of incentives to encourage recruitment in underserved communities.[48] The proceeding subsections outline the experience of ensuring workforce sufficiency in urban, rural, and remote primary care facilities.

Undermanned primary care centers

Healthcare worker maldistribution is a prevailing concern, especially in the Philippines.[49] Implementation experience suggests that this can be addressed through active recruitment, education and training, deployment, and retention. Accordingly, professional incentive schemes aid healthcare worker recruitment in underserved areas.[49] At the start of the study, 12 primary care physicians attended to the 31,000 urban population. In contrast, only 1 physician each catered to the rural and remote populations of approximately 35,000 and 23,000 respectively (Table 3).

To enhance service capacities during the study period, two additional physicians were employed in each of these municipalities. This effectively tripled patient-physician density in the rural and remote sites. Existing literature and the present study experience suggest that administrative responsibilities often restrict the delivery of clinical services in resource-limited settings.[50] The newly-hired physicians were specifically tasked to render clinical care over other administrative or public health duties. While an acute 16-fold increase in rural service utilization was observed following workforce expansion, a downtrend in consultations in the remote site was likewise reported potentially due to pre-existing logistical and administrative problems in the facility.

Continuing professional development in resource-limited settings

Lectures and training workshops were conducted to encourage professional development and proper care management among PCPs.[51] Primary care training was facilitated across several repeated sessions from 2018 to 2021. Training workshops outlined clinical practice guidelines patterned across life stages, namely: essential intrapartum

newborn care, integrated management of childhood illnesses, non-communicable diseases, and geriatric care. To assess the immediate impact of these workshops, pre-and post-test assessments were administered. Results revealed varying levels of information retention.

Training workshops enabled simulations and real-time attendee engagement. However, these sessions are often resource-intensive given the high logistical demand for facilitating such events.[52] Furthermore, frequent and lengthy training can potentially restrict service delivery as PCPs are removed from the frontlines of care.[52] To address this, all PCPs were provided free access to a clinical decision support software through UpToDate. Described as a "living textbook" for physicians and patients alike, UpToDate provides synthesized clinical recommendations based on updated medical evidence.[53] UpToDate can partially offset the need for repetitive training, especially in resource-limited areas, when used as a point-of-care tool. As such, the present study underscores that adopting a contextualized knowledge management strategy may be necessary for sustained professional development in resource-limited settings.[53]

Demoralized primary care workforce

In the Philippines, primary care is lowly perceived despite being the foundation of the health system.[54] Existing literature reports that patients with more resources often seek specialist care at the first onset of symptoms, whereas PCPs are consulted only when no other alternative is available.[55] Salaries are generally lower for PCPs compared to specialists or tertiary-care providers.[49] Further exacerbated by the low premiums placed by policymakers for primary care, the existing primary care workforce suffers from demoralization and high attrition. To address these, the present study conducted staff workshops to raise awareness and bolster morale. Success stories from countries with robust primary care networks were shared. This is perceived to affirm the role of PCPs in strengthening local health systems.[56] This study supports constant dialogue between implementers and PCPs, especially as the latter provides the foundation through which UHC can be operationalized. Furthermore, engaging communities can potentially underscore the value and function of the primary care system for improved trust and uptake (Section 3.5.2).

Unclear delineation of roles

In countries such as the United States, primary care physicians refer to practitioners that specialize in the delivery of primary care.[57] The Philippine experience contrasts with this as general practitioners, specialists, and subspecialists all provide primary care services in addition to their area of specialization.[10] This is especially relevant in areas where primary care specialists are unavailable or insufficient.[58] Other professionals such as nurses, midwives, and community health workers (also referred to as BHWs) render primary care services to provide support.[10] However, in this mix of professionals, roles and expectations were not well delineated as observed during the study period.

To address this, we conducted a stakeholder meeting in February 2018 to define the roles and responsibilities expected of PCPs.[10] In this meeting, it was agreed that the role of primary care physicians was to oversee patient care and supervise the entire primary care team. Nurses were to assist in the implementation of care management plans and management of the rural health units. Midwives were assigned to serve as frontline professionals, tasked to manage barangay health stations and BHWs. Lastly, BHWs were acknowledged as "health coaches" able to deliver first aid and recommend proper health practices such as household remedies and over-the-counter drugs. Clarifying the role of BHWs significantly optimized operations during implementation. Challenges and recommendations for concerns on human resources are summarized in Table 4.

Table 4. Challenges and recommendations for assuring health workforce sufficiency

Challenges	Recommendations
Undermanned primary care centers	• LGUs and HCPNs must collaborate to improve the patient: provider ratio, near levels prescribed by the WHO • Legislation is needed to override current personnel salary capitations and allow the hiring of an adequate number of PCPs • Encourage HCPNs to recruit providers and practitioners residing within the vicinity of facilities to improve retention • HCPNs must provide performance-based incentives to motivate better performance in healthcare delivery
Continuing professional development in resource-limited settings	• Regularly train PCPs with sufficient medical resources such as UpToDate® to enhance knowledge access and retention
Demoralized primary care workforce	• LGUs and provincial health units must host motivational workshops about the crucial role of primary care in the Philippines • Ensure sustained dialogue between system implementers, policymakers, and frontline workers
Unclear delineation of roles	• HCPNs must clarify the roles and expectations from doctors, nurses, midwives, BHWs, and other facility staff to facilitate teamwork

LGU, Local government units; HCPN, Healthcare provider network; PCP, Primary care provider; BHW, Barangay health worker

Financing

Limited coverage of health conditions

To optimize service utilization, the study set a ceiling cap for coverage, instead of limiting the range of tests, treatments, or conditions covered by the benefit package. Each eligible patient benefited from a PHP 2,000.00 "disease-agnostic" spending cap over one year. This amount could be used for

consultations, diagnostics, and prescriptions regardless of the disease condition. This coverage upholds the nature of primary care as the manager of undifferentiated conditions.[59] For example, a patient manifesting with cough does not immediately get diagnosed with tuberculosis at first contact with a PCP. However, if the symptoms persist, the patient may require antibiotics and later, radiological procedures that may lead to a definitive diagnosis. A disease-agnostic policy ensures that undifferentiated conditions are included within the capitation as opposed to assigning diagnostic-related groups.

Given the broad scope of such a disease-agnostic policy, strategies to mitigate the risk of overspending must be considered upon implementation.[2] In the present study, laboratory tests, diagnostics, and medicines had to be availed through accredited PCPs and facilities, abiding by the regulatory requirements previously described. Furthermore, communities were likewise engaged to introduce the concept of risk-sharing and discourage abuse (see Section on Interaction with Population).

Resource-intensive registration processes

Patient registration in the Philippines remains resource-intensive, repetitive, and ultimately inefficient. The implementation of former benefit packages required extensive patient profiling, which involved history taking, a physical examination, and even diagnostics in select cases.[5,31] This ultimately evolved into a mass screening program covering as many individuals as possible in the community, many of whom did not require present medical attention.[47] Primary care providers at the study sites found this registration process to be extremely resource-intensive given widespread staff shortages. Furthermore, the unintended consequence of such processes impeded care for patients requiring immediate attention.

To address this, the present study implemented "opportunistic registration" over "prior registration" as the main strategy for reducing the burden of repetitive screening. During the study period, community members were registered at the point of care during their first consult. This process reduced registration costs given that consultation coincided with registration, ultimately shifting the initiative of registration from providers to patients. By the end of the first implementation year, an estimated 36% of the rural and 18% of the remote site residents had been registered with no added cost or burden to facility operations. The remote site was only able to register about a quarter of the population due to prevailing access barriers. Registration was unnecessary at the urban site as a complete and validated list of employees was available even before the study.

Difficulty in the ascertainment of PhilHealth membership status

Attempts were made to ascertain PhilHealth membership status upon registration at the facility. PhilHealth members' data records were accessed through their verification module—a portal that links to the health care institution. However, PCPs expressed substantial difficulties in accessing the PhilHealth verification module due to the unreliability of the portal and its attached links. As previously outlined, this emphasizes the need to improve interoperability and ensure the desired HIS functions are achieved.

Delayed payments

Issues on timely fund disbursement were experienced across all sites during the study period. Bureaucratic processes such as the micromanagement of receipts ultimately impeded fund disbursement. Furthermore, pre-requisites for release often conflicted with data privacy policies. For example, individual patient information was initially required before fund disbursement for diagnostics and medicine. This accounting requirement was against the Data Privacy Act[25] which prohibits the disclosure of potentially sensitive patient information. Delayed payments had a profound impact on the operations at the remote site. Pharmacies and laboratories rendering services were unable to withstand payment delays and often had to suspend services. To resolve this, revolving funds were introduced, which were intermittently replenished.

Funds for healthcare services were deposited into a special trust account under the UP System and managed by the UP-Accounting Department. The responsibility of each service provider (laboratory, pharmacy, radiology, and physician consultation services) was to issue a monthly statement of account to the UP-Accounting Department. In turn, the Accounting Department validated the service provider's statement of account before disbursing the payment. All transactions required the presentation of official receipts. Accounting services were integrated into the HIS, which made the system capable of real-time monitoring of inventories, expenses, and accounting costs, including expenses per consult and each patient's running balance. Receipt validation had to be conducted using de-identified lists as opposed to individual receipts. The research team engaged with the accounting department to manage expectations and address financing issues. Table 5 summarizes the challenges and corresponding recommendations aimed at ensuring financial accountability for the implemented benefit package.

Interaction with the population

Lack of engagement with leaders and healthcare staff

PPCS supported leaders and PCPs in all sites through an executive committee composed of an overall program leader, an assistant program leader, an administrative officer, a finance officer, a research specialist, and an IT officer. A steering committee was composed of specialists in the fields of public health, public administration and governance, actuarial studies, and finance. The steering committee likewise involved the UPHS medical director. The IT officer

Table 5. Challenges and recommendations for ensuring financial accountability

Challenges	Recommendations
Limited coverage of health conditions	• Set a comprehensive or "disease agnostic" spending capitation covering consultations, diagnostics, and medications • An annual capitation can be set per capita; beyond which out-of-pocket expenses are incurred
Resource-intensive registration processes	• Adopt an "opportunistic registration" strategy for registering community members at the point of care • Healthcare workers should be spared from registration duties to avoid interruption of health care services
Difficulty in the ascertainment of PhilHealth membership status	• Improve interoperability by ensuring the PhilHealth portal is easily accessible
Delayed payments	• Clarify and negotiate bureaucratic reporting requirements • Automate accounting and payment processing • Institute a revolving fund to support private pharmacies and laboratories especially in rural and remote areas

managed a team comprised of software developers, technology documenters, and computer maintenance technicians.

As can be seen, addressing complex health system challenges necessitates a well-coordinated and multidisciplinary team. Besides the clinical sciences (e.g., public health, epidemiology, medicine), vital contributions in engaging communities were elicited from team members with backgrounds in engineering, statistics, information technology, governance, accounting, actuarial sciences, social sciences, and the communication arts. Community engagement was initiated by introducing the philosophy of primary care to local decision-makers. Specifically, this process involved several meetings with chancellors, deans, and officials in UP Diliman, along with the mayors, barangay officials, and health officers in Samal and Bulusan. The PPCS team likewise engaged with the DOH and PhilHealth regularly to ensure policy alignment in planning, implementation, and evaluation.

There were several consultative and participatory engagements with the healthcare staff in all three sites to discuss the existing systems and the planned changes. Each meeting was strategically designed to inspire, gain commitment, and support from key decision-makers and the partner communities. These engagements proved invaluable in effecting cooperation, acceptance, and a gradual transition into a more responsive primary care system.

Lack of engagement with community members and target beneficiaries

Social scientists and graphic artists were hired to develop promotional materials such as posters, tarpaulins, and brochures to address the low public regard for primary care. These were distributed and posted in strategic areas throughout the pilot sites. The team also developed a social media page to highlight primary care services and to provide instructions on availing of primary care services. Videographers also produced content to enhance the image of primary care by underscoring its four service functions.[10] These videos were then posted online and shown in patient waiting areas daily. All materials had both English and Filipino versions for the community to fully appreciate the content.

Table 6. Challenges and recommendations for engaging leaders, healthcare staff, and the community

Challenges	Recommendations
Lack of engagement with leaders and healthcare staff	• Consult with experts and figures across a multitude of disciplines beyond the clinical sciences, such as public health, economics, engineering, communication arts, social sciences, statistics, information technology, among many others • Conduct early engagement with community leaders, health officers, key decision-makers, and institutions (e.g., DOH and PhilHealth)
Lack of engagement with community members and target beneficiaries	• Endear the public with the concept of primary care through town hall meetings, videos, brochures, posters, and similar content • Introduce the concept of risk-sharing in the local language (e.g., *paluwagan*) and context familiar to target beneficiaries

The concept of risk-sharing was introduced in communities to encourage the responsible use of primary care benefits. Through town hall meetings and information campaigns, community members were urged to utilize benefits only as the need arises. Introducing the concept of risk-sharing helped sustain the health needs of an entire community, given the limited resources at hand. An indigenous term that approximates this concept is "*paluwagan.*"[60] This concept helped manage community expectations and prevented benefits misuse in the first year of implementation. An important outcome of these meetings was obtaining feedback on community needs to guide policy development. Through these engagements, the need for clinics after office hours and transport subsidies grew evident.

Table 6 provides a summary of the communication challenges that the PPCS team experienced as it delved into the three sites. These challenges include the complexity of the healthcare system, low perceptions towards primary care, and misguided public expectations leading to the overuse of benefit packages.

Planning Evaluation and Monitoring

Policymakers' focus on vertical or disease-specific outcomes

Strengthening primary care systems requires the continuous reassessment of appropriate outcome measures.

However, the predominance of vertical programs often deters efforts to provide evidence-based policymaking in health systems. Vertical programs are disease-specific, donor-driven, and are usually not well integrated into health systems.[61] The Philippines has several vertical healthcare programs, many of which overlap in coverage and use common resources.[62] While conducting vertical programs can be beneficial, program fragmentation may prevent the synergy needed to foster high-impact interventions.[62] In contrast, horizontal approaches strengthen the health system by developing integrated delivery systems.[61] Unlike outcomes specific to certain diseases, horizontal approaches accommodate broader targets such as patient satisfaction and health service utilization. These outcomes can inform decisions for sound policymaking and management, ultimately transforming health systems in the process.

Non-interest in health provider outcomes

A sustainable health human resource strategy to ensure quality patient care also necessitates evaluating provider-oriented outcome measures such as healthcare worker knowledge, job satisfaction, acceptance of EHR systems, and quality of care.[63] These outcomes highlight provider experiences to improve health standards, performance, and optimum efficiency. Furthermore, emic insights into the workforce experience can inform administrative policies for improving job satisfaction, professional development, and retention.

Inability to make actuarial predictions

An unpublished costing study was performed for this primary care model to obtain direct and indirect expenses for all services covered in the three sites. Accounting for all key health cost drivers through actuarial models allowed the creation of scenarios and inputs that forecast the impact on the healthcare system. These quantitative tools may aid policymakers to arrive at informed decisions for proper resource allocation, financial governance, and health system management.

Bureaucratic delays impede proper monitoring and evaluation

Bureaucratic difficulties and delays contribute to health system inefficiency. This inefficiency has been attributed to "a system that values procedural compliance over outcomes, resulting in excessive use of administrative formalities due to red tape and risk aversion."[19] Such system inefficiencies are evident in repetitive regulatory processes for accreditation, certification, or budget allocations. These result in significant disbursement delays and burdensome administrative duties assigned to health professionals. These added responsibilities for healthcare workers often interfere with patient care. As such, the monitoring and evaluation of health outcomes must be patient-centric and adaptive enough to maintain efficiency.

Table 7. Evaluation and monitoring: challenges and recommendations

Challenges	Recommendations
Policymakers focus on vertical or disease-specific outcomes	• Explore horizontal outcomes such as overall patient satisfaction, utilization, hospitalization, and out-of-pocket expenses
Non-interest in health provider outcomes	• Monitor provider satisfaction and retention, knowledge, quality of care, and EHR satisfaction
Inability to make actuarial predictions	• Conduct regular costing studies
Bureaucratic delays impede proper monitoring and evaluation	• Monitor administrative efficiency • Standardize processes, establish autonomy, and monitor compliance to Anti Red Tape Act

Reducing system bureaucracy can be achieved by: 1) standardizing processes; 2) ensuring compliance with the Anti-Red Tape Act[64]; 3) improving autonomy among local authorities; and 4) assigning administrative functions to capable staff to allow healthcare workers to attend to patient care. These strategies can reinforce system transparency without impeding system efficiency and quality of care.[19,64] Table 7 summarizes the challenges experienced by the project implementers alongside recommendations to improve primary care monitoring and evaluation.

CONCLUSION

The present study aimed to identify key governance challenges in primary care implementation and provide experience-based recommendations to address such issues. The one-year study period revealed that a renewed approach to strengthening primary care systems is fundamental to achieving universal health coverage. Such an approach requires changes to the existing governance structure. The development of standards, accountability mechanisms, performance feedback, and incentives for good performance is a critical hallmark of consistency and good governance. As espoused in the HSD Framework, most health facilities can potentially transition into a strengthened primary care system provided improvements in implementation, financing, management and coordination, supply and infrastructure, human resources, and community engagement. Routine decision-making by multiple actors within the governance structure can significantly impact primary care systems and their resultant outcomes. As such, good governance lays central in strengthening primary care in the Philippines and improving outcomes for providers and patients alike.

Disclaimers

Views expressed by the authors in the submitted article are their own and not an official position of the institution or funder.

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Statement of Authorship

All authors contributed in the conceptualization of work, acquisition and analysis of data, drafting and revising and approved the final version submitted.

Author Disclosure

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