Accelerating Private Sector Engagement in National Health Information Systems

A series on private sector approaches in family planning

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Summary

A national health management information system (HMIS) is the foundation for effective oversight, management, and provision of health information, products, and services in a country. The private sector is often a significant source of health products and services, yet few countries have fully galvanized routine reporting by private health care providers. This results in incomplete data on the types, volumes, and quality of services and products delivered through private sector channels and limits the ability of public health officials to effectively engage and steward both the public and private health sectors. To address this gap, this report establishes a framework for examining and supporting private sector participation in a national HMIS. The framework identifies common barriers to private provider engagement in a national HMIS, shares global case studies, and offers actionable recommendations to governments, private providers, donors, and implementing partners.

Keywords: health management information systems, private sector, family planning, DHIS2

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SHOPSPLUS
Public-private engagement for better health

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Contents

Acronyms

ADDO	Accredited drug dispensing outlet
APHFTA	Association of Private Health Facilities in Tanzania
CHW	Community health worker
COP	Community of practice
DHIS2	District Health Information Software
EMR	Electronic medical record
HFR	Health facility registry
HMIS	Health management information system
IPPF	International Planned Parenthood Federation
LMIC	Low– and middle–income country
MFL	Master facility list
MOH	Ministry of Health
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MSI	Marie Stopes International
MTUHA	Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya
PSI	Population Services International
SMS	Short message service
SHOPS Plus	Sustaining Health Outcomes through the Private Sector Plus
USAID	United States Agency for International Development
USSD	Unstructured supplementary service data

Glossary

Data dictionary	A data dictionary is a collection of definitions and attributes about indicators that are captured in a database.
Data element	A data element defines what is recorded in the system and can be an indicator. An example of a data element is "the number of family planning visits." Data elements are often broken into smaller, component parts to determine, for example, the number of family planning visits by age group.
District health information system 2 (DHIS2) instance	A DHIS2 instance is an organization's customized setup of the DHIS2 software to manage and analyze its data. Any organization can use DHIS2 for health service reporting, including implementing partners and ministries of health, and each would have its own unique instance that is customized to reflect that entity's data collection and reporting needs. There can be multiple DHIS2 instances in one country, and data are not shared or viewable across instances unless there is express coordination.
Health management information systems (HMIS)	HMIS are a data collection system specifically designed to support planning, management, and decision making in health facilities and organizations. HMIS are one of the six building blocks essential for health system strengthening.
Master facility list (MFL)	An MFL is a register of public and private health facilities in a country and comprises a set of administrative information that identifies each facility (unique ID).
Interoperability	Interoperability is the ability of different systems to connect within and across organizational boundaries to access, exchange, and cooperatively use data among stakeholders, with the goal of optimizing the health of individuals and populations.
Private sector	In this report, the "private sector" refers to for-profit and non-state nonprofit facilities and providers of all health care professions which offer clinical services and/or health care products. This includes private clinicians, pharmacists, drug shop proprietors, community health workers, and others.

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Introduction

A national health management information system (HMIS) is an essential building block for the effective oversight, management, and provision of health information, products, and services in a country. A national HMIS provides insight into the health of a population and can help decision makers plan for and respond to changing and evolving health needs in a country. It is also used to monitor the distribution, quantity, and quality of health products and services and to measure progress against health system targets. Inclusion of private sector health data in a national HMIS is essential for public health decision making at national and subnational levels. Yet few countries have fully established routine reporting across the private health sector. While it is generally understood that private providers face many challenges to participating in a national HMIS, there is a lack of consolidated evidence about specific barriers to their inclusion and recommendations on how they can be addressed. This evidence gap limits the ability of public health officials to effectively engage and steward both the public and private health sectors for family planning and other health areas, and results in incomplete data on the types, volumes, and quality of services and products delivered through private sector channels.

The USAID-funded Sustaining Health Outcomes through the Private Sector (SHOPS) Plus project has led global efforts to harness the potential of the private health sector and reflect the substantial contributions of private providers in national HMIS. This report draws on this expertise as well as on an expansive network of HMIS, public sector, and private sector experts to establish a framework and evidence base that examine and support private sector participation in a national HMIS. The "private health sector" in this report refers to formal and informal for-profit and nonprofit health care providers of all cadres, including doctors, nurses, midwives, pharmacists, drug shop proprietors, private community health workers (CHWs), and others, including providers affiliated with donors, implementing partners, and NGOs. This framework articulates key considerations for examining the state of private sector inclusion in a national HMIS and identifies common barriers to private sector participation. For each barrier identified, SHOPS Plus offers strategic, field-tested approaches to overcome these barriers. Given that each country has its own set of barriers and enablers, and that the private sector is made up of diverse cadres of providers who may be differentially empowered and motivated to participate in the HMIS, the best practices in this framework are not prescriptive, but rather a guide for building a more inclusive and insightful national HMIS.

Photo: Jessica Scranton

The primary audiences for this report are 1) Ministry of Health (MOH) stakeholders in low- and middle-income countries (LMICs) who seek to better engage private providers in routine reporting and reflect that data in the national HMIS; 2) private health care providers who may be required or wish to participate in a national HMIS; and 3) donors and implementing partners who seek to facilitate private sector participation through advocacy and technical assistance as part of a country's journey to self-reliance. The best practices in this report are indicated as either MOH led, private sector led, or both, though often these best practices require substantial technical and financial support from donors and implementing partners.

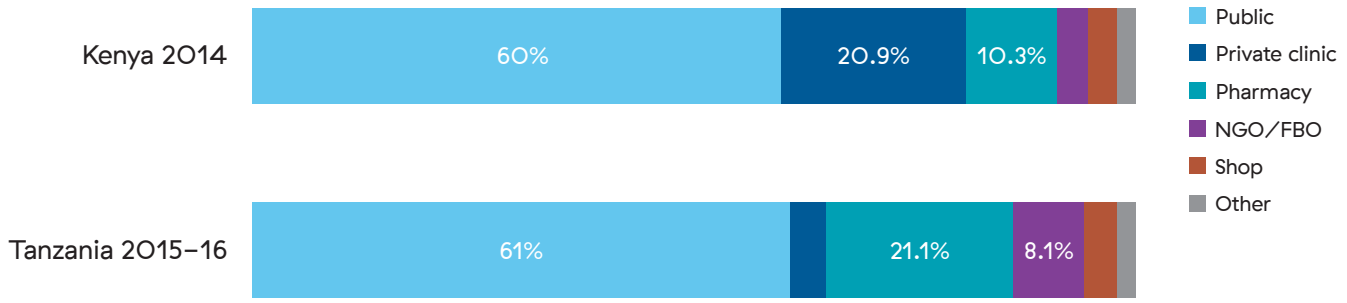
Family planning in the private sector

Routine reporting by private providers is particularly important in the context of family planning and other essential health services for which the private sector is a significant source of care. Studies have estimated that the private sector provides 38 to 40 percent of modern contraceptive methods in sub-Saharan Africa, Asia, and Latin America (SHOPS Plus 2019). Insight into private sector product distribution and service delivery can help a country monitor its supply of and demand for family planning services, as well as its progress toward national family planning goals. Yet the private health sector is not one cohesive entity but a diverse ecosystem of providers and facilities that have

Photo: Fanantenana Randriamahenintsoa

varied incentives and motivations for participating in the health system. Although the distribution of where a population seeks products and services should inform which types of providers are formally engaged in routine reporting, most HMIS in LMICs do not yet systematically include data from pharmacies, drug shops, laboratories, or private sector CHWs. Clinical service data from hospitals, clinics, and other clinical service providers are the first priority for a national HMIS. For some countries, this can mean that there is a significant blind spot when it comes to understanding access to and consumption of family planning products and services. For example, while the private sectors in Kenya and Tanzania serve similar proportions of modern family planning method users (38% and 37%, respectively), in Kenya most private sector users get their methods from clinical service providers, whereas in Tanzania most private sector users get their methods from a pharmacy or drug shop (Figure 1).

Figure 1. Source of modern family planning method among modern method users in select countries



Source: Demographic and Health Surveys

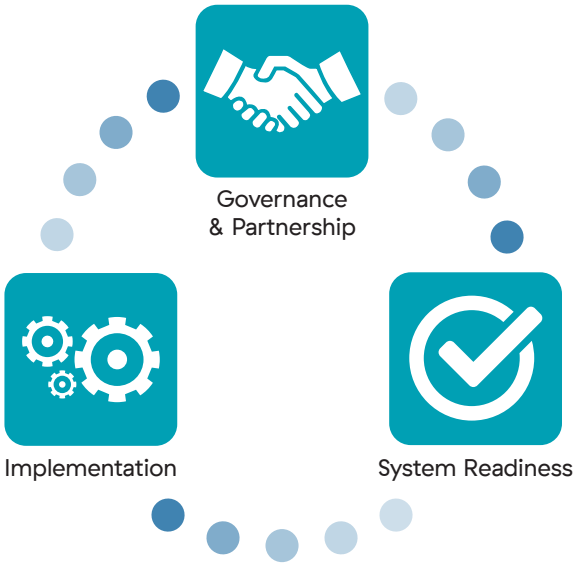
Countries in an early stage of establishing a national HMIS may still be focusing exclusively on engaging private clinical providers. In countries with a more mature HMIS, the MOH may have good engagement with private clinical facilities and seek to expand inclusion to private pharmacies and drug shops. Successful engagement with different types of private providers requires understanding their specific workflows, capacities, and priorities; and accommodating these to the extent possible. With many countries transitioning to more sustainable models of task sharing, particularly for family planning, there is growing interest in including data from frontline health care providers in the national HMIS.


6. Kutompa mtoto mchanga chakula chochote au kinywaji
mama, isipokuwa pale tu inapoagizwa na daktari.
7. Kuwaweka mama na mtoto pamoja mara baada ya kujifungua na waendelee
kuwa pamoja kwa muda wa masaa 24 kila siku.
8. Kuwahimiza wanawake kunyonyesha watoto wao kila mara wanapohitaji
kunyonya.
9. Kutowapa watoto wachanga nyonyo bandia.
10. Kuhimiza sehemu zinazotoa huduma za afya zianzishe kamati za kuhimiza
unyonyeshaji wa maziwa ya mama.
Routine Venipuncture Procedures
BD

A Framework for Private Sector Reporting

Inclusion of private sector data in a national HMIS requires a coordinated response on multiple levels. Considerations, barriers, and strategies for the effective participation of the private sector in a national HMIS are organized into a framework developed by SHOPS Plus that comprises three interrelated components: 1) governance and public-private partnership, 2) system readiness, and 3) implementation with the private sector (Figure 2). Programmatic experience, expertise, and research in private sector health led by SHOPS Plus and other implementing partners globally informed this framework. Each component presents a set of key considerations for private sector engagement, which can help identify and organize barriers and opportunities for private sector engagement in a national HMIS.

Figure 2. A framework to assess and enable private sector reporting



Governance & Partnership

- What policies govern, incentivize, and/or enforce private sector reporting?
- Which types of private providers are formally represented in the national HMIS?
- Is there a representative body or unified voice for the private sector?
- Is the private sector engaged in HMIS decision making?
- Is there an actionable roadmap for private sector inclusion in the national HMIS?

System Readiness

- Is there a current master facility list that includes private facilities?
- Are health indicators aligned across public and private stakeholders?
- Is the national HMIS configured to receive and reflect electronic private sector data?

Implementation

- Do private providers have the tools and resources to report routinely?
- How can the time and cost burden of reporting be mitigated?
- Are there mechanisms to provide relevant data to private sector providers?

Photo: DDC/Sama Jahanpour

Governance and public-private partnership is a foundational component that focuses on the policies, regulation, advocacy, representation, and collaboration that are necessary to enable and enforce private sector participation. System readiness focuses on the underlying architecture and configuration of information systems that facilitate or obstruct the inclusion and use of private sector data. Implementation with the private sector reflects on-the-ground realities of routine reporting in resource-constrained environments. While in theory a country might establish good governance and partnership first, ensure system readiness second, and finally implement with the private sector, in practice the components are interconnected and adjustments in one area often necessitate responsive shifts elsewhere.

In the sections that follow, SHOPS Plus identifies common barriers to the inclusion of private sector data in a national HMIS from both private provider and MOH perspectives for each component, and offers strategies to overcome these barriers. The key considerations for each component can be used by MOH, donor, and private sector stakeholders to assess engagement and identify barriers to private sector participation in a particular country. Annex A demonstrates how the framework can be applied in Tanzania.

Governance and public–private partnership

Governance & Partnership Considerations

- What policies govern, incentivize, and/or enforce private sector reporting?
- Which types of private providers are formally represented in the national HMIS?
- Is there a representative body or unified voice for the private sector?
- Is the private sector engaged in HMIS decision making?
- Is there an actionable roadmap for private sector inclusion in the national HMIS?

Governance of a health system entails developing a strategic policy framework for effective oversight, coalition building, regulation, enforcement, and accountability, as well as securing appropriate funding and workforce for the implementation of the policies. Therefore foundational considerations are whether there are national policies and procedures that clearly describe who is obligated to report (what types of facilities), how and when facilities are expected to report, and incentives or consequences if a facility does not report. Another key consideration is the readiness and ability of the private sector to represent its constituency. Other considerations include whether and how the private sector is engaged in national HMIS planning and decision making and whether there is an agreed-upon roadmap for private sector engagement. With these considerations in mind, SHOPS Plus identified common barriers to strong governance and partnership, and offers strategies to overcome these barriers.

Barriers to HMIS governance and public–private partnership

Policies governing private sector reporting are not effectively enforced

Government stakeholders indicate that the private sector is obligated to report key indicators routinely into the national HMIS. Indeed, national policy documents often reflect this. However, even in countries where reporting is explicitly required of the private sector, there is a lack of operationalization and enforcement of this requirement, and therefore minimal consequences if private providers fail to submit timely, accurate data. This challenge often stems from limited human resource funding/capacity at district levels to track, monitor, and enforce reporting. Private providers indicate that routine reporting to the MOH represents a significant time investment and opportunity cost in a competitive business environment. Without structural incentives or enforcement, private providers may prioritize other operational demands.

Informal incentives insufficient for routine reporting by pharmacists in Kenya

In 2018, the SHOPS Plus project implemented an activity to facilitate routine family planning and child health data sharing between 35 private pharmacies and the Kenyan national HMIS. Pharmacies were not required to report into the national HMIS, but there was interest in piloting their inclusion. Though the pharmacies were initially motivated to report by the reputational benefits of participating in the activity, motivation to report waned quickly because private pharmacies had more pressing financial and operational considerations. The activity ultimately concluded that reputational benefits and reporting feedback/data were not strong enough motivators for sustainable routine reporting in the absence of regulatory enforcement (Bunyi 2018).

Data sharing and use policies are absent or vague

Lack of clarity around how private provider data will be shared and by whom it will be used is a major concern that frequently inhibits private provider reporting. Private providers are hesitant to share data because they are concerned that the MOH will use the data to regulate, audit, tax, or punish providers. Financial data have been pointed to as particularly sensitive. Private providers have also voiced concerns that competitors will gain access to their data and have a competitive advantage. Given these reservations, misconceptions, and a lack of enforcement of the data submission policies, many private providers refuse to share data or share only partial data.

Some cadres of private providers are not formally recognized in HMIS

Governments prioritize brick-and-mortar clinical facilities for inclusion in the national HMIS because they provide the majority of health services in a country. However, a global emphasis on task shifting to non-clinical facilities and CHWs means that a

proportion of many essential services including family planning and immunization are not accounted for in the national HMIS or elsewhere. As care is decentralized and moves closer to consumers, tracking health service provision outside of the traditional public/private physical infrastructure will become more difficult and it will become more important to have these frontline facilities and workers represented in the national HMIS.

The private sector may not be effectively organized to represent its interests

The private sector comprises diverse levels and types of providers and facilities, some of which are informal or unregistered. Clinical facilities may be large, networked with other facilities, and offer a full range of health services, from dentistry to surgery. Or they might be small outposts with only one clinician, or provide specialized services in only one health area (e.g., midwifery). Pharmacies may be large, standalone, and/or networked, or they might be attached to a clinic. And drug shops may be well organized, such as the accredited drug dispensing outlets (ADDOs) in Tanzania, but many are small informal kiosks only loosely affiliated with the health sector. With such diversity in the private health sector, it can be difficult to develop a unified "voice" for the sector. Private providers therefore often do not have a consolidated governing body to represent their interests. They are often members of professional associations, insurance networks, and medical orders, which have their own unique hierarchies, rules, and protocols. These organizations can be helpful in the absence of a consolidated private sector health association but may require multiple negotiations with different cadres.

The private health sector is not engaged in HMIS decision making

Many governments have HMIS committees at national and subnational levels to inform and influence decision making by the MOH and these typically include representation from health care providers. However, HMIS committees often lack intentional private health sector representation as well as formal plans to engage the private sector. Lack of private stakeholder input at these levels results in a limited understanding of the unique challenges and concerns around reporting in the private sector as well as missed opportunities to engage the broader sector. Countries that have been most successful in engaging the private sector in routine reporting have found ways to formalize private sector input and buy-in on key decisions.

Strategies for stronger HMIS governance and public–private partnership

MOH: Operationalize and enforce policies that motivate timely and complete routine reporting in the private sector

Effective policies and regulations must hold tangible value for private providers. For example, policies could tie professional licensure, facility registration, or eligibility for public-private partnerships to specific reporting targets. Public-private partnerships could entail access to training and continuing education opportunities that are typically reserved for public sector practitioners, or access to free or reduced-cost essential medicines that could generate consultation fees for private providers and increase distribution of these essential commodities to the public. Once public and private representatives have agreed to these policies, the MOH must be prepared to consistently monitor compliance, provide support or correction, and enforce consequences. Engagement with, and/or delegation of responsibility to, professional associations can be helpful in shaping and enforcing these regulatory policies with different types of providers. Donors can be called upon to help finance operationalization and enforcement of policies through implementing partner technical assistance.

MOH and private provider: Define how private sector data will be used

Private sector and MOH stakeholders should mutually agree on how the MOH will use and share private health facility data. Data sharing and use policies should specify who will have access to facility-level, district-level, and national-level data and how various stakeholders can use facility-level data. In particular, stakeholders should clarify any taxation or financial implications of reporting and ensure that those policies can be uniformly enforced so as to not unduly penalize providers who are reporting. Information on these policies should be aggressively disseminated to combat misinformation and quell concerns. Further, private sector stakeholders should advocate for appropriate access to aggregated public and private sector data for their own benefit. For example, understanding trends in family planning service provision at a district or regional level may help providers to better plan for procurement and improve their business operations. This data sharing can help incentivize sustainable reporting.

MOH: Engage non-clinical facilities providing essential services

The MOH should consider whether and how to include non-clinical facilities such as pharmacies, laboratories, drug shops, and CHWs in the national HMIS. Policies governing HMIS reporting may need to be updated to cover new cadres of providers, and partnerships will need to be established with representative associations that govern those cadres. The MOH will also need to take into consideration that there may be less capacity and inclination for reporting among private frontline providers and additional training, incentives, forms, and other accommodations may need to be made. Donors and implementing partners can play an important role in formalizing partnerships and policies and also later in piloting reporting with the private providers.

Private provider: Join or form a private sector health association

A private sector health association with organized membership will have more negotiating power in HMIS discussions and implementation than will individual private providers. In many countries, a private sector network already exists and independent private providers should consider joining to participate in HMIS discussions. Private sector health association membership should be inclusive to represent its diversity, and the governing board should include prominent, charismatic champions of private sector health, for example, the president of the medical doctors or midwives associations, and diverse representation from all provider types, including doctors, nurses, midwives, and pharmacists. To maintain relevance and visibility, private sector health associations should convene at least quarterly and regularly engage with MOH divisions and committees. In regard to HMIS matters, the role of the private sector health association is clear:

- Collect and consolidate the concerns and technical and financial resources that private providers need to engage in routine reporting
- Translate private sector interests into formal requests to the MOH
- Interpret and disseminate documentation and updates about HMIS policies and protocols
- Negotiate terms for partnerships, memoranda of understanding, accreditation, registration, and other agreements
- Share feedback and data analysis with private providers

In the absence of a fully fledged national private sector health association, private providers could form representative committees at state, region, or even district levels so they can more formally participate in HMIS decision making and share information with their colleagues. These can later be rolled into a larger private sector platform as subcommittees. Donors and implementing partners can be instrumental in helping to form these associations by providing logistical and financial support for venues, coordination, and transportation. Furthermore, implementing partners can provide technical assistance to formalize and legalize the association, elect leadership, and set

advocacy agendas. Care must be taken to ensure that the association is sustainable beyond the support of a donor-funded project.

MOH and private provider: Engage private providers in an HMIS steering committee and an HMIS community of practice

MOH and private sector stakeholders, particularly governing members of newly formed or existing private sector health associations, should seek to jointly participate in a public-private HMIS steering committee to identify and establish policies and procedures to improve routine reporting by private providers. Within this steering committee, the MOH can identify its overall vision for a robust national HMIS with public and private sector data, and private sector stakeholders can advocate and lobby for their interests. Keeping this steering committee relatively small can facilitate timely decision making. A small private sector HMIS steering committee has proven to be a useful asset in countries such as Ghana, Laos, Nigeria, South Africa, Tanzania, and Uganda.

In addition to the public-private HMIS steering committee, private providers should establish a private sector HMIS community of practice (COP) as a forum to brainstorm and identify how to operationalize guidance and provide feedback to the MOH HMIS steering committee that reflects the on-the-ground realities of the private sector. SHOPS Plus has established private sector HMIS committees and broader COPs in Ghana, Madagascar, and Senegal through workshops that facilitated dialogue between MOH and private sector stakeholders. The MOH can coordinate with a COP to review issues or questions surrounding reporting forms, services, applications, standards, and interoperability. The MOH, donors, and implementing partners can also use these forums to sensitize providers to the importance of reporting and to provide training on how to report or on different electronic reporting tools. The COP can also be a space to create a feedback loop with the private sector and share priority indicators that are appropriately aggregated. The COP can include in-person meetings but may better scale if it also offers a virtual forum, such as a private Facebook group, WhatsApp groups, or other online forums.

MOH and private provider: Develop an action plan

Countries such as Afghanistan, Ghana, Madagascar, and Senegal have made progress toward private sector inclusion in routine reporting by developing an action plan for private provider reporting. An action plan is a document that describes, prioritizes, and assigns steps that private and public stakeholders can take collaboratively to incentivize and improve routine reporting in the private sector. This is an opportunity for the private sector to operationalize its requirements for participation in routine reporting. Stakeholders from the public and private sectors should ensure that the action plan reflects the country's current private sector realities and identifies aspects of governance and partnership, system readiness, and implementation that need to be addressed. Donors and implementing partners have a key role to play in providing facilitation, technical assistance, and funding for the development and execution of an action plan.

Madagascar action plan for private provider participation in HMIS

As part of the push to gain better insights into the health of the population, the Madagascar Ministry of Public Health seeks to improve historically poor reporting across sectors, and particularly in the private sector. In 2019, SHOPS Plus Madagascar convened MOH and private sector stakeholders to identify current reporting challenges in the private sector and co-develop an action plan for private sector inclusion in routine reporting.

Illustrative activities from the MOH's validated action plan:

- Governance—Create a forum for public-private communication on approaches, processes, and tools for the private sector
- System readiness—Conduct a private sector census to complete the master facility list
- System readiness/implementation—Give private providers access to DHIS2 via direct accounts or support other electronic reporting mechanisms
- Implementation—Allow rural private facilities to submit reporting forms to nearby public facilities

The action plan was formally validated by the MOH Division of Studies, Planning and Information Systems (DEPSI) in September 2019. As of 2020, SHOPS Plus has 1) established a private sector committee that meets regularly with DEPSI stakeholders, 2) initiated a national private sector census, 3) facilitated training workshops on both paper and electronic reporting forms, and 4) signed a memorandum of understanding with the district office in Tana-Ville to build its capacity to monitor and support private provider reporting.

System readiness

System Readiness Considerations

- Is there a current master facility list that includes private facilities?
- Are health indicators aligned across public and private stakeholders?
- Is the national HMIS configured to receive and reflect electronic private sector data?

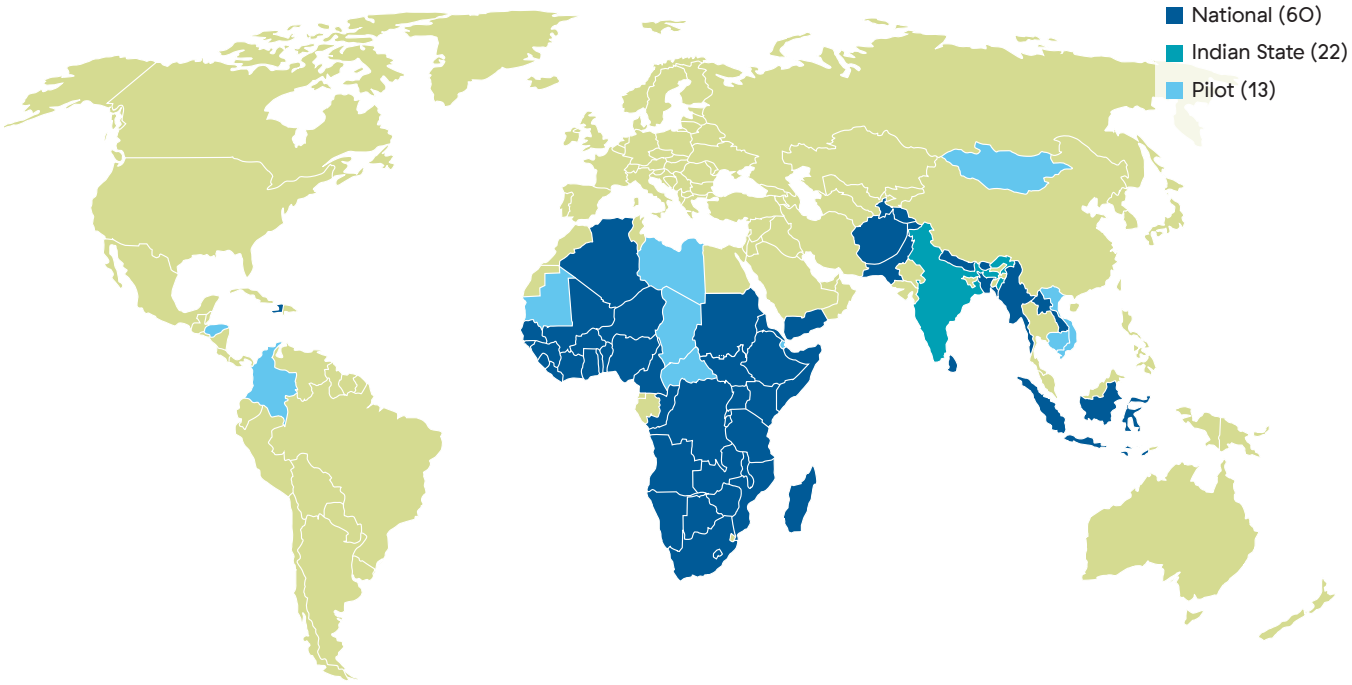
Once strong governance is established and enforced, and collaborative public-private partnerships have been initiated, the national HMIS must be able and ready to receive and reflect the new private sector data that it receives. System readiness encompasses considerations of the configuration of the digital platform (software) and the system architecture. A primary consideration is whether or not there is an updated MFL that identifies and locates private facilities. A second consideration is whether health indicators are clearly defined and aligned between public, private, donor-funded, and other stakeholders, and aligned with private sector service provision. A third consideration is whether the HMIS software is configured to accept electronic submission of private sector data.

What is a DHIS2 instance?

A DHIS2 instance is an organization's customized setup of the DHIS2 software to manage and analyze its data. Any organization can use DHIS2 for reporting, including donors, implementing partners, and ministries of health, and each would have their own unique instance that is customized to reflect their program's data collection and reporting needs. Data are not shared or viewable across instances unless there is expressed coordination.

While there are many digital platforms for HMIS, the DHIS2 is used in at least 73 LMICs, 60 of which use the software as the country's national HMIS (DHIS2 2020) (Figure 3). DHIS2 is an open-source platform that can be used for data management, analysis, visualization, and health program monitoring and evaluation. DHIS2 relies on routine reporting from health facilities, with data aggregated at district, state, and national levels to inform indicators that can direct programmatic and epidemiological stewardship and decision making. DHIS2 also serves NGOs for their data collection, management, and analytic needs, so there can be multiple DHIS2 instances in a country. Because DHIS2 is used by so many LMICs and by most of the countries in which SHOPS Plus works, we will refer to this software in particular in the following sections. However, all of these barriers and strategies hold true with other HMIS software as well.

Figure 3. Global DHIS2 implementations



Source: DHIS2 (2020)

The readiness of a national HMIS and its underlying software to accept and reflect private sector data is driven by MOH policies, procedures, and oversight. For this reason, barriers and recommendations in this section are directed to MOH stakeholders, with considerations for donors and implementing partners.

Barriers to system readiness

The national MFL does not include current information on private facility/provider locations or services

A foundational step toward including private sector data in a national HMIS is to accurately reflect where the private sector operates and what types of services it provides. An MFL is a comprehensive listing of public and private health facilities in a country that includes a unique facility identifier for each facility. An MFL also establishes organizational units and facility hierarchy in DHIS2 so the data from each facility can be appropriately filed, tagged, and analyzed. While most countries have one or more national lists of facilities, those lists may not be consolidated and may exclude data on private facilities, which limits the ability of the national HMIS to accept or reflect data from those facilities. Another challenge is that MFLs often only include data from clinical facilities and exclude important health care providers like pharmacies, drug shops, CHWs, midwives, and non-facility-based independent providers.

What is a master facility list?

An MFL is a complete listing of public and private health facilities in a country that captures administrative data such as the location of the facility, the type of facility, and the unique ID of the facility.

MOH, donor, and implementing partner indicators are not aligned

Some private facilities, including clinics, pharmacies, drug shops, and others, are affiliated through social franchising or other associations with donor-funded implementing partners such as Population Services International (PSI), Marie Stopes International (MSI) Reproductive Choices, and International Planned Parenthood Federation (IPPF). Implementing partners typically require affiliated providers to complete electronic or paper-based registers reflecting the implementing partner's indicators of interest. Because donors frequently channel funding through vertical health programs, such as family planning or malaria, and because it is costly and time

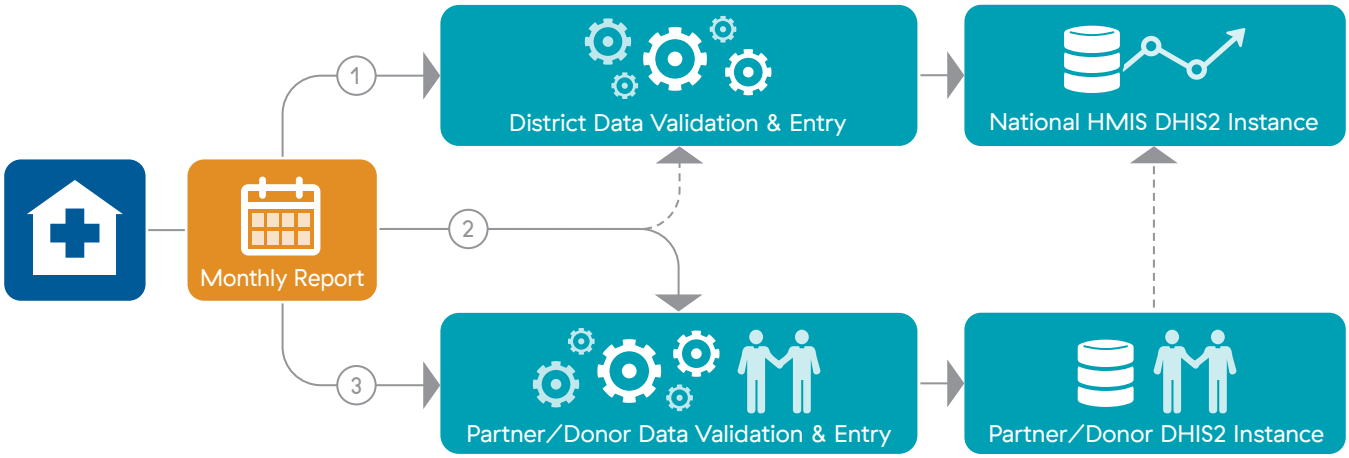
consuming to collect data, implementing partners often collect a narrower set of health impact indicators in only the specific area of interest. Therefore, the indicators that implementing partners collect are not always aligned with national HMIS indicators, and private providers may be asked to report multiple sets of indicators to different stakeholders using different forms. If MOH and implementing partner indicators are not aligned, as a matter of time and resource prioritization, private providers may decline to participate in national HMIS reporting because implementing partners are often more effective at incentivizing the reporting. Annex B offers a case study on why social franchises have had success in encouraging private sector reporting.

Multiple DHIS2 instances in a country are not integrated

In addition to acting as the platform for the national HMIS in 72 countries, many NGOs, donors, and implementing partners also use DHIS2 to manage their organization's health service or program data. In many countries, there are multiple instances of DHIS2 that support reporting for organizations and projects (Figure 4). Information on every DHIS2 instance or server is managed separately and only users affiliated with that particular server can access the data. However, even when indicators are closely aligned, implementing partners are not always required to report directly into the national HMIS DHIS2 instance. Without this integration, there can be additional delays and errors in data sharing, and private sector data may not be reflected in the national HMIS DHIS2 instance.

Figure 4. Private sector reporting in settings with multiple DHIS2 instances

Three scenarios for data reporting



MOH does not support direct electronic reporting by private providers

As described earlier, in most countries, the standard procedure for HMIS reporting is for the facility to bring a paper form to the district officer who reviews the form and then enters the data manually into DHIS2. This process accommodates providers who do not have access to electricity or the Internet or who do not have computer skills. It also gives the MOH more control over the data that are entered into the system. If data are entered incorrectly, these errors can be compounded at subnational levels—in both the public and private sectors—and affect reporting confidence and data quality. However, the paper-based system is inefficient, subject to data entry errors, and one-directional (meaning that private providers send data to the MOH and do not receive feedback). This deters and frustrates private providers who have the capacity to report electronically and who may already be collecting and aggregating facility data through internal systems (electronic medical records [EMRs], accounting, etc.).

Strategies for effective system readiness

MOH: Conduct a private sector census to complete MFL

Countries may need to establish a new MFL dataset, harmonize existing facility lists, collect additional facility data, or update/validate an existing list. Information on health facilities can quickly become outdated, particularly in the private sector where private practices regularly open, expand, move, and close. A private sector census can complete an MFL dataset and serve as the basis for private sector inclusion in DHIS2 or other software. During the census, the MOH must indicate how private facilities should be uniquely identified and geotagged to avoid confusion between health facilities with similar names or facilities that are incorrectly identified in routine reports. Enumerating pharmacies, drug shops, laboratories, and CHWs would be foresightful as these providers could be included in future reporting. Donors and implementing partners often support a first census, but it is important to clarify who will maintain the MFL, how often it will be updated, and who will finance upkeep and oversight.

Senegal system readiness: A private sector census

One of the challenges of private sector inclusion in the national HMIS (DHIS2) in Senegal was that there were no complete or updated records for private facilities. To update and consolidate a directory of private facilities, the MOH reached out to SHOPS Plus in 2017 to conduct a private sector census. The census identified more than 2,753 private clinical facilities, drug shops, pharmacies, and other private providers nationwide (Diop et al. 2018). Of all of the private facilities enumerated in the census, approximately 71 percent were already known in some way to the public sector, but the information had not existed in one place. The census captured administrative and GPS data to integrate private facilities into the MFL.

One challenge of the census was that the law penalized facilities and providers that are unlicensed or unregistered. In remote, low–resource settings, individuals selling drugs and providing care may not always have proper authorization. As a compromise, SHOPS Plus redacted approximately 133 unlicensed providers, primarily drug shops, from the directory before submission to the MOH. Recognizing that private providers might not already be familiar with regulatory protocols is key to initial engagement and eventual inclusion.

The private sector census provided a useful starting point for private sector enumeration in the Senegal DHIS2 instance, and a private sector division in the MOH agreed to maintain and update the list.

MOH: Require alignment of priority indicators across all stakeholders working with private providers

To streamline private sector data collection and reporting, stakeholders should agree to the same definitions of indicators and to collect those indicators on a routine basis. To support a shared understanding of indicators, the MOH should establish and share a data dictionary where all indicators are explicitly defined, including calculation guidance for numerators and denominators. Donors, implementing partners, and private sector stakeholders should participate in defining priority indicators to ensure that the indicators make sense in practice. The activity of defining data elements and identifying where there is duplication or inconsistency across different health programs presents an opportunity for the MOH and other stakeholders to streamline data collection forms and coordinate across different health areas to reduce the reporting burden for private providers.

MOH: Support integration between the national DHIS2 instance and all other DHIS2 instances that capture private facility data

DHIS2 instances are interoperable and can be integrated so that one instance can push data directly to the other, eliminating error-prone and time-consuming manual entry. However, even when indicators are closely aligned, integrating DHIS2 instances requires concerted planning and collaboration across stakeholders. The MOH and donors should require a one-time integration between the national DHIS2 instance and large programs/partners that collect data from private sector stakeholders. Ensuring the integration of private sector DHIS2 instances will improve the capacity of the MOH to sustainably manage the total health system as well as consolidate private sector data in one system.

MOH: Configure direct reporting in DHIS2

Countries that already have strong reporting practices by private providers should consider establishing direct, online accounts in the national DHIS2 instance and allow private providers to report directly into the central HMIS DHIS2 instance that houses both private sector and public sector data. This option should only be offered to facilities that have the capacity and infrastructure to participate in direct electronic reporting. This option can provide better data validation and circumvent logistical challenges (cost, time, transport) of submitting paper-based forms. A DHIS2 account can also be a more efficient way for the MOH to share feedback with private facilities, both about the facility's historic reporting trends as well as aggregated trends for indicators of interest to the facility.

Direct DHIS2 accounts for family planning social marketing organizations in Afghanistan

In Afghanistan, the MOH was interested in capturing the total volume of family planning products that are distributed by social marketing organizations in the national HMIS (DHIS2). To achieve this objective, SHOPS Plus and Avenir Health worked with the MOH to configure direct accounts in the national DHIS2 instance for the Afghan Social Marketing Organization, MSI, and the local IPPF affiliate Afghan Family Guidance. Public and private stakeholders worked together to establish protocols for quantifying total volumes of family planning methods by product on a monthly basis. Once trained, social marketing organizations were motivated to report because it gave them greater visibility among donors, implementing partners, and the MOH.

MOH: Create a DHIS2 training instance for private providers

Even with a clear data dictionary and reporting guidance, private providers may make errors as they first begin routine reporting. If they are reporting directly into the online DHIS2 platform, their mistakes will be incorporated at national and subnational levels and can affect data used for decision making. A training server or "sandbox" DHIS2 instance is a replica of the DHIS2 instance where private providers can receive hands-on practice reporting the data without the risk of potentially deleting their previous data or adversely affecting data in the national DHIS2 instance. After a secondary review for quality, these data can then be easily exported into the official DHIS2 instance.

Implementation with the private sector

Implementation Considerations

- Do private providers have the tools and resources to report routinely?
- How can the time and cost burden of reporting be mitigated?
- Are there mechanisms to provide relevant data to private sector providers?

Once governance and public-private partnerships are established and the HMIS is ready to receive and reflect private sector data, the MOH and private sector are ready to put theory into practice. The MOH and private sector must address the often challenging logistics of, and behavioral barriers to, monthly reporting in resource-constrained environments. Key considerations for implementation are whether private providers have basic training, reporting tools, and capacity to submit paper-based or electronic reporting forms. A second consideration is whether there are ways to minimize or address the time and financial costs of reporting as well as geographical barriers. Thirdly, it is important to consider mechanisms to provide reporting feedback to private providers, both for quality control and engagement purposes. Implementation with the private sector reflects the on-the-ground realities of routine reporting in resource-constrained environments. Challenges and strategies may vary substantially depending on the country context and the type of private provider.

Barriers to implementation

Private facilities are not prioritized for distribution of reporting resources

Public facilities are prioritized to receive technical, financial, and logistical support from the MOH, particularly in resource-limited settings where government funding may not cover essential medicines and services, let alone HMIS reporting. Private facilities attest to inconsistent delivery of reporting forms and are often obligated to photocopy older forms and cover the cost themselves. Photocopying can contribute to use of outdated forms, difficult-to-decipher forms, and forms and registers that are missing altogether. Private providers are also frequently overlooked for training on reporting and supportive supervision visits. Lack of basic reporting resources constitutes a significant barrier to routine reporting by private providers.

Private facilities in remote or rural settings are unable to consistently submit paper reporting forms to the district office

A logistical challenge of routine reporting is physically bringing paper reporting forms to the district data officer at the end of the month. Private providers are tasked with submitting forms by a certain date and are not compensated for the time or cost of transport. The distances between a private facility and the district office can be significant, even when there is good road infrastructure. When roads are impassible, especially during the rainy season, this can greatly affect a private facility's ability to report.

Paper-based reporting practices can be cumbersome, costly, and duplicative for private providers

Most HMIS rely on paper-based submissions at the facility level in order to ensure that all facilities are able to participate. However, these processes can be cumbersome and duplicative for private facilities that can report electronically. In some countries where the digital infrastructure is more advanced, such as Kenya and Tanzania, some private facilities reported a preference for electronic data recording, management, and transfer because it offered more data security, aided in the production of monthly summaries, and facilitated data sharing and tracking over time.

Reporting forms do not reflect private facility service provision

Standardized reporting forms are often designed for larger public facilities that offer a suite of generalized services. Private providers often object to the multitude of pages in the reporting form that are not relevant to small private facilities that specialize in services such as family planning or childbirth. Despite limited applicability, private facilities are required to use the same reporting forms, which can make reporting complicated and cumbersome, and often means that extra pages are printed and only partially completed or not completed at all. This is a particularly notable challenge for private sector providers like pharmacies, laboratories, drug shops, and CHWs, which offer specific subsets of services.

Private providers do not receive feedback on reporting

In many countries, the flow of data is one way: the private sector shares data with the public sector but does not receive informative data about their clinic or catchment area in return, particularly when reporting is paper-based. Private providers have expressed frustration that they do not get any benefit or feedback on their data, and this frustration represents a behavioral barrier to routine reporting. If the private sector is to be a true partner to the MOH in routine reporting, the flow of information should be bi-directional.

Strategies to facilitate improved implementation

MOH: Equitably distribute reporting tools for all registered facilities

If an MOH desires the same reporting participation, timeliness, and quality across public and private facilities, it must equitably allocate the tools (registers, reporting forms) and resources (training, supportive supervision) that enable high-quality participation. When confronted with insufficient resources, an MOH should identify and allocate partner funding for or assistance with the production, distribution, and collection of forms to ensure the private sector has the necessary tools to participate in routine paper-based reporting. Alternatively, the MOH could explore digital reporting tools that may facilitate efficient reporting. Furthermore, the MOH should offer HMIS training and supportive supervision opportunities to private providers.

Supportive supervision desired by private facilities in Ghana

In Ghana, both the MOH and private clinical facilities seek to facilitate high–quality, routine reporting into the national HMIS (DHIS2). In a SHOPS Plus workshop in 2019, private providers identified weak engagement with the District Health Management Team and lack of training at the facility level as the top two barriers to routine reporting. They also identified quarterly supportive supervision visits from the Ghana Health Service as the desired solution to this barrier.

SHOPS Plus examined whether supportive supervision visits could improve reporting rates in a randomized controlled trial in 2020. The result of this study was that private facilities that received quarterly supportive supervision visits were significantly more likely to submit a monthly reporting form in the subsequent month compared to private facilities that received ad hoc support and oversight (Johns et al. forthcoming).

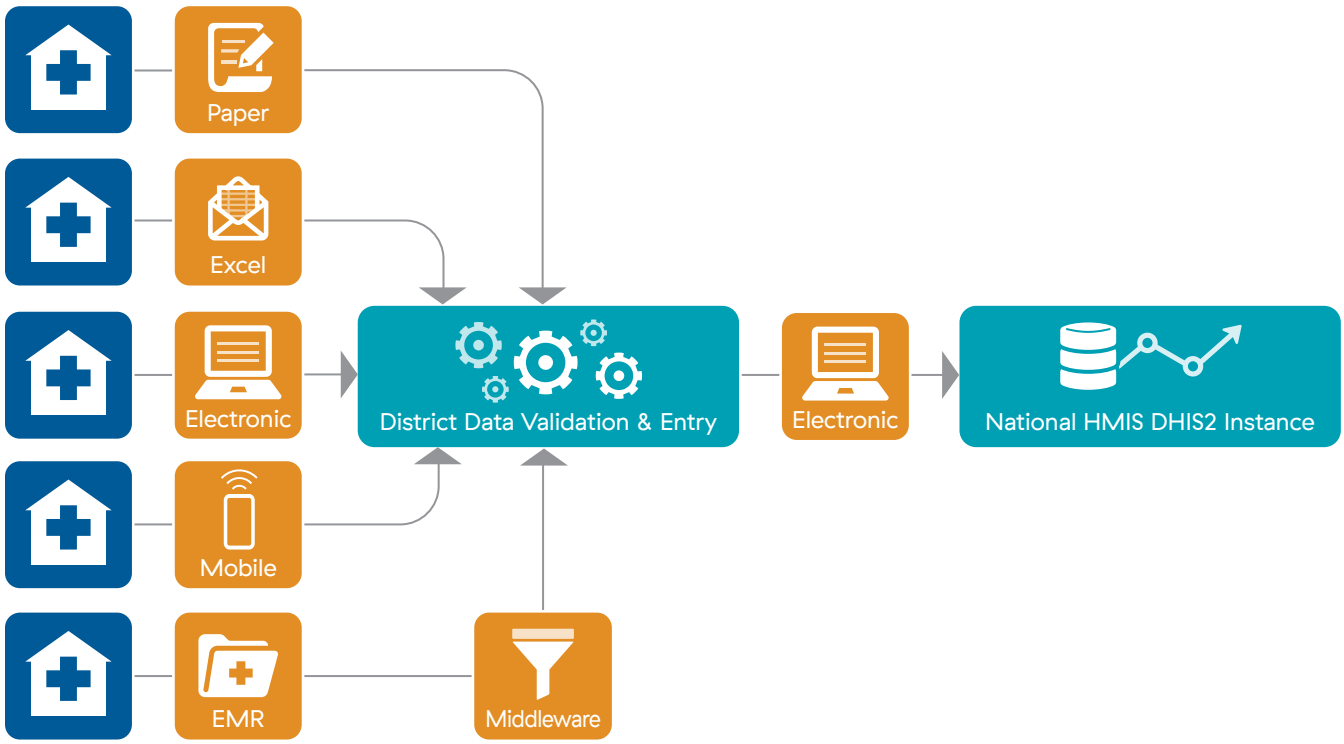
MOH and private provider: Explore alternative submission arrangements for paper reporting forms

While it is a standard practice for private facilities to bring their monthly reporting form to the district office, some countries have allowed alternative arrangements to accommodate and encourage private sector reporting. Many private providers have existing relationships with neighboring public facilities, either through formalized memoranda of understanding, shared staff, or other arrangements. A neighboring public facility might be accessible when the primary district office is unreachable for private providers. MOH and private sector stakeholders should consider allowing private facilities (particularly remote or rural facilities) to submit reporting forms to a nearby public facility, increasing the probability that they will submit on time.

MOH and private provider: Develop digital solutions to facilitate reporting

There are several ways in which an MOH can support electronic reporting to the national DHIS2 platform in the private sector (Figure 5). The simplest option to facilitate monthly reporting is to create an official Excel-based register and linked monthly summary forms that private providers can email to the district data officer. An Excel form does not require Internet connectivity but does provide autocalculation and data validation. It can also facilitate monitoring of trends over time with basic visualization, which can serve as a reporting incentive when private providers do not receive other feedback. A second option is for the MOH to create direct, online accounts (described in the system readiness section). A third way that private stakeholders, often supported by donor-funded implementing partners, can automate reporting is to use middleware to transform and export data from a private facility's proprietary electronic system (or DHIS2 instance) into the indicators required by the national DHIS2 instance. Middleware is software that acts as a bridge between an operating system or database and applications. It allows data to be shared between systems and enables the use of different channels of data collection, including through mobile devices and unstructured supplementary service data (USSD). Donors and implementing partners have largely driven innovation in the use of mobile technologies and middleware for HMIS reporting in the private sector. These tools have also created opportunities to enable routine reporting via mobile phone by pharmacies, drug shops, laboratories, and CHWs.

Figure 5. Reporting mechanisms for private providers



Using USSD for drug shop reporting in Tanzania

In 2017, the Clinton Health Access Initiative, in partnership with Tanzania's e-Government Agency, the Reproductive and Child Health Services Program, and SHOPS Plus, launched an USSD mobile reporting system for ADDOs and private laboratories to report family planning and other indicators. ADDOs have a dedicated, tailor-made paper register, through which information is recorded and aggregated for reporting once a month. USSD works on a "question prompt" basis, where providers simply need to answer a question on their mobile device specifying the month of the data they submitted. Reporting into the system is encouraged via bimonthly automated reminders that are sent via SMS. The USSD system does not require the Internet, and can be used in remote areas where Internet connectivity and smartphone penetration may be limited. The mobile phone reporting system has been configured to automatically link to a private sector DHIS2 instance, promoting visibility of family planning data for more than 2,000 ADDOs.

MOH: Create modular reporting forms to reflect private sector services

For private facilities that report electronically into DHIS2, the MOH can configure reporting blocks that only include indicators that are relevant to that facility (e.g., only family planning indicators). For private facilities that report via paper forms, which represents the majority of reporting facilities in LMICs, the MOH should consider modifying monthly reporting forms so that they reduce the reporting burden. Modifying paper forms does not require re-configuration of DHIS2 or changes in indicators, which can result in more complex system revisions. It can simply be the re-organization of the physical forms so that they are shorter, less complex, and more directly reflective of how service provision is organized across sectors. The creation of modular forms may also benefit district data officers who are responsible for reviewing, validating, and entering data.

Modular monthly reporting forms in Senegal

One of the barriers to private provider reporting in Senegal was the complexity of the paper registers and reporting forms. To address this challenge, SHOPS Plus convened the Private Sector Health Alliance, the National Agency of Statistics, the Division of the Health Information System, and others in 2018 to tailor reporting forms for 120 private facilities across four regions. Stakeholders identified priority indicators sourced from standardized registers and organized them to reflect only relevant data for those types of private facilities. For example, facilities that only offered family planning services received reporting forms that included only related indicators. In parallel, the MOH configured the direct online accounts so that facilities could select only the electronic reporting sheets relevant to their facility.

Private provider: Identify priority indicators for feedback

Private facilities have expressed interest in their performance metrics related to priority indicators at district and national levels. Whether private facilities are reporting electronically or through paper mechanisms, feedback can be a valuable motivator for a private provider to report. Private providers should identify and agree upon a list of indicators of interest through the public-private HMIS steering committee or private sector health association at a district or regional level. Indicators of interest will likely vary by provider type.

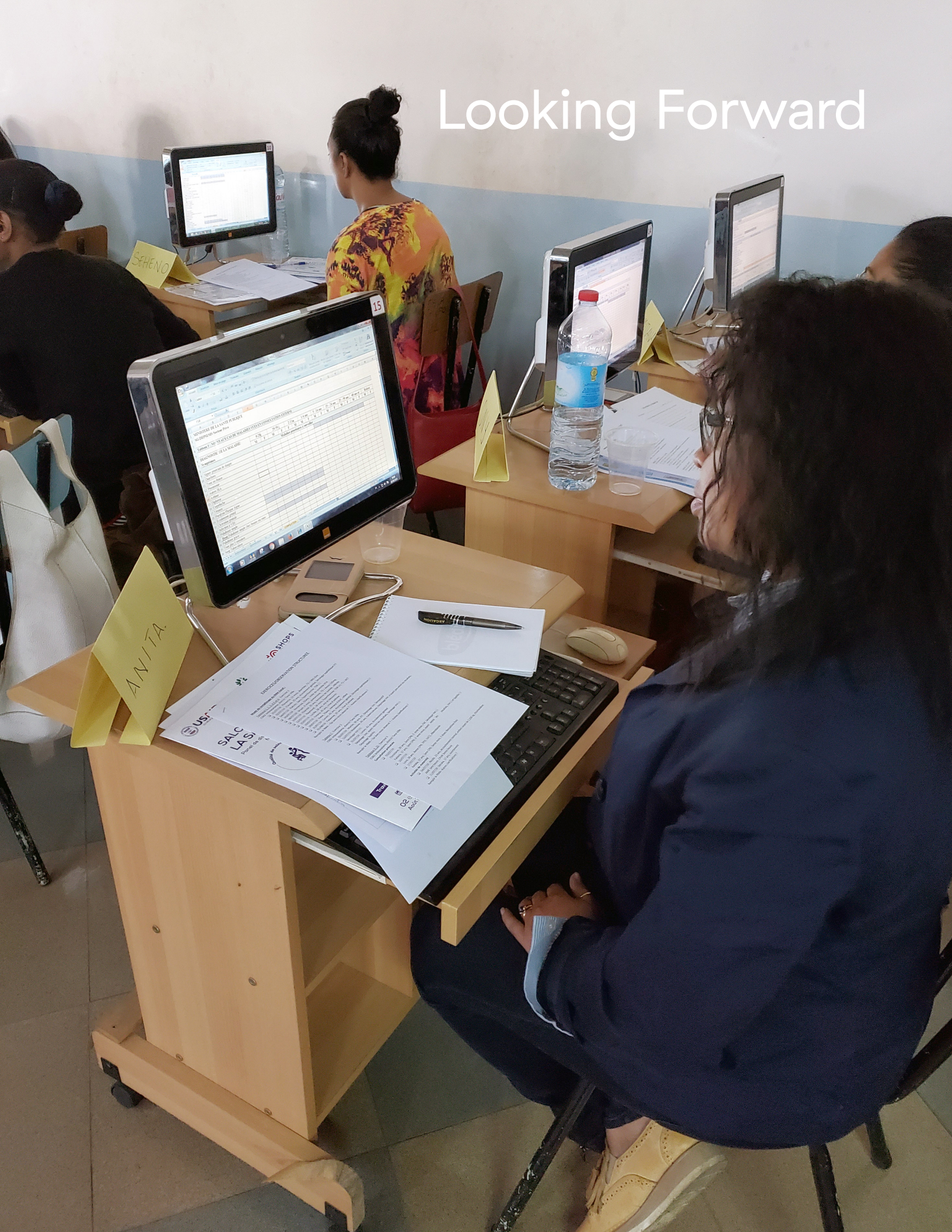
MOH: Provide electronic and paper-based feedback reports at district and regional levels

If private providers are reporting electronically, the MOH should configure DHIS2 so that private provider accounts display historical trends or averages in a given district. If reporting is completed using paper forms, the MOH could generate standardized one- to two-page paper reports that highlight agreed-upon priority trends and indicators for the district or regional level. Paper handouts would be limited in that they could not provide any facility-level feedback or trends. Paper handouts could be distributed during training or supportive supervision visits.

Photo: DDC/Sama Jahanpour

Photo, facing page: Emily Mangone

Looking Forward



Looking Forward

Aspirations to achieve universal health coverage, donor emphasis on self-reliance and sustainability, and the emergence of a global pandemic have resulted in renewed focus on health system strengthening and the contributions of the private health sector. The private sector plays an important role in the provision of health products, services, and information, and must be engaged and counted to fully understand and respond to the health needs of a population. Looking forward, MOH, private, and public stakeholders need to identify barriers specific to their country context and apply strategies such as those offered in this brief to build an inclusive health information system. In this section, we highlight key takeaways, caveats, and next steps for private sector participation in a national HMIS.

There is not a one-size-fits-all approach to private sector inclusion
Across countries, the private sector can look very different in terms of makeup, capacity, volume, and types of services and products offered. These differences are influenced by a country's health profile, regulatory and governance approaches, and infrastructure. The maturity of a national HMIS also influences what types of providers are engaged and how. For these reasons, there is not a one-size-fits-all approach to improving private sector inclusion. The framework in this report can be a roadmap to identify specific barriers in a given context, and while the strategies may not be applicable for every type of private provider in every country, they may help stakeholders to brainstorm ways in which they can advance private sector participation.

An inclusive national HMIS requires significant resources and prioritization
Comprehensive inclusion of private sector data in a national HMIS is an ideal that few countries have achieved because it requires substantial resources to initiate, monitor, and enforce participation as well as to manage ongoing quality control and feedback on monthly reports. While SHOPS Plus has made the case that private sector data are essential to informed and effective decision making, integrating that data may not be as high a priority as other essential functions of the health system. In resource-constrained settings, ministries must allocate scarce funding to the most problematic and pressing health system needs, and may not be able to finance the national HMIS in a way that prioritizes private sector reporting. In these settings, donors and implementing partners can play a role in identifying barriers and advancing private sector engagement. However, the challenges with an HMIS are often systemic and stakeholders should consider how time-bound technical assistance can make a sustainable impact.

Reporting must align with operational priorities and practices

The reality of the for-profit private health sector is that it cannot exist without considering the financial bottom line. Competing demands on private providers can result in poor record keeping and resistance to government oversight, regulation, and taxation. Private providers of all cadres must be convinced of the value of routine reporting, not only as an ideal for public health, but as a good business principle. Motivating private providers to participate in reporting activities instead of or in addition to activities that directly serve their patients or business interests requires thoughtful consideration of the competitive environment in which they operate and corresponding and consistent incentives or enforcement.

Inclusion of frontline providers in an HMIS is increasingly important

Private sector frontline or last mile providers, such as drug shops and pharmacies, are becoming an increasingly important source of health care as they are delegated more clinical responsibilities and serve as a first point of contact for unwell individuals. One recent example of task shifting in family planning that highlights the importance of capturing data from these types of providers is the national authorization in certain countries of pharmacists and CHWs to administer the injectable contraceptive Sayana Press. Yet accounting for the contributions of these providers and incorporating their data may not be straightforward because the range of services that they provide are different from those of clinics and hospitals. Engaging frontline facilities and providers will require understanding how their workflows and capacities differ from brick-and-mortar clinical facilities and developing tools, indicators, and approaches that not just accommodate, but benefit, their practices. Because of these differences, it is unlikely that frontline providers will be proactively engaged at the early stage of an HMIS when clinical service facilities are the primary focus for inclusion. In countries with a more mature national HMIS and the capacity and interest to expand reporting, donors and implementing partners can apply the strategies offered in this report to integrate these important providers into the national HMIS.

Integration of parallel health information systems can enhance private sector reporting

Reconsideration of how to best capture data from all types of private health care providers should also spark a reimagination of whether and how to integrate the national HMIS with information systems for supply chain, human resources, epidemiological surveillance, and health insurance. Integrating sectors and systems can improve forecasting and responsive, evidence-based decision making. For example, an MOH could reconcile four statistics: 1) the number of implants used in the private sector in a given month (supply chain); 2) the number of service visits scheduled (HMIS); 3) the number of providers qualified to offer implant insertion (human resources); and 4) the proportion of the cost covered for implant insertion (insurance). Integration of sectors and systems can result in more seamless management of the

Photo: SHOPS Plus Senegal

total health market and reduced fragmentation as products, providers, and other resources move between sectors to serve a population's health needs. Including private sector data in the national HMIS can be a first step toward greater private sector participation in other information systems, but only if there is careful coordination across those systems. This includes aligning indicators, reconciling forms, and integrating software. Increasing the reporting obligations of private providers to vertical, noninteroperable systems will detract from already tenuous participation and may reduce the quality and timeliness of reporting for all systems.

Market-based solutions may incentivize sustainable private sector reporting

As country economies develop, the market for health data becomes increasingly robust. Market-based solutions that can monetize private sector data may also accelerate private sector reporting. Companies that collect de-identified patient and facility data gain insights into the health care consumption of a population that are valuable to MOH stakeholders, public and private insurers, pharmaceutical companies, researchers, and others in the medical field. The value of this data is compounded as a national HMIS begins to integrate with parallel information systems for supply chain, human resources, epidemiological surveillance, and health insurance. The potential benefits and limitations of market-driven partnerships should be further explored.

Technology plays an important supportive role in HMIS inclusion

The responsible application of digital solutions can facilitate and advance private sector reporting. Lockdowns related to COVID-19 highlighted the importance of digitization when electronic reporting practices were able to continue while paper-based practices were delayed or stopped altogether. Simple tools like Excel can reduce errors in reporting forms and allow for virtual transmission, USSD can facilitate reporting in remote non-networked facilities, middleware can facilitate alignment of indicators across systems, and the open source, interoperable design of DHIS2 can facilitate integration and allow stakeholders to focus on the more complicated human elements of HMIS architecture and implementation. As mobile networks and Internet penetration expand and digital literacy increases, sustainable mobile-enabled systems for private sector reporting must be tested and scaled.

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Annex A.
Tanzania Country Profile

Context: Private sector participation in Tanzania

This country profile examines the state of private sector participation in the national HMIS through the framework of governance and partnership, system readiness, and implementation. It is intended to serve more as a roadmap than a scorecard as it provides insight into current challenges and opportunities for enhancing private sector engagement.

Tanzania has one of the more mature national HMIS in sub-Saharan Africa. The national HMIS was launched in the 1990s as a paper-based data collection tool supported by a Microsoft Access database and transitioned to the DHIS2 platform in 2011. The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) of Tanzania has invested in strengthening the national HMIS in DHIS2 to improve data collection and promote evidence-based decision making at all levels of the health system.

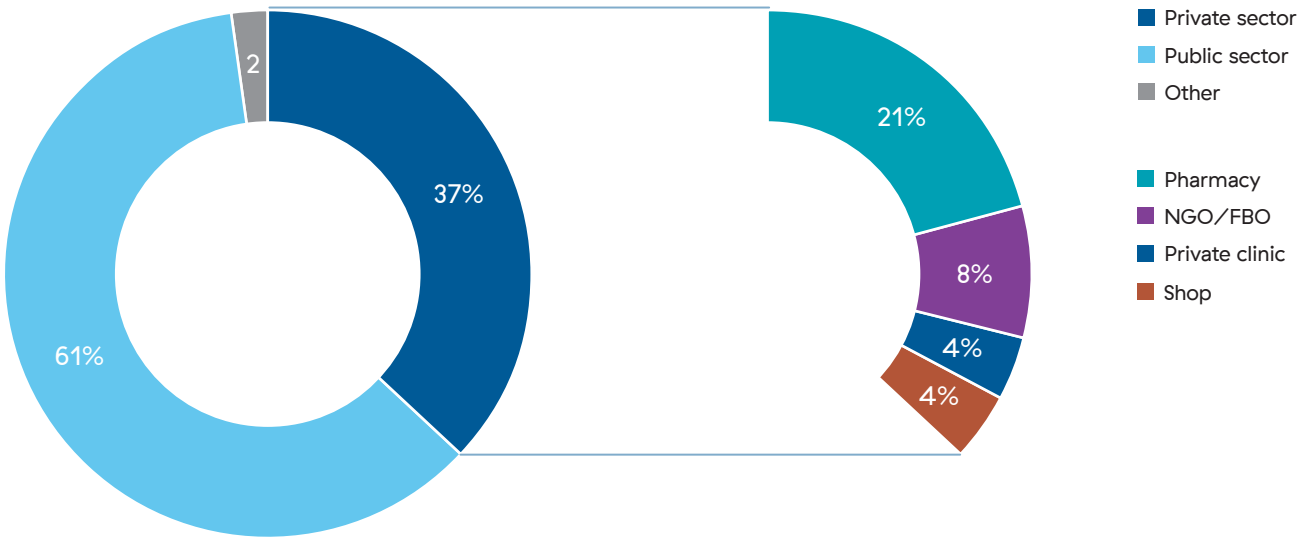
Tanzania: At a Glance

Year of DHIS2 launch: 2011
Number of public clinical facilities: 6,860
Number of private clinical facilities: 4,174
Number of community pharmacies: 1,636
Number of ADDOs: 14,580

Source: http://hfrportal.moh.go.tz/

The private sector plays an important role in the provision of essential health services in Tanzania. As an example, more than a third (37%) of modern family planning users get their method from the private sector (Figure A1). Within the private sector, pharmacies and ADDOs provide more than half (57%) of modern methods, NGO and faith-based organizations provide a fifth of methods, and private clinical facilities provide about 11 percent. Given the substantial contributions of private providers to ensuring access to family planning and other health services and products, it is imperative that these providers are represented in the national HMIS.

Figure A1. Source of method among modern contraceptive users



Source: SHOPS Plus (2019)

Governance and public–private partnership

Governance & Partnership Considerations

- What policies govern, incentivize, and/or enforce private sector reporting?
- Which types of private providers are formally represented in the national HMIS?
- Is there a representative body or unified voice for the private sector?
- Is the private sector engaged in HMIS decision making?
- Is there an actionable roadmap for private sector inclusion in the national HMIS?

What policies govern, incentivize, and/or enforce private sector reporting?

The Tanzanian MoHCDGEC has developed a robust policy and regulatory environment, and fostered strong engagement between the public and private sectors. The primary policy documents that guide health information systems investment are the Health Sector Strategic Plan (HSSP IV 2015–2020) and the National Digital Health Strategy (2019–2024). The HSSP IV, conceived through a participatory process that included private sector partners, provides direction to the monitoring and evaluation systems in the health sector. It emphasizes public-private partnerships and engagement and acknowledges that the private sector is an important asset in terms of service delivery, human resources, health financing, and innovation. The MoHCDGEC is currently working on the development of the HSSP V for 2021–2025.

The National Digital Health Strategy (2019–2024) provides strategic guidance to both public and private stakeholders within the health system on how the application of digital technologies and information systems can improve overall health system performance. These information systems include the national HMIS and electronic systems for surveillance, human resources, facility accounting, and logistics management. The National Digital Health Strategy includes targets for public and private facility participation in national data collection processes.

The policies and procedures for health facility HMIS reporting in both sectors are unambiguous, and they are enforced by linking reporting to the receipt of program-supported commodities (family planning/HIV/maternal and child health/malaria). District-level coordinators for each program compare monthly HMIS reports to commodity ordering forms and reconcile the two sources of data to determine the quantities of public sector commodities to be ordered by a facility. This serves as a structural incentive that enforces reporting for facilities that rely on the public sector for commodities. There are no other formal enforcement mechanisms.

Which types of private providers are formally represented in the national HMIS?
Private clinical facilities, including nongovernmental, faith-based, and for-profit hospitals, health centers, clinics, dispensaries, and maternity homes, are mandated to participate in monthly national HMIS reporting. Private facility HMIS participation is regulated by the municipal health authorities who, in principle, visit all facilities at least quarterly in order to monitor stock, provide supportive supervision, and share and collect information.

Currently, the MoHCDGEC does not require ADDOs, laboratories, or community pharmacies to report into the national HMIS. However, there is a private sector DHIS2 instance supported by donor-funded implementing partners. Because ADDOs play such a large role in family planning service provision, this DHIS2 instance was developed to collect that data and to introduce ADDOs and laboratories to the concept of routine reporting on key indicators. The ultimate objective of this initiative is to integrate the private sector DHIS2 instance with the national DHIS2 instance so that data from ADDOs is reflected in the national HMIS. There is currently no centralized system for pharmacy data.

Is there a representative body or unified voice for the private sector?
Private providers have several representative organizations that make decisions on their behalf and act as liaisons to the public sector. The most comprehensive representative body is the nonprofit Association of Private Health Facilities in Tanzania (APHFTA). Formed in 1994, APHFTA represents hospitals, health centers, dispensaries, clinics, laboratories, pharmacies, ADDOs, and maternity homes, among others. In addition to representing the interests of the private sector with the MoHCDGEC for HMIS, APHFTA supports private sector advocacy, quality training and capacity building,

research, and networking of private health facilities. There are also organizations representing different private sector cadres including the Pharmaceutical Society of Tanzania, district- and regional-level ADDO Associations, and faith-based organizations represented by networks, including the Christian Social Services Commission. The private sector is therefore fairly well organized and represented in Tanzania.

Is the private sector engaged in HMIS decision making?
Coordination between the MoHCDGEC and organizations that represent the private sector has increased thanks to efforts to ensure access to priority health products and services through the public and private sector. The majority of this coordination has been at the national level; APHFTA contributes regularly to national HMIS committee meetings and decision making. The National Digital Health Strategy also identifies private health facilities and private sector partners as members of the National Digital Health Steering Committee. Subnational work is also ongoing, especially with the President's Office—Regional, Administration and Local Government, which plays a prominent role in implementation and often asks private sector partners, including implementing partners, wholesalers, retailers, and social marketing organizations, to share district or regional data if not otherwise included in the national HMIS. There is also a Public-Private Health Forum, which is another platform for discussions related to public-private engagements.

Is there an actionable roadmap for private sector inclusion in the national HMIS?
Because the private sector is already represented in most strategic decision-making bodies for HMIS, there is not a specific roadmap for further private sector-specific engagement. However, there is a Public-Private Partnership Unit and technical working group, which serve to maintain focus on how the public and private stakeholders can partner strategically.

System readiness

System Readiness Considerations

- Is there a current master facility list that includes private facilities?
- Are health indicators aligned across public and private stakeholders?
- Is the national HMIS configured to receive and reflect electronic private sector data?

Is there a current MFL that includes private facilities?
All clinical health facilities, whether public or private, are required to be registered with the MoHCDGEC and are included in the health facility registry (HFR). Approximately 37 percent of registered facilities in the registry are private. The HFR does not include community pharmacies and ADDOs; a list of these outlets is maintained separately by the Pharmacy Council of Tanzania, which is an agency of the MoHCDGEC. The

MoHCDGEC has an active public portal for the HFR that is regularly updated by the ministry's department of information and communications technology. The HFR is the source of the MFL, which is the official source of health facility information for the public and private facilities in mainland Tanzania.

Are health indicators aligned across public and private stakeholders?
All elements related to HMIS data collection are standard across public and private health facilities. The data collection tools, called *Mfumo wa Taarifa za Uendeshaji wa Huduma za Afy*a (MTUHA) Books, are universal regardless of sector. A data dictionary with defined indicators is available by request from the MoHCDGEC, and it is included as a handout in an introduction packet during training. While indicators are aligned across public and private facilities, donor-funded implementing partners including PSI, MSI, and others routinely collect additional program-specific indicators of interest from affiliated or franchised private facilities. This does add to the reporting burden on private providers, but they are also incentivized through informal and contractual arrangements with implementing partners.

While private sector data are shared informally across stakeholders, no private sector, donor, or implementing partner systems or DHIS2 instances are directly integrated into the national DHIS2 instance. There are aspirations to integrate data from the private sector (ADDO/laboratory) instance with the national DHIS2 instance in 2021.

Is the national HMIS configured to receive and reflect electronic private sector data?
The national DHIS2 instance is configured to accept and process reports electronically. Private health facilities that have demonstrated consistent reporting and that have technological capacity are given online accounts and can submit monthly reports directly in DHIS2.

Implementation with the private sector

Implementation Considerations

- Do private providers have the tools and resources to report routinely?
- How can the time and cost burden of reporting be mitigated?
- Are there mechanisms to provide relevant data to private sector providers?

Do private providers have the tools and resources required to report routinely?
In principle, district and regional health personnel deliver reporting tools such as MTUHA Books from the MoHCDGEC on a monthly basis. In practice, a lack of resources can require private health facilities to go and pick them up, but they are typically available at the district level. Capacity-building programs for training health facility staff on the use of the reporting tools are coordinated at the district and regional

levels by the district and regional medical officers, respectively. As a matter of policy, private clinical facilities are given the same access to these training resources as public facilities. In practice, however, public facilities are more likely to receive training than are private facilities due to resource constraints.

The MoHCDGEC does not provide any reporting tools or resources to ADDOs, pharmacies, or private laboratories. However, ADDOs and private laboratories receive reporting tools and training through support from donor-funded implementing partners such as the Clinton Health Access Initiative and the SHOPS Plus project. These reporting tools include the paper MTUHA Books, as well as a USSD reporting system that allows them to submit data via mobile phone. Table A1 presents the mechanisms and systems for reporting by private provider type.

Table A1. HMIS reporting tools and systems by private provider type

Facility Type	Mechanisms for Reporting	System for Reporting
Private clinical facilities	• Paper forms (MTUHA Books) • Direct accounts for national DHIS2 instance	DHIS2—national instance [MoHCDGEC funded/distributed]
Private laboratories	• Direct accounts in private sector DHIS2 instance • USSD mobile reporting	DHIS2—private sector instance [Donor funded, implementing partner distributed]
ADDOs	• Direct accounts in private sector DHIS2 instance • USSD mobile reporting	DHIS2—private sector instance [Donor funded, implementing partner distributed]
Community pharmacies	None	None

How can the time and cost burden of reporting be mitigated?

Private health facilities that have the digital infrastructure, capacity, and patient volume to justify having a direct reporting account in DHIS2 are given that access to facilitate their submissions. An accommodating practice for private health facilities that do not meet these criteria is to pair them with another public or private health facility that does have direct electronic reporting access so that the data can be reported on their behalf. ADDOs and private laboratories can report through mobile USSD systems, allowing the private providers the convenience of reporting through their mobile phones.

Are there mechanisms to provide relevant data to private sector providers? DHIS2 is designed such that there are regular validation checks when data are reported into the system regardless of the ownership of the facility. These data are also monitored by district- and regional-level health personnel depending on the health area and feedback is provided through corrective supportive supervision visits by these personnel. Currently, private facilities that have their own direct accounts can review their historical data and identify trends over time. Private providers have expressed concerns over sharing data with competitors, even in aggregate, and so individual facilities are not given access to aggregated indicators at district or regional levels. For ADDOs that report using a mobile USSD reporting system, there are plans to send feedback loop messages via short message service (SMS) to the individual based on their reported data in DHIS2.

Challenges and opportunities for private sector reporting

Tanzania benefits from strong policies governing private sector HMIS participation and good collaboration between public and private stakeholders. Tanzania also has extensive experience developing and refining its DHIS2 platform and the underlying architecture (such as the MFL). Finally, Tanzania has good mobile phone and Internet penetration, creating opportunities for supportive digital tools for HMIS reporting that can expand reporting access and increase efficiency. Still, some challenges remain and there are opportunities for MoHCDGEC, donor, and implementing partner stakeholders to further advance private sector engagement.

Governance challenge: Community pharmacies, private laboratories, and ADDOs are not formally engaged with the national HMIS.

- **Opportunity**: The ADDO program was established to increase access to essential medicines and pharmaceutical services to populations living in rural and peri-urban areas. As such, they act as an extension of the public health system even though they are privately owned. Given the strong organization and representation of community pharmacies and ADDOs through the Pharmacy Council, as well as the interest of the MoHCDGEC in these data, there is a clear opportunity for donors and implementing partners to facilitate a series of workshops to establish formal, mutually beneficial reporting policies and protocols that govern their participation in the national HMIS.

Governance challenge: ADDOs, private laboratories, and community pharmacies do not benefit from the same access to free commodities as private clinical facilities. Structural incentives or enforcement for non-clinical provider reporting may be insufficient.

- **Opportunity**: ADDOs have indicated that they are motivated to report by inclusion in HMIS decision-making bodies and more opportunities to advocate with district

and regional personnel, which allow them to raise challenges they face. However, evidence from other programs indicates that these perceived benefits will not last in the long term. While there is initial goodwill and strong partnership, MOH and private sector stakeholders should identify structural incentives or enforcement that create tangible, sustainable value for private providers and motivate them to report routinely.

System readiness challenge: The private sector DHIS2 instance that serves as a data repository for ADDOs and private laboratories is not integrated with the national DHIS2 instance.

- **Opportunity**: Because the indicators that are collected in both instances are aligned (both based on MTUHA Books) and DHIS2 software is interoperable, the two instances could be fairly easily integrated so that the national instance accounts for the additional private sector data. Additionally, the private sector instance could expand to include community pharmacies. The MOH and implementing partners should work together to configure an integration such that ADDOs, private laboratories, and pharmacies are accounted for in the MFL hierarchy, and their data are reflected in the national HMIS instance.

Implementation challenge: Monthly reporting tools are not always delivered to private facilities by the MoHCDGEC as expected, requiring extra resources from private providers to travel and/or print new forms. Reporting tools provided by implementing partners may not be sustainable beyond the life of the project (typically 3–5 years).

- **Opportunity**: Associations of private providers such as ADDOs and private health facility associations have expressed interest in contracting with the MoHCDGEC to take over the responsibility of printing and distributing these tools at a cost because that could become a source of revenue for them. MoHCDGEC and private sector stakeholders should explore sustainable, mutually beneficial partnerships to ensure that private providers have the basic tools they need to report.
- **Opportunity**: The MoHCDGEC should consider expanding private provider access to direct DHIS2 accounts and introduce digital tools that facilitate offline data collection and reporting via mobile device. The USSD reporting system used for ADDOs and private laboratories can easily be scaled up to allow other private sector stakeholders to report key indicators using mobile technology.

Annex B. The Social Franchise: Lessons for Improved Private Sector Reporting

Social franchises play a unique role in the market because they can facilitate private sector reporting into national HMIS systems, support the improvement of facility record keeping for evidence-based decision making, and directly collect private sector data for donor reporting and program improvement. Examples of well-known social franchisor organizations for family planning include PSI, MSI Reproductive Choices, and IPPF. Social franchises introduce new incentives that motivate providers to report, when they might not otherwise. Social franchisors provide oversight, accountability, and quality control where governments are unable to, and can also more clearly tie rewards and consequences to the behaviors they seek to encourage or discourage. As such, social franchises are often more successful than governments in encouraging timely, accurate, and complete routine reporting from the private sector. This case study draws from PSI global franchise experiences and offers lessons on how to effectively encourage private provider reporting and reduce duplicative data collection in the context of donor-funded programs.

How does a social franchise work?

Social franchises typically aim to organize fragmented private facilities by identifying and working with existing private health businesses to improve their quality, demand generation practices, business management, inventory management, access to subsidized or free commodities, and more. Franchises can include clinical facilities as well as drug shops, pharmacies, laboratories, and CHWs. A social franchise typically requires that franchisees follow key standards and guidelines in order to remain within the network, which are shared in the form of:

- A brand name and brand use guidelines
- A manual that identifies standard operating practices
- A contract that governs the responsibilities of the franchisor and franchisee
- Standard training on service delivery, demand generation, business improvement, information technology, etc.
- A shared plan and process for quality assurance or supportive supervision

How do social franchises encourage private sector reporting?

To motivate franchisees to submit timely and accurate reports, franchisors use a mix of mechanisms including: performance incentive programs, streamlining national and donor indicators to reduce reporting burden, and introducing electronic patient and clinic management systems into private health facilities to autopopulate MOH and donor reports. PSI has identified the following key approaches applied in one or more of its country programs to improve timely and accurate private sector reporting into national and donor systems.

- **Assess barriers and motivators to reporting**

  By engaging in regular conversations with franchisees, franchisors can quickly hone in on key barriers to provider reporting, which often include a fear of increased taxation, lack of government policies or forms directed toward private sector players, lack of consequences for a failure to report, or simply a lack of time to report. In some cases, a provider may simply not know what a field means in a data collection form (e.g., new user, method switcher), and therefore skip a section of the report.

  In Laos, PSI conducted a provider perception study that helped the social franchise understand what motivates their providers to report. A key finding was that providers are most committed to providing quality care, and so incorporating accurate reporting into quality assurance systems would improve outcomes. In Cambodia, PSI found that private providers were not reporting into provincial health departments because the available forms did not align with private sector service provision. PSI worked with the local government to create a section within existing forms specifically for private providers.

- **Hold franchisees accountable by enforcing contract terms**

  While there are often MOH reporting policies in place, there are fewer touch points to reinforce positive behavior, and often no consequences for failing to report into the national system. This puts franchisors, like PSI, in a strong position to support the enforcement of both donor and national reporting, based on funder interest. Franchisees are typically motivated to report to the franchisor, as they receive technical support and, in some cases, subsidized commodities through their membership, which they risk losing if they fail to comply with reporting requirements. Franchisees know they are contractually bound through their franchise agreement to report services delivered, and that there are enforceable consequences if they fail to do so. Reporting is generally one facet of a franchisor's decision to de-franchise a facility, alongside other key indicators, such as quality.

- **Collaborate with national governments to streamline provider reporting**
  PSI has worked to reduce the inefficiencies of parallel reporting systems by making a concerted effort to streamline donor and national indicators, and to default to government indicators where possible to promote sustainability. Additionally, they build the capacity of ministry staff to incorporate private sector data flows into the national database and support the development of dashboards.

  In Uganda, PSI collaborated with district health teams to print new reporting forms that layered in required donor indicators, so providers could reduce their reporting time and complete less paperwork overall. At the same time, PSI Uganda field staff worked with district biostatisticians to increase private sector data flow into the national system by building the capacity of the public sector to collect, visualize, and make decisions around family planning data.

- **Incentivize reporting performance**
  Franchisees also respond well to positive incentives to behavior change. In some countries, PSI leverages performance rewards programs to influence and improve accuracy and timeliness of provider reporting—both to PSI and into the national system. Taken together with quality scores, providers are assessed using a points system on the reporting each quarter, and the top 1 to 5 percent of providers receive a reward, such as free equipment or supplies. This has proven quite successful in several countries, as it instills a sense of competition between franchisee providers and offers regular opportunities to receive a reward in exchange for hard work.

- **Leverage quick, user-friendly digital reporting mechanisms**
  The COVID-19 pandemic has accelerated a shift to digital reporting, including via WhatsApp, Telegram, SMS, or other widely used platforms, as quality assurance officers are no longer able to visit in person. Surprisingly, this digital approach has increased on-time report submission in many countries, including Cambodia, to nearly 100 percent. Even providers who do not have a smartphone are able to borrow one, take a photo of reports, and send the photos to PSI field staff to be entered into PSI's DHIS2 instance. The same digital platforms are also used to convene virtual quality assurance meetings or link franchisees with online MOH trainings, which keeps providers actively engaged.

  PSI Kenya has introduced an electronic clinic management system to high-performing franchisee sites to help providers better collect, track, and visualize data. Data are automatically shared with the franchisor in lieu of donor reports, and MOH forms, which have been built into the system, pre-populate so that franchisees can simply print and take them to district health offices at the end of the month. Previously, it took a provider a full week to tally paper-based records and to complete MOH forms, costing limited time and money.

Conclusion

PSI focuses on the sustainability of reporting within market systems, and employs methods to increase time and cost efficiencies to providers to align incentives. Social franchises have the advantage of leveraging donor funding, field staff resources, close relationships with providers, and enforceable contracts to influence provider behavior, but are ultimately attempting to shift market levers and strengthen health systems by removing reporting barriers for their own franchisees as well as private sector stakeholders more broadly.

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