USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTaPS) PROGRAM

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Subnational Procurement Practices of Maternal, Newborn, and Child Health Medicines in Nepal

Nepal

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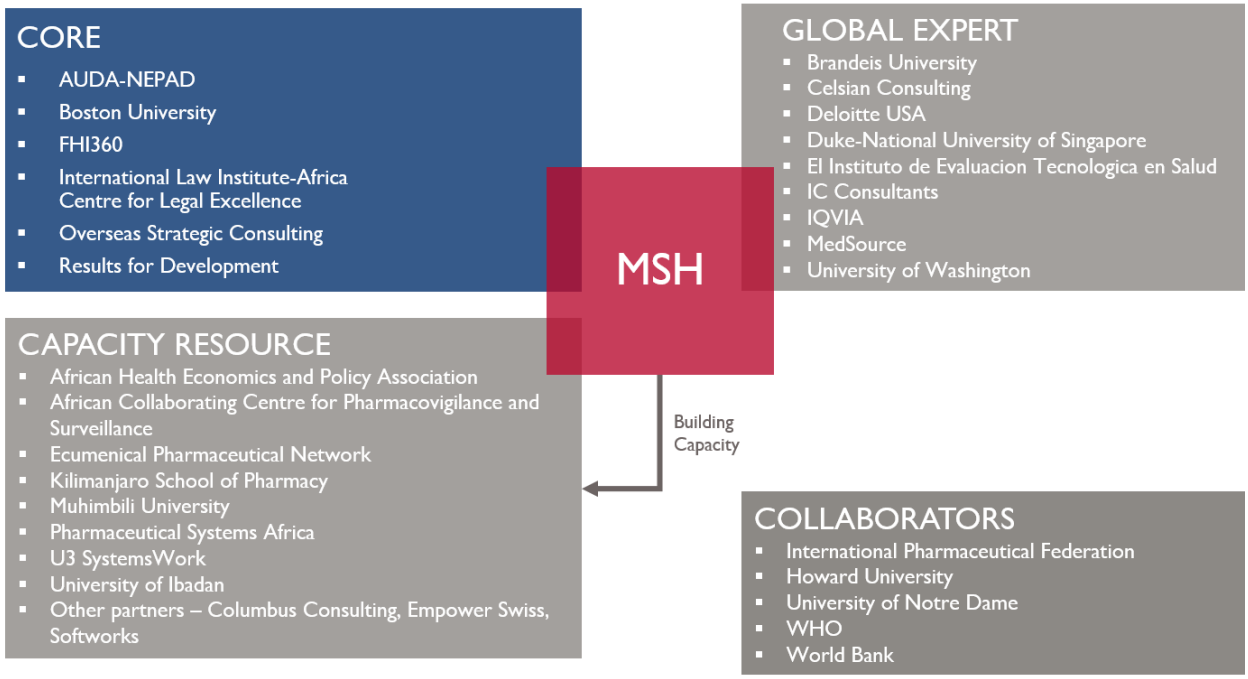
About the USAID MTaPS Program

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to higher-performing health systems. MTaPS focuses on improving access to essential medical products and related services and on the appropriate use of medicines to ensure better health outcomes for all populations. The program brings expertise honed over decades of seminal pharmaceutical systems experience across more than 40 countries. The MTaPS approach builds sustainable gains in countries by including all actors in health care—government, civil society, the private sector, and academia. The program is implemented by a consortium of global and local partners and led by Management Sciences for Health (MSH), a global health nonprofit.

The MTaPS Consortium



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ACRONYMS AND ABBREVIATIONS

CAO	chief administrative officer
DDA	Department of Drug Administration
DOHS	Department of Health Services
e-GP	electronic government procurement
eLMIS	electronic logistics management information system
FP	family planning
GMP	Good Manufacturing Practices
LLG	local-level government
MNCH	maternal, newborn, and child health
MOHP	Ministry of Health and Population
MOSD	Ministry of Social Development
MTaPS	Medicines, Technologies, and Pharmaceutical Services
NPR	Nepal rupee
ORS	oral rehydration salts
PHCC	primary health care center
PHD	Provincial Health Directorate
PHLMC	provincial health logistic management center
PLG	provincial-level government
PPA	Public Procurement Act
PPMO	Public Procurement Monitoring Office
PPR	Public Procurement Regulation
SOP	standard operating procedure
USAID	US Agency for International Development
WHO	World Health Organization

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PROJECT SUMMARY

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EXECUTIVE SUMMARY

BACKGROUND

Appropriate procurement practices and availability of quality maternal, newborn, and child health (MNCH) medical products that are offered free of charge at all public-sector levels of care in Nepal are essential to provide quality MNCH services.

Local-level governments (LLGs) comprise metropolitan and submetropolitan cities and municipalities (urban and rural), while provincial-level governments (PLGs) include PHLMCs and district health offices. After federalization, the LLGs were given authority to take responsibility for procuring most MNCH items and other essential medicines; however, the LLGs did not have experience with procurement. Good procurement should be characterized by transparent, impartial, and accountable processes; integrity and fair and open competition; value for money; and maximized use of available resources for quality-assured products. The central government provides procurement assistance to the LLGs and PLGs as needed; however, studies have shown that there is a large variation in prices and procurement methods followed by procurement entities. In addition, the quality of products procured at the local level is not ensured.

OBJECTIVE

Assess procurement practices at subnational levels to ensure the quality and availability of MNCH commodities.

METHODS

We used a cross-sectional descriptive study design incorporating qualitative and quantitative approaches to assess subnational procurement practices that ensure the quality of MNCH medicines. We assessed the availability of eight MNCH tracer medicines at the local and provincial levels and conducted key informant interviews. We used semi-structured tools to conduct individual face-to-face interviews in Nepali with 77 purposively selected interview respondents from 33 institutions at the federal, provincial (4 PLGs), and local government (12 LLGs) levels; district health offices; and health facilities.

We collected information on the roles and responsibilities, procurement mechanisms and process, training and infrastructure, and finance, including challenges faced by LLGs and PHLMCs focused on MNCH tracer medicines.

FINDINGS

MNCH medicine availability

Availability of MNCH products was good, and procured items reflected the clinical needs at the health facility level. All tracer medicines were available in LLGs except for maternal health products that are procured by health facilities. However, there were isolated stock-outs of two maternal health products in PHLMCs and oversupply from pushing products to LLGs from health office stores.

Procurement roles and responsibilities

Procurement of medicines take place at all levels—federal, provincial, and local. The federal level procures vaccine and family planning (FP) commodities; the PHLMCs procure essential and emergency medicines; and the LLGs (metropolitan, submetropolitan, municipalities, and rural municipalities) procure MNCH items and other essential medicines. The health office, which is the extended provincial health unit at the district level, is responsible for receiving and storing essential medicines and vaccines from the PHLMCs and plays a crucial role in distribution. The health office procures medicines for outbreak management and coordinates and provides technical support to the LLG. Health facilities also procure oxytocin, magnesium sulfate, misoprostol, and other MNCH items.

At all levels, the heads of the offices or facilities were the primary financial decision makers, including for procurement as per the Public Procurement Act (PPA) 2007; in addition, all PHLMCs had pharmacists to assist in procurement and other medicine management functions, while no LLG had a pharmacist on staff.

The LLG is responsible for allocating funds and carrying out procurement activities to make medicines available at all facilities. However, the key MNCH items (oxytocin, misoprostol, and magnesium sulfate) were not being procured by the municipality. The municipality allocates a budget to procure these medicines to health posts that are birthing centers or where medical abortion services are available. The PHLMCs also procure MNCH medicines, which are distributed to provincial hospitals and local levels through the health offices. There was duplicated procurement among PHLMCs, LLGs, and health facilities. Without guidance, multiple procurement units purchased the same medicines, and some medicines were not procured at all.

Procurement process and practices

Three procurement methods are used depending on the value of the order: direct procurement, sealed quotation, and open bidding. An open bid must be published in the national newspaper with 30 days' notice for bid submission. A sealed quotation must be published in a local newspaper with 15 days' notice. Direct procurement from a retail outlet is used for small purchases. This study revealed that LLGs and health offices mainly used direct procurement (by splitting the procurements) and sealed quotation methods, while PHLMCs used both open bid and sealed quotation methods.

Across all LLGs and provinces, procurements were conducted two to eight times a year. None of the LLGs or PHLMCs included in the study prequalified products or suppliers/manufacturers, which is permitted by Nepali procurement acts, regulations, and guidelines, mainly because they were unfamiliar with the practice. All LLGs and PHLMCs used product specifications developed at the federal level for tenders, such as quantity, strength, dosage form, and a quality indicator (Good Manufacturing Practices [GMP] certified).

There was no standard approach or formula applied to quantification, and the data were often missing or of poor quality. The availability of budget ultimately determined the quantity of medicine to be procured, but no standard prioritization or vetting process was in place.

None of the LLGs or PHLMCs had access to standard operating procedures (SOPs) or guidelines related to the procurement process. Likewise, none of the LLGs or PHLMCs had any kind of medicine procurement list. They used either Nepal's free drugs list (2017) or the essential medicines list (2016).

The prices of medicines procured by the LLGs and health facilities were generally higher than those procured by the PHLMCs.

When receiving shipments, pharmacists or paramedics at PHLMCs and LLGs performed only a visual inspection. The majority of LLGs did not have any inspection checklists, while PHLMCs had a checklist of evaluation parameters available. None of the LLGs or PHLMCs had an established mechanism for reporting supplier issues.

We assessed the adherence of the LLGs and PHLMCs with nine good pharmaceutical procurement principles. All 12 LLGs in the study complied with five of the nine principles, and all four PHLMCs complied with seven of the nine; none of the institutions visited complied with the principles of transparency and written procedures. Procurement functions, prices, and other information were not made publicly available, nor was there a mechanism to monitor the transparency of the procurement process at the LLG or provincial level.

Procurement training and infrastructure

Only some staff in LLGs and PHLMCs were trained in procurement, which means that untrained staff carried out procurement functions. Functional computers and internet access were available in all LLGs and PHLMCs. PHLMCs used the electronic government procurement (e-GP) system, which is the government's web-based procurement portal, but most LLGs did not due to lack of capacity.

Budget development and allocation

The budget needed for medicines at PHLMCs and municipalities came from the federal government as a conditional grant. In addition, the provincial ministry allocated additional resources for the PHLMCs, and municipalities allocated for themselves at the local level. The budget allocation for medicines in LLGs ranged from a minimum of 2.1M NPR to a maximum of 4.7M NPR, where the average share from the federal government was 59%. The PHLMC budget for medicines ranged from a minimum of 58M NPR to a maximum of 71M NPR. There was no separate budget line for MNCH-related drug procurement in any LLG or PLG. While most of the LLGs, PHLMCs, and health offices felt they did not have sufficient budgets for medicines to meet demand, most were not able to spend all their budget allocation.

Recommendations

Deficiencies in the way subnational procurement is conducted should be addressed to ensure medicines' quality and affordable pricing. We made 12 recommendations to mitigate some of these issues by maximizing the use of resources and achieving value for money, improving transparency and accountability, and ensuring product quality. For example, procurement guidelines for medicines and health commodities should be developed and followed by all levels. Aggregating demand through centralized bidding and local procurement through a framework contract would be a more effective way of managing procurement at the local level, but negotiation should occur at the central level where there is more expertise. Prequalification and registration of wholesalers should be considered as well as a system to monitor suppliers. Complementary actions include strengthening and expanding the electronic logistics management information system (eLMIS) to make sure quality data are used; standardizing the quantification approach; and building capacity in procurement functions at all levels, including the use of the e-GP.

Conclusion

A multifaceted approach is required to improve the quality and affordability of medical products procured at the subnational level. Resource usage should be maximized to achieve value for money; additional strategies to improve transparency, integrity, and accountability should be established; and the quality of medical products should be ensured.

INTRODUCTION

BACKGROUND

Meeting the United Nations Sustainable Development Goal for health[1] and achieving universal health coverage requires reliable access to affordable and quality medicines. Therefore, along with the state's commitment to health, the management and procurement of affordable, quality, and appropriate medicines is important. In Nepal, different policies, strategies, acts, rules, and directives have been issued and are being implemented to ensure the availability of quality medicines, including the National Health Policy 2019,[2] National Drug Policy 1995,[3] Nepal Health Sector Strategy, Public Health Service Act, Safe Motherhood and Reproductive Health Right Act, PPA, and Public Procurement Regulation (PPR).

The Constitution of Nepal established three tiers of government—federal, provincial, and local—and all three have the right to procure medicines; however, there is no separate policy or strategic framework for procuring medicines or other health commodities. Nepal ensures citizens' health through the constitution by using public expenditure to provide basic health services free of charge. Medicines for women's and children's health are considered essential medicines and are procured using government funding. The government aims to comply with good public procurement practices. However, procurement is somewhat fragmented, as some health commodities, including vaccines and FP products, are procured centrally, some provincially, some locally, and even some at the facility level (hospital and health center). A mechanism for ensuring affordable prices and medicine quality has not been standardized.

HEALTH SERVICES DELIVERY STRUCTURE

Nepal's restructured health management sector aims to ensure uninterrupted health services through an efficient and effective supply chain management system. The Logistic Management Section under the Department of Health Services (DOHS) is responsible for providing a regular supply of medicines, equipment, and vaccines to PHLMCs and LLGs for 7,632 service delivery points.[4] The three-tiered organizational structure and major functions are presented in figure 1 and table 1.

[1] Sustainable Development Goal, United Nations Organization, 2016

[2] https://publichealthupdate.com/national-health-policy-2019-nepal/

[3] https://www.dda.gov.np/content/national-drug-policy-1995

[4] Nepal health facility registry 2020. Available at: https://nhfr.mohp.gov.np/

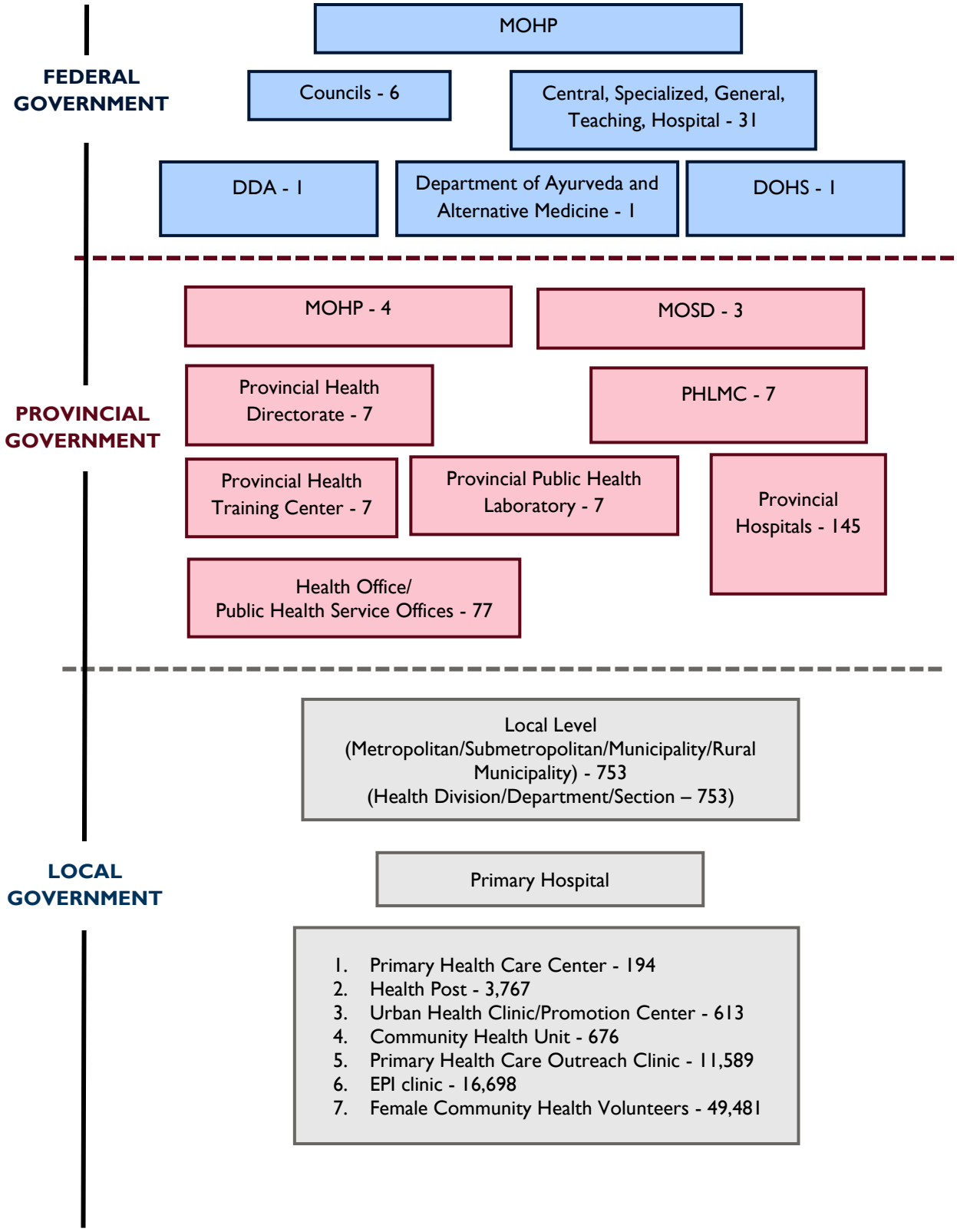

Figure 1. Health system framework of Nepal

Table 1. Government organizations and their role in managing medicines

Level	Tier of organization	Role related to medicine management[5]
Federal	MOHP	▪ Develop and amend acts and regulations ▪ Ensure sufficient budget for medicine procurement
	Logistic Management Section of Management Division/DOHS	▪ Provide annual procurement plan and consolidated procurement plan in consultation with DOHS divisions and centers ▪ Support provincial and local levels to prepare procurement plans and procedures ▪ Procure and distribute medicines such as vaccines, FP commodities, and some specialty medicines
Province	MOSD in three provinces: Madhes, Karnali, and Sudurpaschim MOHP in four provinces: Province One, Bagmati, Gandaki, and Lumbini	▪ Develop and amend provincial acts and regulations ▪ Ensure sufficient budget for medicine procurement ▪ Prepare provincial-level guidelines
	Provincial Health Directorate (PHD) (7) PHLMCs (7)	▪ Prepare procurement plans and logistic supply plans ▪ Procure, store, and distribute equipment and medicines and carry out other health logistics ▪ Manage provincial buffer stock of medicines and health-related products for emergencies ▪ Facilitate and coordinate regular procurement and supply to LLG entities
	Health office at district (77)	▪ Procure some medicines ▪ Support distribution of medicines at the local level ▪ Provide procurement-related technical support if needed
Local	Metropolitan/submetropolitan/ municipality/rural municipality health sections (753)	▪ Plan procurement and conduct quantification and forecasting of health commodities at the local level ▪ Order and receive a regular supply of essential medicines, vaccines, and FP commodities for health facilities ▪ Procure, store, and distribute medicine and equipment to health facilities ▪ Provide supervision, monitoring, and technical support to health facilities ▪ Coordinate with district and health facilities to ensure availability of medicines and commodities
	Hospital administration and pharmacy management unit	▪ Quantify, forecast, procure, and store medicines ▪ Order and ensure supply of medicine ▪ Operate own hospital pharmacy

The federal structure of the country is governed by three levels of government—the federal level, seven provinces, and 753 local level governments.

At the federal level, the MOHP is responsible for formulating the national plan, policy strategy, and guidelines. Under the MOHP, there are three departments—DOHS, DDA, and Department of Ayurveda and Alternative Medicine—that are responsible for the formulation and implementation of programs, the use of financial resources and accountability, and monitoring and evaluation. The DDA is the regulatory authority responsible for ensuring the quality, registration, and inspection of pharmacies, wholesalers, distributors, and manufacturers of medicines and regulating their import, export, production, sale, and distribution. The Department of Ayurveda and Alternative Medicine is responsible for Ayurvedic services and implements health promotional activities. The DOHS is responsible for delivering preventive, promotive, diagnostic, and curative health services. The director general is the

[5] Functional analysis of role and responsibility of different levels of government, MOHP, 2017

organizational head. The DOHS has five divisions: Management, Family Welfare, Epidemiology and Disease Control, Curative Service, and Nursing and Social Security.

The Management Division is responsible for the procurement and supply of vaccines, contraceptives, medicines, equipment, instruments, and other logistics at the provincial and local levels. This division is also responsible for implementing and monitoring the eLMIS and providing technical support to the provincial and local levels for procurement and supply chain issues.

The provincial ministries pertaining to the health sector are the MOHP (in four provinces) and MOSD (in three provinces). Under the provincial ministries, there are provincial-level health directorates, which are responsible for the monitoring, supervision, and quality assurance of health services in the province. Similarly, there are seven PHLMCs, one in each province, that are responsible for procurement and supply chain management of essential medicines. Each district has a district health office that is the extended provincial health unit under the health directorate and provides support in supply chain management of medicines procured by PHLMCs. Health offices distribute medicines and other supplies received from PHLMCs to LLGs. The district health office also procures medicines needed for outbreak management and health campaigns.

There are 753 LLGs. According to their population, infrastructure, and services available, they are further categorized as metropolitan city, submetropolitan city, municipality, or rural municipality. Availability of transport facilities; condition and regularity of road and air transport; availability of education facilities; status of health, telecommunications, and electricity facilities and access to such services; human development index; and geographical location are among the determining factors in the categorization. There are 6 metropolitan cities, 11 submetropolitan cities, 276 municipalities, and 460 rural municipalities. According to the constitutional mandate, all LLGs have the same authority and rights. Each LLG has a health section responsible for implementing health programs and initiating the procurement process of medicines. Local health facilities, health posts, primary health care centers (PHCCs), basic health service units, and municipal hospitals are under the respective LLG and provide health services at the community level. The procurement and supply chain of health facilities is managed by LLGs.

MNCH services are delivered through health posts, PHCCs, and urban health clinics at the peripheral level. Similarly, provincial and higher-level referral hospitals provide these services.[6] MNCH is a high-priority program in Nepal, and services are available free of cost through public-sector health facilities. The medicines needed for MNCH services are on the essential medicines list and are supplied regularly.

PURPOSE

The objective of this assessment was to map the procurement standards and practices used in the subnational government (provinces and LLGs) as a means to identify options for the government to develop strategies to improve subnational procurement and ensure the quality of MNCH medicines.

[6] Organization structure and service per the Ministry of Health and Population, MOHP Business Plan

REVIEW OF POLICIES AND ACTS

There are a number of policies and legal frameworks that guide procurement of medical products, and the federal government provides technical assistance and capacity building to support the procurement process.

POLICY

The Constitution of Nepal 2015 states that health is a fundamental right provided through a number of policies. Further, the MOHP has endorsed the Nepal Health Sector Strategy 2016–2021[7] implementation plan, which provides the budgetary framework to ensure Nepal's commitment to achieving the Sustainable Development Goals by 2030. The following policies guide access to medical products for the delivery of health services in Nepal.

National Health Policy 2019

The MOHP developed the National Health Policy 2019 as part of the framework to provide free basic health care services to citizens. The health policy states that "p*rocurement, transportation, quality, storage, and distribution system shall be made more effective and systematic by preparing specification of medicines and medical supplies*." Specifications provide the description of the medicines and medical supplies, which ensure the quality of goods to be procured.

National Drug Policy 1995

This policy's goal is to maintain, safeguard, and promote the health of people by making the country self-reliant in medicine production; ensure the availability of safe, effective, standard, and quality medicines at an affordable price in quantities sufficient to cover the needs in every corner of the country; and effectively manage all medicines-related activities, including production, import, export, storage, sale, supply, and distribution.

To ensure quality, the policy guides the procurement of medicines through tenders from a list of standard manufacturers or their authorized agents that the government of Nepal has identified using a prequalifying process. Other stipulations include that the procurement of essential medicines should be made using generic names and that a GMP certificate issued as per World Health Organization (WHO) guidelines should be compulsory for medicines.

National Reproductive Health Commodity Security Strategy 2015

The Reproductive Health Commodity Security Strategy aims to ensure a reliable supply and choice of quality contraceptives and other reproductive health commodities to meet every person's needs at the right time and in the right place. It also aims to ensure adequate funding to purchase contraceptives and other reproductive health commodities for MNCH services.

[7] http://www.nhssp.org.np/NHSSP_Archives/health_policy/NHSS_implementation_plan_2016_2021_february2017.pdf

LEGAL

Following are descriptions of laws and regulations that affect the procurement of health products.

Drug Act 1978

This act has been in existence since 1978 and was amended in 2000. The DDA was established under the provision of the Drug Act to carry out all the functions related to the control of drugs. The Drug Act prohibits the selling of any medicine without it being registered in the country. Any person who sells and distributes medicines should also registered with the DDA. This act provides legal provision for the availability of safer medicines for public consumption that should be effective and meet quality standards. It prohibits the manufacture, sale, distribution, export, import, or consumption of drugs not conforming to prescribed standards.

Public Health Act 2018

This act is the main legal provision for restructuring the health system. Provisions relating to the price and provision of medicines, prescriptions, and pharmacies are as follows:

- Physicians and health workers must write the generic name of medicines in a prescription.
- Each government hospital must ensure the regular availability of medicines at a fair price by operating its own pharmacy.
- The government of Nepal will determine the price of medicines.
- Each health institution and service provider must comply with the standard treatment protocol so that medicines are properly used and promoted.
- Pharmaceutical suppliers must make necessary arrangements during the storage, sale, and distribution of medicines to maintain their quality.

Public Health Regulation 2019

The Public Health Regulation's aim is to ensure the availability of free health services, including those for MNCH, which is a fundamental right of citizens. The regulation places the responsibility for providing basic health services exclusively at the local level.

Public Procurement Act 2007 (first amendment July 14, 2016)

The PPA, introduced in 2007, strives to create a more open, transparent, competitive, reliable, and efficient governmental procurement system. It also aims to obtain the maximum return on public expenditure by promoting competition, fairness, honesty, accountability, and reliability in the public procurement process. Furthermore, it ensures good governance by enhancing the managerial capacity of public entities in procuring construction works, goods, and consulting services by providing equal opportunities for products, sellers, suppliers, and construction entrepreneurs to participate in the public procurement process without discrimination. There is no separate legal arrangement for health commodities in the act—all medicines and medical products are procured following PPA under the provision of goods. A substantial proportion of the national health budget goes toward the purchase of pharmaceutical products/medicines. Table 2 lists the procurement methods prescribed by the public procurement regulation in the PPA 2007 for any public entity.

Safer Motherhood and Reproductive Health Rights Act 2075-2018

The Safer Motherhood and Reproductive Health Rights Act 2018 provides legal provisions for implementing maternal and neonatal health services as guaranteed by the Constitution of Nepal. This act includes mandatory provisions to the local level to allocate the required budget for maternal and reproductive health services in its annual budget.

Table 2. PPA's legal measures for the public procurement process

Methods	Procurement of medicine/ equipment	Budget limit	Process	Guidance
Procurement of goods, construction works, or other services (medicines and medical products are procured under the provision for goods)				
Through direct purchase ***(Clause 85 of PPR)***	Goods/services/ construction work	Not to exceed 0.5M NPR	Quotation from standing list	Based on cost estimate up to 0.5M NPR
	Medicinal goods	Not to exceed 2M NPR	Quotation from supplier	Procure at the selling price specified by the manufacturer of such goods by publishing a notice in a newspaper of national circulation
	Medicinal goods	No limit	Direct negotiation	If there is only one pharmaceutical company prequalified by WHO to manufacture any pharmaceutical product
Sealed quotation ***(Clause 84 of PPR)***	X-ray, ECG, medicinal goods, medical equipment used for diagnosis and treatment of a disease	Not to exceed 5M NPR	▪ Competitive biding ▪ Can be published as a notice in the local newspaper ▪ 15 days bid submission time	Based on cost estimate up to 5M NPR
Open bid ***(Clause 15 of PPR)***	Any type of goods/works/ service as per need	Mandatory above 5M NPR	▪ Competitive bidding ▪ Notice in the national newspaper ▪ 30 days bid submission time and 45 days in case of international competitive bidding	Cost estimate above 5M NPR
Catalog shopping ***(Clause 31 B of PPR)***	Heavy equipment, motor vehicles, tools, machinery equipment, medical devices required for health services such as X-ray and MRI or similar	0.4M NPR	▪ Competition of price among suppliers on the published price ▪ upon giving written notice of 7–15 days	Only authorized agent or production company eligible for bid
Limited tendering ***(Clause 31 C of PPR)***	Goods/works/ services that are of limited availability		▪ Competition among supplier/service providers through a 15-day notice ▪ Should obtain prior approval from one level higher authority	Inviting bids or proposals if suppliers are limited (3 or fewer)
Emergency procurement (special circumstances) ***(Clause 145 of PPR)***	Goods/works/ services per need during emergency phases (immediately in a short period)	NA	▪ Competitive or negotiation ▪ Procurement exceeding 1M NPR will publish a public notice of the procurement details	For use if a crisis could occur in public security and interest and community health if procurement is not conducted immediately

METHODOLOGY

This was a cross-sectional descriptive study of subnational procurement practices of MNCH medicines in Nepal using both qualitative and quantitative data collection.

STUDY SAMPLE

To best describe and assess performance in procurement practices, we took a sample from all administrative levels from the MOHP and DDA branch offices to the provincial level and down to the health facility level (table 3). A total of 33 sampling points were included, all of which are involved in planning, budgeting, procurement, distribution, and storage. Three of the seven provinces in the country were sampled to represent the mountain, hilly, and terai regions and also considering access to the province and the availability of the DDA and its branch offices in Biratnagar and Birgunj. The provinces included were Province 1, Province 2 (Madhesh Pradesh), and Gandaki. Within each province, we included the PHD. A fourth directorate and the PHLMC from Kathmandu were also included to cover Bagmati province. Within each province, two to six districts were sampled purposively. In total, 17 districts were visited (figure 2, table 4).

Table 3. Government offices included in study sample

Government entity	Number
Management Division/DOHS	1
Department of Drug Administration (Subnational unit) ▪ DDA Biratnagar ▪ DDA Birgunj	2
Provincial ministry (MOSD/MOHP) ▪ MOSD Prov 1 ▪ MOSD Madhesh Pradesh ▪ MOHP Gandaki	3
PHD ▪ PHD Prov 1 ▪ PHD Madhesh Prov ▪ PHD Bagmati Prov ▪ PHD Gandaki Prov	4
PHLMC ▪ PHLMC 1 ▪ PHLMC 2 ▪ PHLMC Bagmati Prov ▪ PHLMC Gandaki Prov	4
Health office (district base) ▪ Makwanpur ▪ Dolakha ▪ Ramechhap	3
Metropolitan/Submetropolitan City ▪ Metropolitan Pokhara ▪ Metropolitan Birgunj ▪ Submetropolitan Jitpur Simara ▪ Metropolitan Biratnagar	4
Municipality ▪ Municipality Shukla Gandaki ▪ Municipality Duhabi ▪ Municipality Dhangadi Mai ▪ Municipality Dhulikhel	4

Government entity	Number
Rural municipality ▪ Rural municipality Jahada ▪ Rural municipality Agni Sair Krishna Sarobar ▪ Rural municipality Bishnu ▪ Rural municipality Netrawati Dojung	4
Health post/PHCC/hospital ▪ Jiri Hospital ▪ Manthali Hospital ▪ Khimti PHCC ▪ Bonch Health Post	4
Total	33

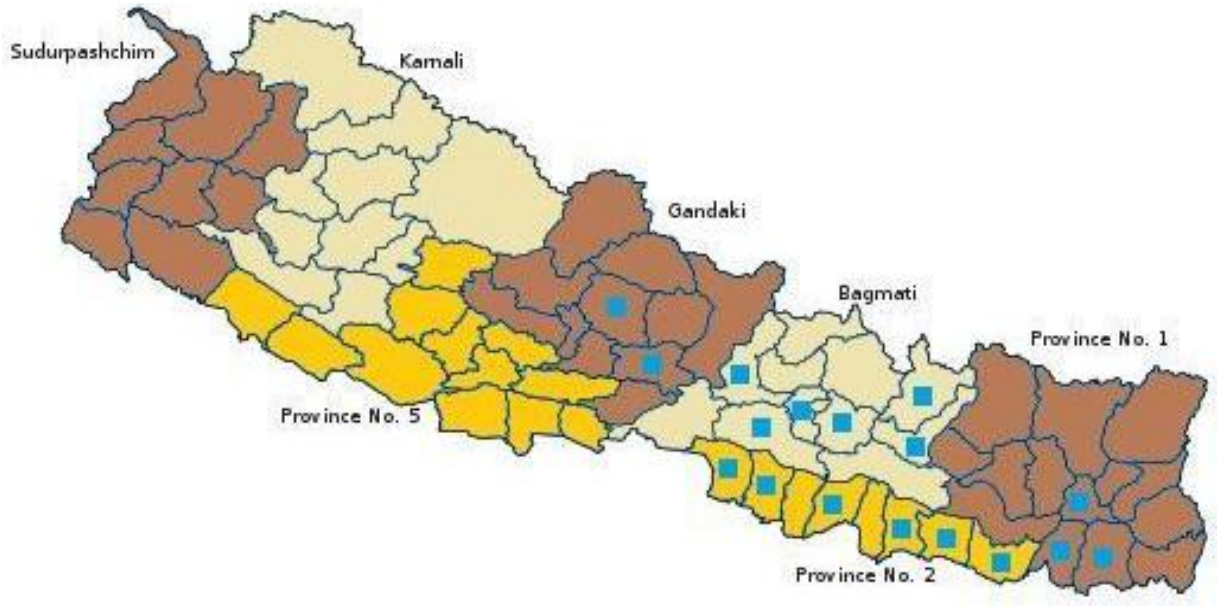

Figure 2. Map of the 17 districts indicating where the government entities included in the study are situated

Table 4. Offices and health institutions represented in the study by province

Province	District	Study unit (offices/health institution)
Gandaki	Tanahun	▪ Sukla-Gandaki Municipality
	Kaski	▪ Provincial MOHP ▪ PHD ▪ PHLMC ▪ Pokhara Metropolitan City
Province 1	Morang	▪ MOSD ▪ PHLMC ▪ DDA ▪ Biratnagar Metropolitan City ▪ Rural Municipality, Jahada
	Dhankuta	▪ PHD
	Sunsari	▪ Duhabi Municipality

Province	District	Study unit (offices/health institution)
Province 2 (Madhesh Pradesh)	Dhanusha	▪ MOSD ▪ PHD ▪ PHLMC
	Saptari	▪ Aganisarai Krishna Sawaran Rural Municipality
	Siraha	▪ Dhangadi Mai Municipality
	Sarlahi	▪ Bishnupur Rural Municipality
	Parsa	▪ DDA ▪ Birgunj Metropolitan City
	Bara	▪ Simara Submetropolitan City
Bagmati	Kavreplanchowk	▪ Dhulikhel Municipality
	Dhading	▪ Netrawati Durjung Municipality
	Makawanpur	▪ PHD ▪ PHLMC ▪ Health Office, Makawanpur
	Dolokha	▪ Health Office, Dolakha ▪ Jiri Hospital ▪ Bonch Health Post
	Ramechhap	▪ Health Office, Ramechhap ▪ Khimti PHCC ▪ Manthali Hospital
	Kathmandu	▪ Management Division/DOHS
4 provinces	17 districts	33 offices/health institutions

We interviewed the head of the institution, chief of the responsible section/unit, or representative official from each government entity, for a total of 77 participants (table 5). Participants came from 17 districts across four provinces, 12 LLGs, 3 health offices, and 4 health institutions. Just over 30% of the respondents were from the provincial level, 64% from the local government level, and 5% from the federal level.

Table 5. Number of study respondents by government level

Government level	Section representative	Total
Provincial	MOSD/MOHP (provincial level)	3
	Procurement Unit Chief	4
	Provincial Pharmacist	4
	Provincial Procurement Section Chief	3
	Provincial Health Director	4
	Chief, PHLMC	3
	Chief, Health Office	3
	Subtotal	24
Local	Municipal Health Coordinator	12
	Municipal Chief Administrative Officer	6
	Storekeeper	10
	Procurement Unit Member	15
	Health Post/PHCC/Hospital In-Charge	4
	Mayor	2
	Subtotal	49
Federal	Logistics Management Section Chief	1
	DDA Chief/Acting Chief	2
	Management Division Director	1
	Subtotal	4
	Total	77

DATA COLLECTION

Interviews were held with the 77 respondents using a semistructured interview guide. Records and documents on procurement, quality assurance, and stock and storage management were collected and reviewed. An information collection checklist was used for the desk review. The data collected covered product prequalification and specifications, supplier prequalification, tender process, supplier performance and quality assurance, financing, challenges, and recommendations. Topics also included roles and responsibilities, different procurement mechanisms and the procurement process, training, infrastructure, finance, and challenges faced by LLGs and PHLMCs focusing on procurement of eight MNCH tracer medicines (table 6).

Table 6. MNCH tracer medicines

Category	Medicine and Formulation	Medical Condition
Maternal Health	Oxytocin, 5IU/10 IU injection	Postpartum hemorrhage
	Misoprostol 200 micrograms tablets	
	Magnesium sulfate 500mg/ml (50%) injection/10ml ampoule	Pre-eclampsia and eclampsia
Newborn Health	Gentamicin, 20mg/2ml or 80mg/2ml injection	Newborn sepsis
	Chlorhexidine gel 7.1%, 3gm	Umbilical cord care
Child Health	Amoxicillin 250mg dispersible tablets	Pneumonia
	Oral rehydration salts (ORS) sachets	Diarrhea
	Zinc sulfate 20mg dispersible tablets	Diarrhea

The interview guide was formulated in English and translated into Nepali, and the survey results were translated into English. Before we finalized the tool, it was pretested and updated. Two consultants conducted all interviews, reviewed all documents, and collected all the information.

DATA PROCESSING AND ANALYSIS

Before analyzing the data, we checked for data consistency and completeness. The team leader checked the completed questionnaires and followed up with respondents as needed. After cleaning, the data were analyzed using Excel spreadsheets.

ETHICAL CONSIDERATIONS

We obtained formal permission from authorities at the federal level, as well as from provincial and local authorities in the selected districts. All the participants provided oral informed consent. Before the interviews, the data collector explained the objectives of the research and gave the participants a sheet containing information on the research objectives, data collection method, role of participants, voluntary participation, and organizational benefits.

STUDY FINDINGS

In addition to our assessment of the availability of the MNCH tracer medicines at the local and provincial levels, this section summarizes the views of the participants (federal government, provincial government, local government, health offices, and health facilities) on the procurement of MNCH-related tracer medicines.

PRODUCT AVAILABILITY

We looked at the current availability and stock-outs over the past year of the MNCH tracer medicines at LLG and PHLMC stores. Except for oxytocin, misoprostol, and magnesium sulfate, LLGs had all others available, although chlorhexidine gel was not available in five LLGs. Except for oxytocin, misoprostol, and gentamicin, all PHLMCs had all tracer medicines available (table 7). LLGs had experienced no stock-outs of the medicines they had available at the time of the visit except for five LLGs that had suffered a stock-out of two months of chlorhexidine umbilical cord gel. Two PHLMCs had each experienced a stock-out of one medicine (oxytocin and magnesium sulfate) over the previous year. Misoprostol and magnesium sulfate were stocked-out in one of the four health facilities visited.

Most of the LLGs did not procure oxytocin, misoprostol, and magnesium sulfate because they are only needed at birthing centers. There are very few of these in the municipalities, making consumption low. Two LLGs, however, did procure oxytocin and magnesium sulfate, but they were not available in their store as they had already been distributed to the relevant health facility.

In addition, 10 LLGs said that they received medicines from the health office stores that they did not order and were notified of the shipments just before the delivery. A few PHLMCs indicated that the medicines supplied by the federal government were based on demand and that they were given notice before delivery.

The fact that multiple procurement units are procuring the same items and yet some items are still stocked-out indicates the need for improvements in subnational procurement, including guidelines.

Table 7. Availability and stock-out situation of MNCH-related tracer medicines

Medicine	No. of units with the product currently available in the stores		No. of units with product stock-outs in last year	
	Local Level (n=12)	Province (n=4)	Local Level (n=12)	Province (n=4)
Oxytocin injection	0	3	0	1
Misoprostol tablets	0	3	0	0
Magnesium sulfate injection	0	4	0	1
Gentamicin injection	12	3	0	0
Amoxicillin dispersible tablets 250mg	12	4	0	0
Zinc sulfate tablets	12	4	0	0
ORS sachets	12	4	0	0
Chlorhexidine gel	7	4	5	0

PROCUREMENT ROLES AND RESPONSIBILITIES

Responsibilities of government levels and entities

PHLMCs procure medicines at the provincial government level, while metropolitan city/rural/ municipalities procure at the local level. In the federal structure of Nepal, submunicipalities (submetropolitan city/rural/municipalities) are the lowest political unit (LLGs), and all PHLMCs and LLGs were procuring key MNCH medicines. Of the eight MNCH tracer medicines, all LLGs procured four items (amoxicillin dispersible tablets, zinc tablets, ORS, and iron tablets), while only a few LLGs procured chlorhexidine and gentamicin injection. Procurement of medicines for the health facility level is the responsibility of the municipality; however, the municipality does not procure oxytocin, misoprostol, or magnesium sulfate because of the small number of birthing centers and medical abortion service sites, which limits demand. Instead of procuring those medicines, the LLGs allocate budget to the health facilities with birthing centers and/or medical abortion services. The health facilities then procure these medicines directly from a pharmacy or wholesaler after approval of the health facility management and operation committee. Other essential medicines are procured at the municipality level and sent to the health facilities.

District health offices procure a few MNCH items such as iron/folic acid, amoxicillin, and other medicines needed for outbreak management and emergency response. Vaccines and FP commodities are procured federally and supplied to PHLMCs. MNCH medicines procured by PHLMCs are mostly distributed to provincial hospitals and are also sent to the local level through health offices. LLGs receive vaccines, FP commodities, and other medicines procured at PHLMCs through the health offices. Distribution of medicines procured by PHLMCs is channeled through health offices. PHLMCs procure the medicine and send it to the health office, where it is stored in the warehouse until it is distributed to the LLG, according to the health office distribution plan.

The funding, procurement, and flow of medicines through the system are shown in figure 3.

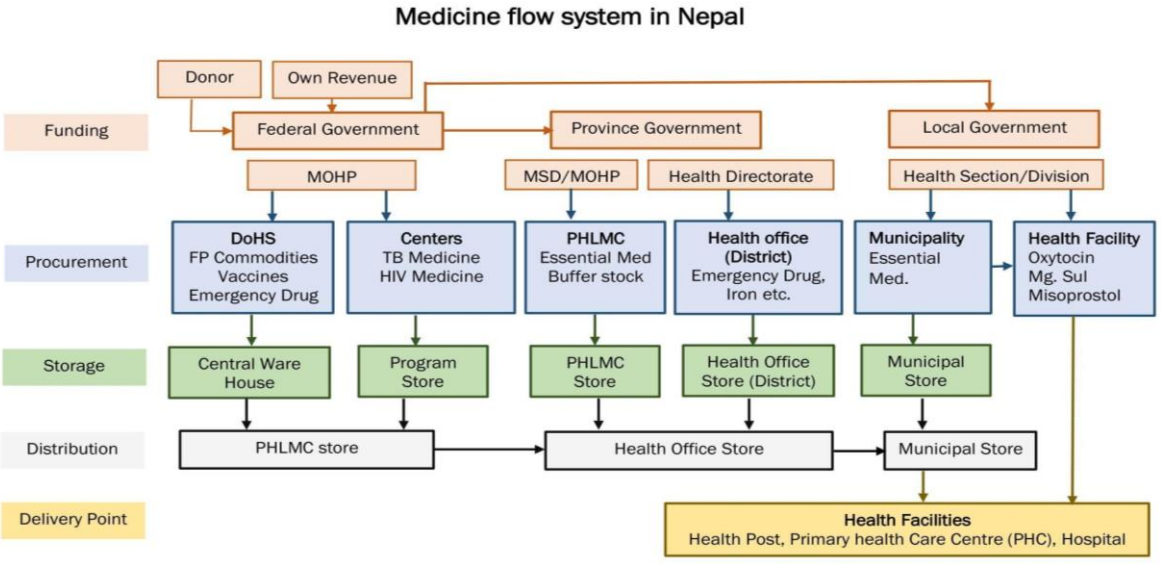

Figure 3. Funding, procurement, and supply mechanism of medicines

Roles of government personnel

At all levels, the heads of the offices or facilities were the primary financial decision makers, including for procurement (figure 4). This coincides with the PPA 2007, which says that the chief of the concerned public entity is responsible for procurement functions.

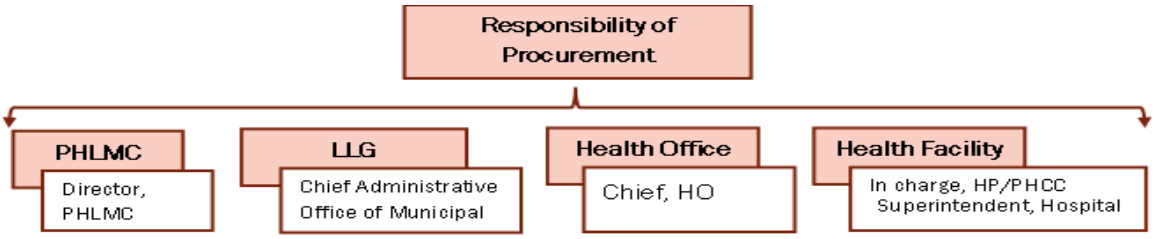

Figure 4. Primary responsible person for procurement

In LLGs (including metropolitan cities), the chief administrative officer (CAO) nominates members of the procurement unit as required. They were unaware of the provision and were also conducting procurements below 0.5M NPR. The other municipalities had separate procurement units for different functions (services, construction, and goods, including medicines). Procurement unit membership varied across the LLGs. It was dependent on the availability of staff and a desire to have balanced representation from all sections of the office, as the units cover all the municipality's procurement functions; all LLGs had health section representation in the health-related procurement unit.

The PHLMC organogram had a separate planning and procurement section, which was headed by a senior public health officer, a pharmacist, and an administrative officer, and there is no need to delegate a unit. There was a separate section for supply chain and store management staffed by a pharmacist and cold-chain assistants. Table 8 shows the make-up of the procurement unit in LLGs and PHLMCs. No LLG had a pharmacist on staff, whereas all PHLMCs had pharmacists to assist in procurement and other medicine management functions.

Table 8. Members of the procurement unit

Areas	Local Level (n=12)	PHLMC (n=4)
CAO/director	1	0
Health section chief	12	0
Procurement unit/section head	4	4
Other staff of health section	3	4
Administration officer	12	4
Finance head	8	2
Store head	7	2
Pharmacist	0	4
Others (e.g., engineers, doctors)	8	2

All LLGs and PHLMCs in the assessment said that medicine procurement is very technical and raises legal issues, so they all adhere to the PPA and PPR. However, two LLGs had not yet formed a procurement unit, which is a mandatory provision in PPA 2007 article 7(3).

Before initiating the procurement process, the following tasks are to be completed by the health section in all LLGs and the procurement sections in PHLMCs:

- Selection of medicines (active ingredient, strength, and formulation)
- Quantification of medicines
- Cost estimation
- Use of standardized specifications
- Determination of procurement quantity
- Preparation of pharmaceutical tender documents

The procurement unit and section carry out the following responsibilities:

- Opening the tender
- Bid evaluation and selection of suppliers
- Approval of product specification
- Tender award

The CAO has to give the final approval of the procurement process.

Meetings of the procurement units are reportedly not held regularly or for a specific length of time. Meetings are ad hoc and based on needs linked to procurement and available resources. Almost all LLGs and PHLMCs held health procurement unit meetings in the last two months of the fiscal year (i.e., June and July 2021) so they could use any remaining budget allocated to purchase medicines. One procurement needed three to four meetings. No members have specific tasks; the procurement unit coordinates the activities.

Duplication of roles

Without guidance, multiple procurement units purchase the same medicines, and some medicines are not procured at all. This duplication is a waste of allocated resources. Pushing medicines from a higher level without determining need contributes to overstock; additionally, there is no mechanism for LLGs and PHLMCs to share stock, which is also a contributor to overstock and stock-out situations. For example, we found that some overstocked iron tablets were expiring in the LLG stores.

> *There is a limited budget for medicine procurement. LLGs are more responsible for managing the medicine at their level. There is no fixed allocated budget for MNCH-related medicines except iron/folic acid. The district was unable to meet the LLGs' need for medicine. The district simply procures the medicines based on the available budget. There is duplication and low coordination with LLGs on procurement issues.*
>
> *—Health office*
>
> *Health facilities are under the municipalities. The supply of medicine is the responsibility of the municipality. Oxytocin, misoprostol, and magnesium sulfate are not needed for all health facilities. So instead of procuring these drugs, the municipality provides the budget to procure from the local pharmacy, so that the health facility could procure the medicine as per need.*
>
> *—Health section of municipality*

TYPES OF PROCUREMENT USED IN NEPAL

In general, there are three procurement methods: direct procurement, sealed quotation, and open bid. The type of procurement is determined by the procurement value. An open bid is mandatory when the estimated cost is above 5M NPR; 30 days' notice must be given for bid submission after notice is published in the national newspaper. Even if only one bid is submitted, it can be accepted. A sealed quotation is mandatory for procurements above 0.5M NPR to a maximum of 5M NPR. For that, 15 days' notice must be given to submit a bid after publication in a local newspaper. Three bids must be submitted, or the process must repeat. Direct procurement from a retail outlet is used for any purchase below 0.5M NPR.

This study revealed that LLGs and health offices mainly used the direct procurement and sealed quotation methods, while PHLMCs used both the open bid and sealed quotation methods. Our discussions showed that instead of applying a single competitive bidding process to the entire budget allocation, most LLGs divided up the total budget into smaller parts, starting with direct procurements, to downsize the budget to below 5M NPR and qualify for using a sealed quotation. They did this to avoid using open competitive bidding because a sealed quotation required only 15 days to respond after the notice, and the notice can be published in a local rather than national newspaper, which is less expensive.

> *We call for the registration of suppliers in a standing list with the necessary documents. If the applying suppliers meet all those defined documents, we request them to submit a sealed quotation with the offer price of selected medicines. We selected one supplier who offered the lowest amount of total bid through an initial assessment of the comparative price chart. Then we make a contract for the delivery of the medicine within a given period of time.*
>
> *—Procurement section, metropolitan municipality*

Suppliers who want to compete for direct procurements are put on a standing list, which an open bid does not require. A standing list is a mandatory provision of the PPA 2007 (third amendment) and PPR (10th amendment). According to the act and regulations, any supplier can register its forms/company at any time during the fiscal year. All LLGs, PHLMCs, health offices, and hospitals had used the standing list for direct procurements. The following documents are necessary to register on the standing list:

- Updated/renewed company or form registration documents
- Permanent account number/value-added tax-related documents
- Tax clearance certificate
- DDA certificate to supply medicine

All PHLMCs used sealed quotations and open bid methods, whereas 11 of 12 LLGs procured medicines directly from pharmacies/wholesalers. The reasons the health facilities chose the direct method included:

- Urgent need for medicines during an epidemic (generally April–August in Nepal)
- Small activities with separate budget allocations (below 0.5M NPR) to procure medicines
- Low consumption of misoprostol, magnesium sulfate, and oxytocin and only a small budget allocated from the municipality
- Leftover budget after previous procurements, which is used to buy more medicines
- Budget saved for emergencies until the last month of the fiscal year that needs to be used
- Erroneous budgeting

Medicine procurement files are submitted to me in compliance with all legal provisions. The procurement unit puts the rationale for direct procurement in the purchase memo. Due to the sensitivity and its emergency, we choose direct procurement. I do not have any information about any one of the procurement unit members having a vested interest and trying to gain personally from the supplier. However, other medical equipment is always procured through competitive bidding.

—CAO rural municipality

After a competitive bidding process, most bid quotes were reportedly up to 40% below what the LLG/PHLMCs had estimated for the cost of medicines. Cost estimation is done before the publication of a tender notice. It is prepared on the basis of market price and the rate of medicines in previous procurements, which gives an idea of the cost of medicines to be procured, but this highlights that there is a problem in cost estimation if the quoted price is up to 40% lower.

In such circumstances, the LLGs/PHLMCs reported using the remaining budget to repeat the procurement to ensure the availability of buffer stock, although this practice was less frequent by PHLMCs.

PROCUREMENT PROCESS AND PRACTICES

Quantification of medicines

All LLGs and PHLMCs stated that they estimated the quantity of medicines needed based on morbidity trends, previous consumption, and budget availability. None of the LLGs or PHLMCs used separate guidelines or standard processes for MNCH-related medicine quantification. Health offices only procured medicines based on the available budget without considering other factors. Health facilities procured medicines based on the previous year's consumption data from the eLMIS.

Timing of procurements

There was no exact timeline/period to procure medicine. After approval of the new budget and at the beginning of the new fiscal year on July 15, municipalities and PHLMCs started the procurement process in the first quarter of the new fiscal year, usually from September onward. While the procurement was being processed, respondents state that medicine stock levels usually decreased and demand from health facilities increased, which can be compounded by emergencies and outbreaks. At this point, LLGs reportedly prefer to directly procure needed items to avoid stock-outs.

LLGs and PHLMCs procured medicines a minimum of two times to a maximum of eight times over the previous fiscal year (all medicines and commodities, not just those for MNCH). The reason for repeated procurement was the inability to accurately forecast and quantify needed medicines. Proper forecasting and quantification can reduce the frequency of procurement and the workload.

Prequalification of products and suppliers/manufactures

None of the LLGs or PHLMCs included in the study used prequalified products or suppliers/manufacturers, which is allowed by the PPA 2007 (third amendment), PPR 2007 (10th amendment), and procurement guidelines published by MOHP. In addition, most of the LLGs and PHLMCs said that they did not know about the provision or process of prequalifying products and

suppliers/manufacturers spelled out in existing laws. Others said that they did not want the administrative burden of prequalifying products and suppliers/manufacturers and that they were concerned that without experience, they would not be able to complete the process correctly, which could disallow the expenditure or raise questions by the auditor. This indicates the lack of knowledge and understanding of existing procurement legal arrangements and a need for capacity building to perform procurement functions.

Procurement SOPs or guidelines

There were no SOPs or guidelines on procurement in LLGs or PHLMCs. All LLGs and PHLMCs relied on federal procurement laws and regulations instead of guidelines, and none used the MOHP procurement guidelines (a general procurement guideline not specific to medicines). Three LLGs developed their own procurement regulations, adapted in part from those in place at the federal level; the types of procurement, the budget delineation for procurement, and other provisions remained unchanged. No special clause or provision for medicines procurement was included in the regulations developed by the LLGs.

PHLMCs used standard bid documents developed by the Public Procurement Monitoring Office (PPMO), while LLGs used general documents that had no specification provisions—only space for listing the per-unit price of the medicine.

Procurement-related reporting

There was no procurement-related reporting from one level of government to another level (i.e., local, provincial, federal); however, the health offices report monthly to the PHD and provincial MOHP/MOSD. Health facilities also send budget reports to their respective municipalities. In addition, no procurement unit published audit reports. After completion of an audit, the auditor general produces its annual report and highlights specific issues or disallows the amount spent on procurement observed at the local and provincial levels during the audit. No audit system exists at health facilities.

Good pharmaceutical procurement principles

Table 9 illustrates how well LLGs and PHLMCs adhere to internationally recognized good pharmaceutical procurement principles.[8]

Table 9. Reported application of the good pharmaceutical procurement principles

Good pharmaceutical procurement practice	Local (n=12)	Province (n=4)
Procurement by generic name (international nonproprietary name, specifies quality standards, not specific brands)	12	4
Procurement limited to essential medicines list or formulary list (selects safe, effective, and cost-effective medicines)	12	4
Procurement in bulk (e.g., quantities for more than three months)	8	3
Order quantities based on a reliable estimate of need	12	4
Reliable payment and good financial management (e.g., prompt payments made within a month)	12	4
Transparency and written procedures	0	0

[8] Adapted from MSH. 2012. Chapter 18 Managing Procurement, MDS-3: Managing Access to Medicines and Health Technologies. Arlington, VA: Management Sciences for Health.

Good pharmaceutical procurement practice	Local (n=12)	Province (n=4)
Separation of key functions	7	4
Annual audit with published records (i.e., to show compliance with procurement procedures)	12	4
Regular reporting on procurement performance	3	4

Tendering bids

Product selection and specification

The LLGs and PHLMCs had no need to develop their own institutional lists of medicines to be procured as they used the free drugs list published by the Primary Health Care and Revitalization Division (a DOHS division before restructuring) in November 2017 and/or the essential medicines list published by the DDA in 2016—whichever was more accessible and easier to use. To ensure the health rights of citizens, all medicines (including MNCH) should be available in the health facilities. For this purpose, the medicines list is supposed to be updated by the provincial and local-level government as per the new package of basic health services; however, it was not updated.

LLGs, PHLMCs, and health offices did not develop specifications for procuring medicines. They used specifications developed by the Logistic Management Section of the Management Division/DOHS at the federal level. The specifications were not publicly available, but LLGs and PHLMCs had access to them. Information such as quantity, strength, dosage form, and quality indicator (GMP certified) were included in the specifications in the tender documents of all LLGs and PHLMCs. Additional information such as storage, cold chain maintenance, quality test-related documents, packaging, labeling, shelf life, and standards was included in the PHLMC tender documents only. Two PHLMCs included quality specifications such as US/India/British pharmacopoeia in their specifications. No additional information targeting MNCH medicines was included in the LLG and PHLMC specifications.

During competitive bidding, LLGs, health offices, and PHLMCs required suppliers or manufacturers to submit the supplier's registration, tax numbers, DDA certificate as medicine supplier, and GMP certificate with their bidding documents. Additional documents such as quality control certificates, product registration certificates, and batch certificates were demanded by the provincial level only. None of these requirements apply to the health facilities, which procure directly from the pharmacy with only the list of required medicines.

> *At the local level, there is no pharmacist position. So those who are working as the health coordinator have to review/analyze the bid document regardless of their academic background, and the act does not specify any qualification. During the procurement and receipt of products, the lead pharmacist's or medical officer's recommendations or criteria were taken into account.*
>
> *—Procurement Unit Head, municipality*

In the bidding documents of all LLGs and PHLMCs, the delivery point was at their store. The arrangement to deliver medicines directly to the health facilities was not mentioned in bidding documents. In most cases, the municipal stores delivered medicines to health facilities.

Time frame

Depending on the procurement method used, the time it actually took from announcing a request for quote to receiving quotes/tender applications varied. The minimum notice periods for methods of procurement are agreed to in the PPA 2007: 15 days for sealed quotation and 30 days for open bidding.

Table 10. Time frame of the tender process (based on previous year's procurement experience)

Type of bid	Time frame
The time frame of request for quotations to receive the quotes and documents from the suppliers	
Open bid*	15–30 days
Sealed quotations**	7–15 days
Direct procurement	3–7 days
The average time period of procurement awarded after receiving the quotes	
Time	3–30 days
Average procurement lead time	
Time	15 days–4 months

*Law requires not less than 30 days
**Law requires not less than 15 days

Ensuring transparency

All LLGs and PHLMCs published a public notice in a national or local daily newspaper inviting bids for sealed quotations or open competitive bidding, respectively. These notices were also published on their webpages and some on social media networks. Three LLGs and all PHLMCs used the e-GP, where notices were published on the PPMO site. The e-GP is a web-based procurement system developed by the PPMO and designed to help public entities register the master and annual procurement plans and procurement requisitions and to publish procurement documents. The e-GP also helps the bidder search, view, and download tender information and submit bids electronically. This increases transparency, nondiscrimination, equality of access, and open competition. The nine LLGs that did not use the e-GP said they had insufficient capacity or staff willingness to change practices.

LLGs and PHLMCs did not routinely share procurement-related information with the PPMO, the District Treasury Controller's office, or civil society until and unless it was demanded. There is no legal arrangement for regular monitoring or cross-checking the transparency of the procurement process at LLGs and PHLMCs by the federal level. Internally, however, the mayor, some elected officials, and other higher-ranking officials were sometimes asked about procurement status.

We are interested in using e-GP but could not due to the unwillingness of the administration team.

—Health section, municipality

We used it but could not continue the procurement process due to a technological error and insufficient capacity to proceed with e-GP. So we paused the e-GP process and now continue manually.

—Account Officer, municipality

Managing conflicts of interest

LLGs and PHLMCs had no guidelines regarding procurement-related conflicts of interest or receiving gifts or hospitality. None of the LLG or PHLMC procurement unit members involved in the procurement process signed a confidentiality agreement. While elected representatives monitored the procurement process, none of the LLGs or PHLMCs had a way to include civil society (independent actors or citizen representatives) in monitoring procurement procedures. However, a code of conduct for procurement entities is included in the PPA and regulations. According to the code of conduct, if the person involved knows that their nearest relatives have participated as a bidder or proponent in the procurement proceedings they are involved in, they should not take part in the procurement proceedings and should give immediate notification to a level higher authority. The code of conduct also provides guidance to avoid corrupt or fraudulent practice. The act includes a code of conduct for suppliers/bidders that covers bribery, coercion, collusion, interfering with other bidders, seeking to influence, and conflicts of interest.

Most of the LLG is interested in procuring medicine through sealed quotations and direct purchase because companies or suppliers have become successful in influencing procurement teams.

—Health Division Chief, MOSD, province

I always suggest using e-GP in all cases of procurement. I think corruption has taken place mostly through quotation calls and direct purchases in medicine procurement at the local level.

—Mayor, municipality

Lack of transparency in government procurement has been a systemic problem in Nepal. In addition, inefficiencies due to manual and paper-driven procurement processes have resulted in poor service and limited participation of bidders. The government recognized that establishing an e-GP system could help improve transparency, efficiency, and value for money in government procurement.

—Management Division/DOHS

Make provisions for a social audit of medicine procurement (in terms of procured amount, types, quantity, distribution, and availability, among other things).

—Director, PHLMC

We need to make provisions for the engagement of citizens to closely monitor the procurement process for more reliability and to increase access to health services, at least at the local level government.

—Secretary, MOHP, province

Tender prices and supplier payments

Most LLGs (67%) and all PHLMCs practiced fixed-price quotes in their tender documents for a period of one year. Once a contract is signed, they can buy against it for a year at that price. This practice helped them to purchase medicine at the rate that was negotiated during competitive bidding when that is used. The health offices have a small budget allocation and, like health facilities, they procured directly from a local pharmacy with cash as per the guidance for smaller sums of money. In this case, the price is not fixed.

The payment process started immediately after the delivery and receipt of medicines at all levels of government, including health offices and health facilities. Usually, the payment process was completed within seven days. Before making a payment, the account section of the procuring unit entity checked with the store and health section to ensure that medicines were received as per the contract. The payment became pending if there was any quality problem, mismatch, or incomplete delivery of medicines. Suppliers tried to push the stock of available medicines even if it did not meet the criteria. Such practices can be curbed with trained staff and use of a checklist before accepting medicine shipments. No advance payment system was observed at LLGs, health offices, or PHLMCs.

> *The health section recommended stopping the final payment as nearly expired medicines were supplied, which was contrary to the provisions in the agreement. However, the municipal authorities put a lot of pressure to make the final payment. To date, we have not provided a recommendation for payment. We believe a payment has been made to the supplier. This makes it difficult for us to treat and maintain the quality standard in further procurement.*
>
> *—Health Section, municipality*

We compared the prices of MNCH medicines procured at health posts, hospitals, municipalities, and PHLMCs (table 11).

Table 11. Procurement prices (NPR) of MNCH-related tracer medicines by health system level

Medicines	Health post/ PHCC		Hospital		Price per unit at LLG		Price per unit at PHLMC	
	Min	Max	Min	Max	Min	Max	Min	Max
Oxytocin inj/10u amp	19	28	30	32	-	43.21	9	12
Misoprostol tabs 200mg	-	40	35	47.5	-	-	3.75	17
Magnesium sulfate 500mg/ml (50%) inj/10 ml amp	34	45	20	58.50	22.15	26	15	16
Chlorhexidine gel 7.1%, 3g per tube	-	-	-	-	26	42.85	12	29
Gentamicin injection 20mg/2ml	-	-	-	-	10.5	17.04	13	43
Amoxicillin dispersible tablets, 250mg	-	-	-	-	1.75	4.8	1.5	2.25
Zinc 20mg tablet	-	-	-	-	2.17	4	0.85	2
ORS/sachet	-	-	-	-	0.01	9.8	5.52	7.15

Prices varied both within and between levels. The health facilities paid significantly more for misoprostol and magnesium sulfate than did LLGs or PHLMCs, which was probably a reflection of their direct purchases from pharmacies. However, the average unit price of oxytocin was more than three times higher at the LLG level than at the provincial level. For ORS, there were significant price differences among the LLGs, ranging from 0.01 NPR to 9.8 NPR per sachet due to the small volume purchased. During the interviews, the LLGs said that they procure medicines several times during the fiscal year at a price contracted with suppliers for a certain quantity. If the LLG submitted a purchase order after the contractual quantity had been met, suppliers would no longer honor the contract price, and the purchase would be at a higher price. This may have been the driver of some of the wide variations in prices we saw, which have also been identified by other studies.[9]

[9] *Nepal: A Study of Public Procurement in the Health Sector and Availability of Procurement Data. Transparency International, 2020.*

Quality assurance of suppliers' performance and products procured

Although both LLGs and PHLMCs required a product registration certificate to be submitted during the bidding process, they only relied on the documents provided by the suppliers and did not cross-check them with the DDA. Shipments were inspected visually at the store by a team from the evaluation committee comprising pharmacists in the PHLMCs and health workers in the LLGs. The receiving entity took the delivery and recorded the relevant information in its stock records before issuing products to the facility. Only three PHLMCs and one LLG were able to produce a printed or soft copy of the receiving checklist. LLGs checked for quantity, dosage, strength, expiry date, generic name, and physical status of the medicine. PHLMCs also checked batch number and company, product registration, packaging, storage, and formulation.

There was no established mechanism for LLGs or PHLMCs to report problems with suppliers. Typically, any issues with the supplier were reported internally but not officially. The entities made a verbal request to suppliers to resolve the issues or problems (e.g., packaging issues, expired or nearly expired products, broken vials), and the payment of supplied medicines was held until the issues were settled. Suppliers can be blacklisted for poor performance, which is taken into account in future procurements, but neither LLGs nor PHLMCs took action against suppliers related to performance issues.

There was no procedure to check the quality of procured medicines through laboratory testing at any LLG. LLGs had no basic knowledge about the quality assurance process. They perceived that the supplied medicine was of high quality based on the submitted documents (DDA registration and WHO GMP). However, the PHLMCs had a practice of randomly quality checking supplied medicines through laboratory testing. A simplified checklist can guide health workers to take rapid, transparent, patient-centered actions when facing a suspected poor-quality medicine.

LLGs experienced simple issues such as broken bottles and nearly expired medicine. No other quality issues were described by LLGs or health facilities.

There is no coordination and sharing of procurement processes about medicines going to be procured. Medicine quality testing at the municipal level is almost non-existent. The municipal government has not demanded that the medicine's quality be tested until now. The DDA will be ready to manage the provision of quality testing if municipalities request it. Regional offices are unable to cover the whole area to assure the quality of medicine due to the scarcity of technology, staff, and resources. About 10-12% of medicines that failed quality testing were produced by domestic companies. There was no evidence of a test of oxytocin, magnesium sulfate, zinc, or misoprostol.

—DDA, province

If medicines are registered in the DDA then we trust that they are of good quality. We only buy registered medicines.

—Health Coordinator, municipality

We consult with our hospital doctors and paramedics for evaluation of medicine. As per the suggestion of the doctor, we accept the medicine thinking that it must be of good quality.

—Health Coordinator, municipality

We are not sure about the quality of the medicine because the medicine is supplied at a very minimal cost in comparison to our cost estimation. We only procured the medicines based on the WHO GMP and DDA registration documents. We do not have a lab facility in the LLGs or provinces. Besides, we had a network problem checking the quality of medicines in private laboratories. We asked once in Kathmandu, but the high lab charge and the time taken for the report are major constraints on the timely completion of the procurement process. This is a major issue that all LLGs face and need to identify the mechanism of quality check to settle the issues related to procured medicines as soon as possible.

—CAO, municipality

PROCUREMENT-RELATED TRAINING AND INFRASTRUCTURE

Not all staff in two LLGs and three PHLMCs were trained in procurement, indicating that untrained staff carried out procurement functions. According to PPA 2007 article 7(2), procurement activity should be executed by an employee who has knowledge of or training on procurement. This situation indicates the need for procurement training as well as streamlining of tools for the process or even changing the role or procurement tasks to be conducted at peripheral levels. Most of the health staff were trained on the eLMIS.

It is a process of capacity building to improve work efficiency and gain skills in logistic and procurement systems through the training. Since we are already in a federal structure, we had a bit of confusion about aligning our work with the new structure. There are MoFAGA [Ministry of Federal Affairs and General Administration] directives to use different software (PAM), while for MOHP we use eLMIS and e-GP. We are duplicating the same work with different software. So, it is a bit confusing to operate the procurement process. In such a situation, the training will be very helpful in executing our day-to-day professional work in the changed context. So, I request training in the future for procurement planning, supply chain management, and logistics systems at regular intervals of time.

—Health Coordinator, Health Section, municipality

All LLGs and PHLMCs responded that they had functional computers available at their desks that were used for multiple tasks, but there were no separate computers exclusively for procurement functions. All LLG and PHLMC staff used their personal mobile phones for official use and were reimbursed for the recharge cost. Unless there were network problems, all LLGs and PHLMCs said that internet access was always available. The main reasons why LLGs reportedly do not use the e-GP were lack of capacity and fluctuations in network connectivity and staff resistance to change. However, the threshold for using the e-GP is procurements of more than 6M NPR, and most LLGs' medicine budgets were less than that.

MEDICINE BUDGET PROCESS

The budget needed for medicine at PHLMCs (provincial level) and municipalities (local level) came from the federal government as a conditional grant. In addition, the provincial ministry (the MOHP in four provinces and the MOSD in three) allocated additional resources for the PHLMCs, and municipalities allocated for themselves at the local level. The budget was developed once a year as per the national constitution. Figure 5 shows the budget development process for pharmaceuticals.

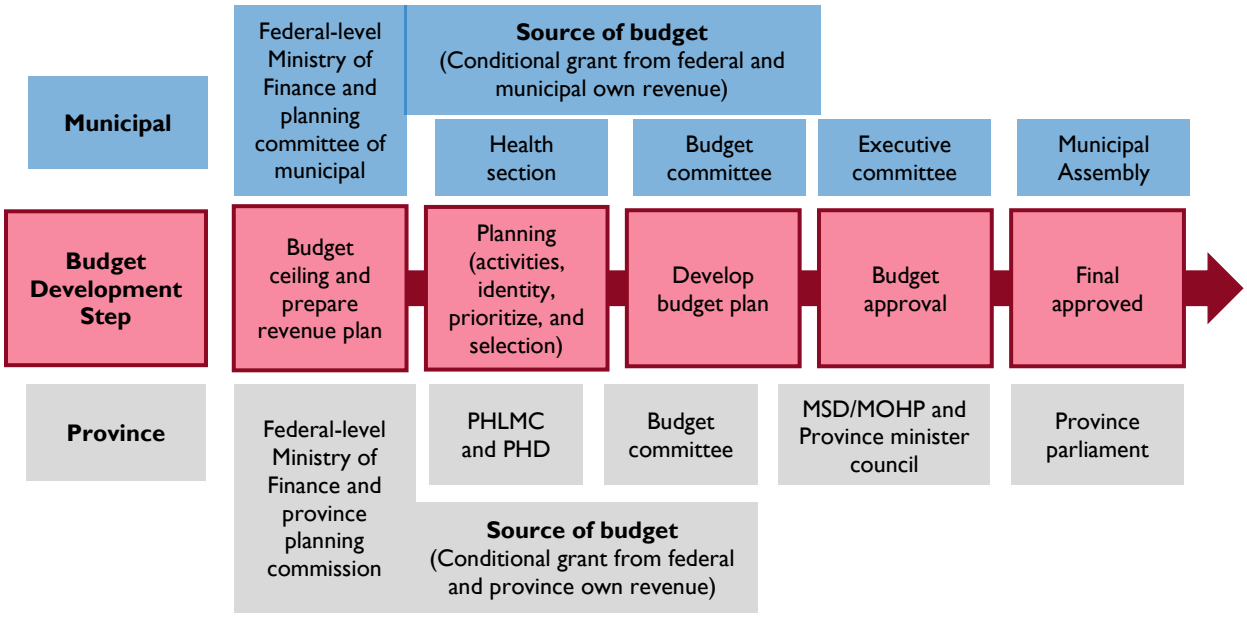

Figure 5. Health and medicine budget development process

There was no separate budget heading for MNCH medicines in LLGs or PHLMCs. The budget to procure MNCH medicines came under the individual budget line items for medicines for Integrated Management for Newborn and Childhood illnesses, iron/folic acid and zinc, medicines for basic health services, and FP commodities. Medicines were also procured for noncommunicable diseases, mental health, leprosy, TB, and HIV and AIDS under their respective budget lines.

The budget allocation for medicines for LLGs ranged from a minimum of 2.1M NPR to a maximum of 4.7M NPR, and the average share from the federal government was 59% (table 12). The average metropolitan city budget was almost double that of rural municipalities because of their larger population size and number of health facilities. The average expenditure for medicines out of the allotted budget among all LLGs was 86%. The PHLMC budget ranged from a minimum of 58M NPR to a maximum of 71M NPR for medicines. Almost all of the budget was allocated by the federal government in a conditional grant specifically to purchase medicines. The LLGs and PHLMCs did not spend all of their allocated budgets, perhaps, as mentioned earlier, due to inaccurate quantification or cost estimation or that the suppliers' quoted rates were often less than the government's cost estimations.

Table 12. Allocation and source of budget for medicine procurement/million NPR

Level of government	Budget status (FY 2020/21)						Source of budget and sharing % (FY 2020/21)							
	Total medicine budget			Budget for procurement (%)			Federal share				Municipal share			
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	%	Min	Max	Avg	%
Municipality	2.3	4.1	3.3	87.4	97.3	91.5	1.2	3.0	2.1	63.5	0.8	1.7	1.2	36.5
Metropolitan	2.2	6.5	5.1	64.5	81.3	76.0	1.9	4.0	3.4	69.3	0.3	3.0	1.8	30.7
Rural municipality	1.7	3.5	2.7	87.6	98.2	92.5	0.8	1.8	1.2	44.0	0.9	2.0	1.5	56.0
LLG total	2.1	4.7	3.7	79.8	92.3	86.7	1.3	2.9	2.2	58.9	0.7	2.2	1.5	41.1
Province*	58.0	71.0	64.8	68.0	82.0	75.0	-	-	-	-	-	-	-	-

** In LLGs, the gross budget was allocated under the heading of medicine (all types of medicines), while the budget allocation in the PHLMCs were in the subheadings. The medicine used for reproductive health was budgeted under a separate budget heading (iron, folic, and zinc; no-scalpel vasectomy; and Integrated Management of Newborn and Childhood Illnesses) and was allocated by the federal government as a conditional grant.*

Most of the LLGs, PLGs, and health offices did not have sufficient budgets for medicines to meet demand. This could be solved with correct forecasting and reliable cost estimation, because PHLMCs and LLGs were unable to burn all their medicine budget allocations (table 12). LLGs and PLGs were not allowed to spend beyond the budget except in the case of an unforeseen situation, and LLGs had no additional budget for procurement tasks such as committee meetings and request for quote advertisements. The procurement team had to manage the cost of those activities using the same budget. LLGs also did not have a specific budget for medicine distribution; however, PHLMCs did have a budget for transportation and distribution of medicine.

The respondents reported that the major challenges in developing the medicine procurement budget and getting approvals were:

- A mismatch of demand, poor attention to quantification and forecasting, and unreliable cost estimations
- Difficulty in conveying the urgency of the need for medicines to municipal and ministerial authorities who prioritized other development agendas over health and medicine

Here are two cases described by two respondents—in one, the municipality had sufficient resources and procured medicines effectively, and in the other, the municipality had insufficient resources and procurement was inefficient. This shows the differences between municipalities in the management of budget and supplies, which should be standardized by establishing procedures and guidelines and building the capacity to follow them.

In our municipality, the availability of medicines was crucial. We do not have a sufficient quantity of medicine and there is difficulty in managing supplies. We requested a budget based on our morbidity and previous consumption, but the municipality has other priorities, and the health sector receives little attention. The COVID pandemic compelled executive people to understand the importance of the health sector. In our municipality, insufficient coordination, inadequate support, and a lack of understanding of the health system are major issues. We are extremely pessimistic about the current state of the healthcare system under local government.

—Health Section, municipality

We didn't have to worry about running out of budget to get the medicine we needed. The municipal government promptly allocated funds for the purchase of necessary medicines. The basis for estimating the quantity of medicines isn't set in stone. However, we used factors such as morbidity trends, prior consumption, and accessible budget. Furthermore, the budget determined the items and quantities purchased. We prioritize lifesaving and most-needed medicines in the case of a budget shortfall.

—Health Section, municipality

KEY FINDINGS

The government of Nepal is committed to providing quality MNCH health services by ensuring equitable access, harmonizing the procurement system for medicines and commodities, and enhancing the capacity of staff. The LLGs and PLGs are facing the twin challenges of balancing limited resources with increasing need for improved health care services, including quality MNCH services. Following is a summary of the primary findings of the mapping of subnational procurement practices.

AVAILABILITY

- Availability of MNCH products was found to be good, and procured items reflected the clinical needs at the health facility level. All tracer medicines were available in LLGs except for those maternal health products that were procured by health facilities. However, there were isolated stock-outs of two maternal health products in PHLMCs, and oversupply through pushing products to LLGs from health office stores was common.

PROCUREMENT ROLES AND RESPONSIBILITIES

- Procurement of medical products was conducted at all levels: PHLMCs, district health offices, LLGs, and health facilities.
- Procurement was poorly coordinated, and roles and responsibilities for procurement were not well documented or implemented. There was duplication of procurement efforts and results and an ad hoc procurement planning and implementation process despite clarity on signing off on the expenditures.
- At all levels, the heads of the offices or facilities were the primary financial decision makers, including for procurement as per the PPA 2007.
- No LLGs had a pharmacist on staff, whereas all PHLMCs had pharmacists to assist in procurement and other medicine management functions.
- There was a lack of coordination between the local and provincial governments on procurement planning, quantification, forecasting, reporting, and quality assurance processes. Duplication of procurement at both levels or procurement falling through the cracks created confusion and overstock/stock-outs.

TYPES OF PROCUREMENT USED

- The study found that the procurement regulation was generally adhered to; however, tenders were split to reduce value and allow for direct procurement, which is faster but less cost-effective.
- PHLMCs widely used open bidding and sealed quotation methods, but LLGs procured primarily through sealed quotations and direct procurement.
- Poor estimation of the cost was noted as a problem of competitive bidding.

PROCUREMENT PROCESS AND PRACTICES

Quantification

- While LLGs and PHLMCs reported they forecast based on morbidity trends and previous consumption, no guidance was available, there was no standard approach or formula applied, and the data were often missing or not of good quality. The availability of budget ultimately determined the quantity of medicine to be procured, but no standard prioritization or vetting process was in place.

Timing

- Procurement and budgeting were not managed effectively, as procurement was not carried out in a planned way, and there was no regular follow up on quantities procured or budget. There was no exact timeline or period to procure medical products, and procurements were conducted up to eight times per year. PHLMCs and LLGs usually started the procurement process after the approval of the new budget and the beginning of the new fiscal year. While the procurements were being processed, medicine stock levels usually decreased and demand from health facilities increased, risking stock-outs.

Prequalification of products and suppliers/manufacturers

- None of the LLGs and PHLMCs prequalified products or suppliers for procurement as a strategy to ensure quality as they did not know it was permitted or how to do it. While all LLGs, PHLMCs, health offices, and hospitals had standing lists of eligible suppliers, these were not necessarily registered wholesalers. Without consideration for the standard of distribution practices of wholesalers, the quality of products cannot be ensured.

SOPs/guidelines on procurement

- There were no SOPs or guidelines for LLGs or PHLMCs on procurement of medicines. All LLGs and PHLMCs relied on federal procurement laws and regulations.

Procurement-related reporting

- There was no procurement-related reporting from one level of government to another (i.e., local, provincial, federal).

Good pharmaceutical procurement principles

- While LLGs and PHLMCs mostly adhered to internationally recognized good pharmaceutical procurement principles, there were weaknesses noted related to transparency and lack of written standard procedures.

TENDERING BIDS

Product selection and specification

- LLGs and PHLMCs used the free drugs list published by the federal government or the national essential medicines list as a basis for procurement rather than adapting the list to their own needs.
- LLGs and PHLMCs used specifications for the medical products to be procured developed by the Management Division/DOHS. Quantity; strength; dosage form; and quality requirements (e.g.,

mandatory GMP certification, suppliers' registration, DDA certificate for medicine) were included in the specification in the tender documents of all LLGs, health offices, and PHLMCs. However only the PHLMCs included specifications such as storage, cold chain maintenance, quality test-related documents, packaging, labeling, and shelf life in the tender document. The health facilities visited the pharmacy with the list of required medicines to be procured.

Time frame of bidding

- The average lead time to complete the whole procurement process ranged from 15 days to 4 months under normal circumstances. As expected, the time for direct procurement was less than for competitive bidding.

Ensuring transparency and managing conflicts of interest

- All LLGs and PHLMCs published a public notice in a national daily or local newspaper inviting bids for sealed quotations or open competitive bidding, respectively, but only three LLGs and all PHLMCs used the e-GP, which is a mechanism established to promote transparency, equality of access, and open competition in procurements.
- There were no guidelines available to LLGs and PHLMCs regarding procurement-related conflicts of interest or receiving gifts, but a code of conduct was included in the public procurement act and regulations.

Tender prices and supplier payments

- The cost of medicines procured by the LLGs and health facilities was generally higher than those procured by the PHLMCs. Where contracts were awarded by LLGs and PHLMCs after a bidding process, prices were typically fixed in tender documents for a period of one year; however, when medicines are procured directly, there are no fixed prices, which is one of the causes of higher prices.
- In general, the payment process started immediately after the delivery and entry of receipt of medicines at all levels of government, including health office and health facilities, but remained pending if there were any quality problems, mismatch, or incomplete delivery of medicines.

Quality assurance of suppliers' performance and products procured

- The role of LLGs and PHLMCs to ensure the quality of the medicines procured was different from that of the health facilities as they functioned as wholesalers in the public sector and needed to ensure the quality of the product to be distributed down the chain. There was no checking of registration status of medicine with the DDA, although the PHLMCs had a practice of randomly quality checking supplied medicines through laboratory testing. While LLGs and PHLMCs reported checking for certain issues on receipt of the procured medicines, there was no standard checklist for receiving medicines at each level and referral to the DDA for testing in the event of anomalies.
- Isolated quality issues were reported by LLGs such as broken bottles, and nearly expired medicine. There were no established mechanisms (e.g., procedures, checklists) for LLGs or PHLMCs to report problems with suppliers.

PROCUREMENT-RELATED TRAINING AND INFRASTRUCTURE

- Few staff carrying out procurement functions had been trained in procurement, which is complex and involves knowledge of pharmaceuticals and their quality and how to prioritize what to procure when there are budget and financial management capacity limitations. While all LLGs and PHLMCs were equipped with computers and means of communication, the e-GP was not used in most LLGs mostly due to a lack of capacity of the staff to use it; split procurements under the mandatory threshold to use the e-GP; and a lack of comprehensive, easy-to-understand guidelines or clear standard procedures.

MEDICINE BUDGET PROCESS

- The budget needed for medicine procurement was developed at each level. In addition, the federal government provided a conditional subsidy to procure medicines.
- While the LLGs, PLGs, health offices, and hospitals felt their budgets for procurement were insufficient to meet the demand for medicines, most were not able to spend all their budget allocation, probably due to a lack of or poor-quality data, no standardized approach to quantification, and unreliable cost estimation.
- LLGs lacked the budget for tasks related to the procurement of medicines (e.g., meetings, distribution, advertisements) and the budget for procuring MNCH medicines was not ring-fenced, or those products were not prioritized in the vetting of procurements.

RECOMMENDATIONS

The mapping of subnational procurement practices has identified some areas of weakness in procurement that may compromise the quality and affordability of medicines. There are challenges related to the capacity of staff to conduct the complex functions of procurement—ensure quality, prioritize when budgets are limited, and financial management. In addition, procedures for procurement are not documented, and registration of medicines or wholesalers cannot be verified by procurement units. Several interventions are needed to address the multifaceted, complex nature of procurement to ensure quality and affordability of the products procured. To address these and other findings of the mapping, we propose the following recommendations.

MAXIMIZE USE OF RESOURCES AND ACHIEVE VALUE FOR MONEY

- Aggregate demand of medical products to be procured.
- Establish central framework contracts for vital and essential pharmaceuticals. This would require clearly defining roles and responsibilities for each level of government. For example:
  - Local government manages budget, quantifies needs, places orders, pays suppliers, and receives stock
  - Federal government qualifies suppliers and establishes framework contracts
- Strengthen forecasting and eLMIS systems through the introduction of standardized approaches and guidelines for quantification using quality data for all levels where quantification is to be conducted. Further technical assistance may be needed.

- Engage civil society to advocate for bigger budgets, critically observe outcomes, and help ensure public awareness of issues relevant to maintaining their health.
- Review budget allocations to ensure they are equitable.
- Strengthen financial management at all levels to track budgets and prioritize procurements.

IMPROVING TRANSPARENCY, INTEGRITY, AND ACCOUNTABILITY

- Develop guidelines and expand the use of the e-GP system, tailoring it to the demands of pharmaceutical procurement.
- Find ways to engage civil society in oversight of procurement of pharmaceuticals and budgeting.
- Develop guidelines and SOPs for pharmaceutical procurement for use nationwide.
- Strengthen oversight of local procurement by federal authorities to ensure transparency and fairness, including a reporting requirement from lower to higher levels.
- Encourage adherence to the PPA code of conduct at all levels through regular refresher trainings.

ENSURING QUALITY OF PRODUCT AND SERVICES

- Rigorously prequalify suppliers and registration of wholesalers.
- Set a requirement and mechanism for supplier performance to be systematically monitored and reported on to all government levels and through appropriate public forums.
- Include penalties for poor performance in contracts and rigorously enforce them.
- Publish relevant audit reports on procurement performance.
- Make the list of medical products registered by the DDA available to all procuring units.
- Develop standardized checklists for use when receiving medical products to use routinely before accepting the products.
- Develop or extend chemical testing capability for use at provincial levels with the DDA in the event that quality issues are suspected.
- Provide extensive technical assistance and training to improve understanding of quality assurance issues in pharmaceutical procurements.

CONCLUSION

Based on the assessment findings, it is clear that while national laws and regulations for the most part require certain standards in procurement, in practice these standards are not generally implemented by local authorities, and the current system falls somewhat short of meeting good procurement practice as understood internationally. There is much duplication and inefficiency, as procurement is conducted at multiple levels with little coordination and is not reliably informed by actual need. Procurements are often split to allow direct procurement, thereby not requiring a competitive process, which drives prices higher and introduces risks of poor-quality products. Training and guidelines on procurement are lacking, but limited staff capacity in procurement is not easily resolved by simply training and making guidelines available as procurement is a complex task involving pharmaceutical technical skills, assessment of quality of medical products, understanding how to prioritize the medicines to be procured, and financial management. Some of these functions need to be conducted by professionally trained staff with specific expertise.

A multifaceted approach is required to improve the quality and affordability of medical products procured at the subnational level. The use of resources should be maximized to achieve value for money through pooling demand and negotiating framework agreements at the national level, as well as improving financial management and more equitably allocating budget. The value of quality data on which to base forecasting and supply planning cannot be understated, and the process of quantification and the use of the information system should be strengthened. Additional strategies to improve transparency, integrity, and accountability should be strengthened or established, such as guidelines for pharmaceutical procurement, use of the e-GP system, and oversight of local procurement by authorities and civil society. Finally, the quality of medical products should be ensured by rigorously prequalifying suppliers and registering wholesalers who comply with good distribution practices, monitoring suppliers' performance, and carefully inspecting medical products on receipt. The ongoing work in Nepal to streamline the registration system through digitalization and making it available online is also important so that procuring units can check that medicines are currently registered by the DDA.

By implementing multiple diverse strategies targeting efficiency, transparency, and accountability in subnational procurement, Nepal will be able to ensure the quality and affordability of the products procured.

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