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The Landscape of Strategic Health Purchasing for Universal Health Coverage in Burkina Faso: Insights from Five Major Health Financing Schemes

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ABSTRACT

Strategic health purchasing is a key strategy in Burkina Faso to spur progress toward universal health coverage (UHC). However, a comprehensive analysis of existing health financing arrangements and their purchasing functions has not been undertaken to date. This article provides an in-depth analysis of five key health financing schemes in Burkina Faso: *Gratuité* (a national free health care program for women and children under age 5), *crédits délégués* (delegated credits), *crédits transférés* (transfers to municipalities), community-based health insurance, and occupation-based health insurance. This study involved a document review and complementary key informant interviews using the Strategic Health Purchasing Progress Tracking Framework developed by the Strategic Purchasing Africa Resource Center (SPARC). Data were collected using the framework's accompanying Microsoft Excel-based tool. We analyzed the data manually to examine and identify the strengths and weaknesses of governance arrangements and purchasing functions and capacities. The study provides insight into areas that are working well from a strategic purchasing perspective and, more importantly, areas that need more attention. Areas for improvement include low financial and managerial autonomy for some schemes, weak accountability measures, lack of explicit quality standards for contracting and for service delivery, budget overruns and late provider payment, provider payment that is not linked to provider performance, fragmented health information systems, and information generated is not linked to purchasing decisions. Improvements in purchasing functions are required to address shortcomings while consolidating achievements. This study will inform next steps for Burkina Faso to improve purchasing and advance progress toward UHC.

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Introduction

Consensus is emerging that countries must move from passive to strategic health purchasing in order to make progress toward universal health coverage (UHC).^{1–3} Passive health purchasing implies that providers receive funds regardless of their performance,⁴ while strategic health purchasing takes a proactive approach by using information to determine what types of health services to buy, for whom, from whom, how, and at what payment rates.^{2,5} Indeed, strategic purchasing means deliberately directing health funds to priority populations, interventions, and services and actively creating incentives so funding is used more equitably and efficiently and aligns with population health needs.^{2,6}

Despite the momentum for strategic purchasing, many developing countries lack the resources and capacity to implement it or struggle to identify effective entry

points.^{7–10} But strategic purchasing is not all-or-nothing. Purchasing arrangements are in place in any health system, and a variety of intermediary steps can be taken to make them more strategic.² Some studies have analyzed strategic purchasing from the perspective of performance-based financing (PBF),^{11–13} health insurance,^{8,14} or user fee exemption policies.¹¹ For this study of purchasing arrangements in Burkina Faso, we examined purchasing mechanisms from the perspective of the entire health system, using a practical and functional approach to describe and assess purchasing functions across the main health financing arrangements in the country. We took a systemwide view to identify strengths, weaknesses, and challenges and to identify actions or reforms that could help improve health system performance. The study also illustrates how strategic purchasing, which is sometimes seen as an

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ambiguous concept,¹⁵ can be approached, described, and analyzed in practice to prioritize actions and make incremental progress.

Burkina Faso's Health Financing Context

Burkina Faso's current health expenditure (CHE) per capita is \$42.30 USD (2019).¹⁶ Government spending dominates health expenditure (at 41.8% of CHE), followed by out-of-pocket payments (34.7%), external aid (15.8%), and voluntary health insurance contributions (1.9%).¹⁶ Public resources are pooled by the Treasury and allocated to the Ministry of Health (MOH). At the MOH, budget formulation, execution, and monitoring are carried out by the Directorate of Administration and Finance (DAF), which also plays the role of purchaser for the public financing schemes—the *Gratuité* program (which provides free health care for women and children under age 5), *crédits délégués* (delegated credits), and *crédits transférés* (transfers to municipalities). External resources are channeled using on-budget or off-budget support. Pooling of private resources through voluntary private health insurance schemes—commercial, community-based, or occupation-based—is highly fragmented.

Five health financing schemes are included in this study. They were chosen based on their geographic and/or population coverage and/or the share of total government health spending they manage. The schemes are:

- **Gratuité (national free health care program for women and children under age 5).** Implemented since 2016, this scheme subsidizes medical exams, medical procedures, medicines, medical consumables, hospitalizations, and medical evacuations. This scheme makes a partial split between the purchasing agency (a dedicated unit in the MOH) and the public providers delivering services under the scheme.
- **Crédits délégués (delegated credits).** Delegated credits are national budget funds allocated for MOH operating and capital expenditures at the central, intermediate, and peripheral levels. Primary health care (PHC) facilities do not receive these funds.
- **Crédits transférés (transfers to municipalities).** These are national budget funds that are intended for PHC facilities. The funds are not handed over directly to the facilities, but rather to municipalities to purchase goods and services for the health facilities.

- **Community-based health insurance (CBHI).** These voluntary schemes are run by nonprofit associations that serve as the purchasers. Members contribute regularly, and the pooled funds are used to pay for care in the event of illness.
- **Occupation-based health insurance (OBHI).** These schemes cover workers in certain public or private companies. The revenue comes from worker contributions or company grants. Membership is voluntary, mandatory, or automatic, depending on the company.

Table 1 summarizes the key features of the five health financing schemes, including their purchaser(s), revenue source(s), population covered, services purchased, providers involved, provider payment method used, and governance actors.

Methods

Analytical Framework

This study used the Strategic Health Purchasing Progress Tracking Framework created by the Strategic Purchasing Africa Resource Center (SPARC) to guide data collection and analysis.¹⁹ We compiled descriptive information on 1) purchasing functions (benefits specification, contracting arrangements, provider payment, and performance monitoring) and their execution in the schemes; and 2) external factors and governance arrangements and how they are linked to strategic purchasing. These elements are depicted in Figure 1.

Data Collection

We populated the framework's Microsoft Excel-based data collection tool with data initially collected from June to December 2019 (these data have been continuously updated as necessary). Data were collected primarily through reviews of policy documents, decrees and directives, national health accounts, MOH statistical yearbooks, activity reports and/or websites of units in charge of managing and/or implementing the policies under study, newspapers, and scientific literature. Gaps in the document reviews were supplemented by informal interviews with key informants. All informants provided informed consent. Key informants were selected based on their current work assignments and experience with, or expertise in the schemes under study; they included three policy makers, four CBHI or OBHI representatives, and the mayor of a municipality. The last coauthor (SPY) of this paper is the technical secretary in charge of UHC in Burkina Faso and has

Table 1. Key features of the five main health financing schemes^{17,18}

	Gratuité	Crédits Délégués	Crédits Transférés	CBHI	OBHI
Purchaser(s)	<ul style="list-style-type: none"> • Technical secretariat in charge of UHC (ST/CSU) within MOH • Directorate of Administration and Finance (DAF) within MOH 	<ul style="list-style-type: none"> • DAF 	<ul style="list-style-type: none"> • DAF 	<ul style="list-style-type: none"> • Executive board of the CBHI scheme 	<ul style="list-style-type: none"> • Executive board of the OBHI scheme
Revenue Source(s)	<ul style="list-style-type: none"> • Government budget (99%) • Donors (1%) 	<ul style="list-style-type: none"> • Government budget (100%) (domestic resources + budget support from donors) 	<ul style="list-style-type: none"> • Government budget (100%) (domestic resources + budget support from donors) 	<ul style="list-style-type: none"> • Voluntary beneficiary contributions, support from partners (variable proportions depending on the CBHI scheme) • Members of CBHI schemes and their dependents 	<ul style="list-style-type: none"> • Voluntary and/or mandatory beneficiary contributions, support from partners (variable proportions depending on the OBHI scheme) • Members of OBHI schemes and their dependents
Covered Population	<ul style="list-style-type: none"> • Children under age 5 • Pregnant women • Postpartum women up to 42 days after childbirth • Women living with obstetric fistula • Women ages 25 to 55 for screening and treatment of precancerous cervical lesions • Women ages 25 and older for physical examination of breasts 	<ul style="list-style-type: none"> • All people; health districts and health facilities are the direct beneficiaries, and the population is the indirect beneficiary 	<ul style="list-style-type: none"> • All people; municipalities are the direct beneficiary, and PHC facilities and the population are the indirect beneficiaries 	<ul style="list-style-type: none"> • Members of CBHI schemes and their dependents 	<ul style="list-style-type: none"> • Members of OBHI schemes and their dependents
% of Total Population Covered	<ul style="list-style-type: none"> • About 25% 	<ul style="list-style-type: none"> • 100% 	<ul style="list-style-type: none"> • 100% 	<ul style="list-style-type: none"> • Unknown 	<ul style="list-style-type: none"> • Unknown
Services Purchased	<ul style="list-style-type: none"> • Care during pregnancy • Childbirth care and obstetric interventions • Care for children under age 5 (except basic treatment of chronic diseases) • Screening for precancerous cervical lesions • Fuel for medical evacuations within the country 	<ul style="list-style-type: none"> • Personnel costs (54%) • Current expenditure for operation of public health institutions • Investments (18%) • Procurement of goods and services for operation of central and peripheral units of MOH (4%) 	<ul style="list-style-type: none"> • Building, standardizing and rehabilitating PHC facilities • PHC operating costs (e.g., fuel office supplies, equipment, medicines, vehicle and building maintenance) 	<ul style="list-style-type: none"> • Well-defined health benefit package for the specific CBHI scheme (usually PHC + medical evacuations at the secondary care level) 	<ul style="list-style-type: none"> • Most of the health care services available in health facilities covered by agreement
Providers	<ul style="list-style-type: none"> • All public health facilities • Some private health facilities that have an agreement with MOH 	<ul style="list-style-type: none"> • Health districts and all public health facilities • Some private health facilities under agreement 	<ul style="list-style-type: none"> • All public health facilities 	<ul style="list-style-type: none"> • Some public health facilities • Some private health facilities including pharmacies and laboratories 	<ul style="list-style-type: none"> • Some public health facilities • Some private health facilities, including pharmacies and laboratories
Provider Payment Method(s)	<ul style="list-style-type: none"> • Fee-for-service 	<ul style="list-style-type: none"> • Line-item budget • part of the total budget allocated based on performance (health service utilization indicators) 	<ul style="list-style-type: none"> • Line-item budget 	<ul style="list-style-type: none"> • Fee-for-service 	<ul style="list-style-type: none"> • Fee-for-service
Governance Actors	<ul style="list-style-type: none"> • MOH • Ministry of Finance (MOF) • Nongovernmental organizations (NGOs)/associations that monitor the effectiveness of the policy 	<ul style="list-style-type: none"> • MOH • MOF 	<ul style="list-style-type: none"> • MOH • MOF • Ministry of Territorial Administration and Decentralization • Municipalities 	<ul style="list-style-type: none"> • Promoters of CBHI schemes • Board of directors of CBHI schemes • General assembly of CBHI schemes 	<ul style="list-style-type: none"> • Federation of OBHI schemes • Board of directors of OBHI schemes • General assembly of OBHI schemes

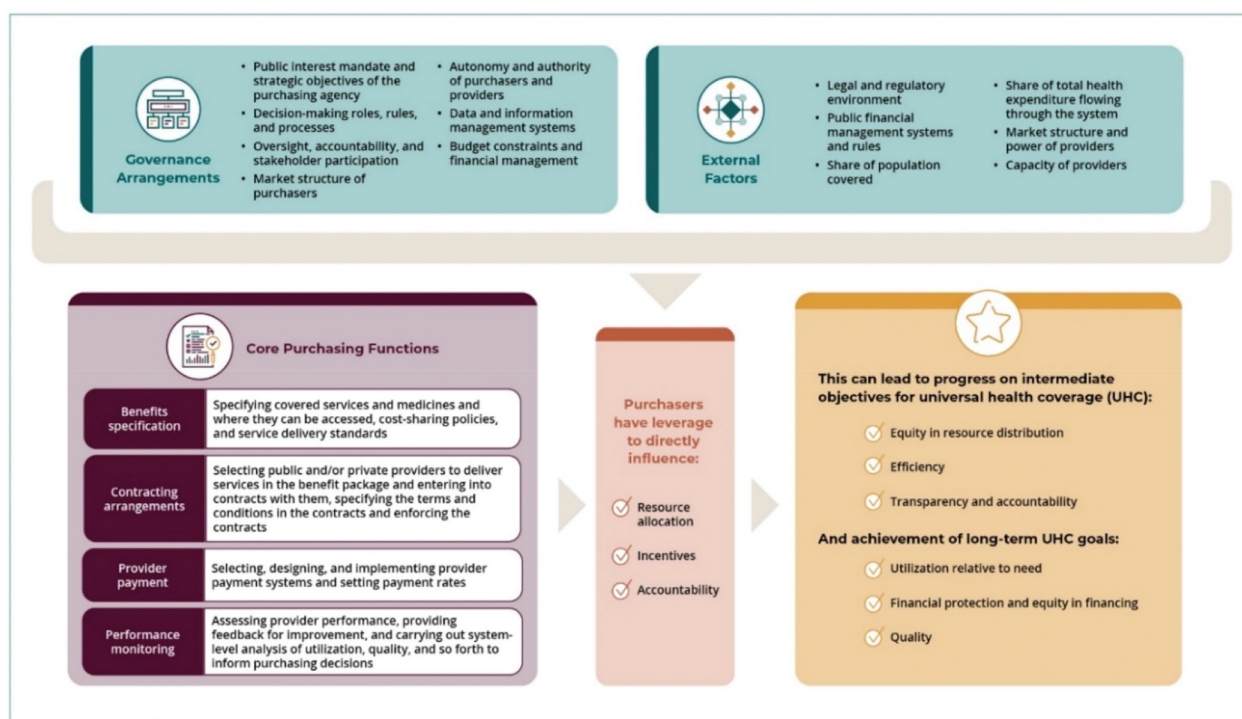


Figure 1. Strategic health purchasing progress tracking framework.

extensive experience in and knowledge of the country's health system. He facilitated access to certain documents (gray literature), and his tacit knowledge was used to fill in gaps in the document review.

Data Analysis

We applied 11 normative benchmarks to assess the governance arrangements and the purchasing functions and capacities in the five health financing schemes selected for the study.¹⁹ These benchmarks are listed in Table 2.

Results

Governance Arrangements

Mandate and Authority of Purchasers

All five health financing schemes have a designated purchaser with regulatory provisions specifying its role and responsibilities in the form of decrees, orders, directives, and other provisions. For *Gratuité*, *crédits délégués*, and *crédits transférés*, funds are transferred by the Treasury to the MOH's DAF, which has the mandate to transfer funds for those three schemes.^{17,18}

For the *Gratuité* scheme, the Technical secretariat in charge of UHC (ST/CSU) has the authority to determine the amounts to be given to or withdrawn

from health facilities, approve payment of health facility bills each quarter, reward facilities for good performance, propose sanctions for health facilities where irregularities are found, and ensure national coordination and monitoring for the scheme. It also has the authority to include private health facilities in the scheme, supervise the activities of all health facilities in the scheme, and select payment methods and set payment rates.

For *crédits délégués* and *crédits transférés*, the DAF is primarily responsible for preparing health district budgets based on predefined criteria (such as the size of the population covered, the number of health facilities, operating costs, and the poverty index). The DAF transfers funds received from the Treasury to the bank accounts of health districts or municipalities; it also supports the health districts and municipalities to ensure proper budget execution, make any necessary budget adjustments, and perform mid-term evaluations of budget execution. However, the DAF has virtually no autonomy to decide how funds should be used because it must comply with preestablished rules, of public finance management.^a

As for CBHIs and OBHIs, each is managed by an executive board, which is responsible for ensuring proper implementation of decisions made by the CBHI

Table 2. Purchasing functions and corresponding benchmarks.

Purchasing Function	Benchmarks for Strategic Purchasing
Governance and external factors	<ul style="list-style-type: none"> Purchasing functions have an institutional home that has a clear mandate and allocation of functions Providers have autonomy in managerial and financial decision making and are held accountable
Financial management	<ul style="list-style-type: none"> Purchasing arrangements incorporate mechanisms to ensure budgetary control
Benefits specification	<ul style="list-style-type: none"> A benefit package is specified and aligned with purchasing arrangements The purchasing agency further defines service delivery standards when contracting with providers
Contracting arrangements	<ul style="list-style-type: none"> Contracts are in place and are used to achieve objectives Selective contracting specifies service quality standards
Provider payment	<ul style="list-style-type: none"> Provider payment systems are linked to health system objectives Payment rates are based on a combination of cost information, available resources, policy priorities, and negotiation
Performance monitoring	<ul style="list-style-type: none"> Monitoring information is generated and used at the provider level Information and analysis are used for system-level monitoring and purchasing decisions

or OBHI scheme's general assembly (its top governing body, which includes member representatives) and developing contracts with providers and policy holders. Executive boards are autonomous and can enter into contracts with providers and terminate them in the event of noncompliance. However, changes in benefit packages, provider payment terms, membership conditions, or contribution rates are often the responsibility of the general assembly.^b

Autonomy and Power of Providers in Decision Making and Accountability Mechanisms

Private service providers have a great deal of autonomy to manage their resources. Autonomy for public providers is mixed and depends on the health financing scheme. Autonomy is low for providers under *crédits délégués* and *crédits transférés*, because money is not paid directly to them; inputs are provided by the DAF or the municipalities to the public health facilities. Provider autonomy is higher under *Gratuité* and CBHI and OBHI schemes, because funds are received as revenue directly by the health facilities and can be used for routine expenses per their annual budget. In all cases, some requirements must still be met. For example, although most PHC facilities have some flexibility in deciding which inputs (such as medicines or supplies) to buy, any expenditures over 25,000 XOF (about \$45.00 USD) must be authorized by the district medical officer.

Moreover, providers must comply with public financial management rules, which can sometimes lengthen disbursement processes.^c

Both public and private providers usually have little negotiating power over purchasing mechanisms. However, public health workers can turn to trade unions, which are quite influential and can use strikes to demand higher salaries/bonuses and better working conditions. The private sector also has an umbrella organization, *Fédération des Associations Professionnelles de la Santé Privée du Burkina Faso* (FASPB), whose mission is to act as an intermediary between private-sector providers and the MOH and technical and financial partners and to advocate for private sector–friendly conditions in health policies.²⁰

Under *Gratuité*, *crédits délégués*, and *crédits transférés*, purchasers are held accountable through government bodies such as health services inspectorates, Treasury inspectorates, and the Superior Authority for State Control and Anti-Corruption. But alleged or revealed dysfunctions and suspected fraud or corruption are not always subject to in-depth investigation or sanctions. The government, with support from donors, established Customer Service Units through which citizens can provide feedback and lodge complaints about the quality of the services they have received in public facilities. The MOH has also used mechanisms set up by civil society organizations or national and international NGOs to receive feedback from the population, but these mechanisms are not well coordinated and corrective actions that are eventually taken are not sufficiently communicated to the public. The sustainability of these mechanisms is also not guaranteed because they are part of externally funded projects.^{21–23}

For *Gratuité* specifically, the ST/CSU has mechanisms to promote accountability, including population satisfaction surveys conducted by national and international NGOs, semiannual review meetings to assess strengths and weaknesses of the program and make recommendations, stakeholder meetings at the regional and district levels, and publication of implementation reports. The ST/CSU uses the survey results to commend health facilities that properly implement the scheme and to sanction misbehaviors by withholding money or notifying the provider's supervisors. To inform citizens of their rights and obligations, the ST/CSU uses several channels: media interviews, response to complaints or queries on social media, newsletters, documentaries, and conferences and public debates organized by NGOs or civil society organizations in collaboration with the MOH. These activities are generally ad hoc, however.

In contrast, *crédits délégués* and *crédits transférés* lack mechanisms for consultation with citizens. They have no dedicated staff for communication with citizens and rely on support from the Directorate of Communication and Ministerial Press of the MOH. However, civil society organizations sometimes hold the government accountable for their use of domestic and external resources through citizen surveys or studies.²⁴

Under CBHI and OBHI schemes, the rights and obligations of concern to members are specified in contracts. These schemes consider member needs and input through their general assembly and analyses of health care utilization. OBHI schemes generally emphasize institutional and interprofessional communication, while CBHI schemes focus mainly on raising public awareness of the importance of financial protection in order to encourage enrollment and renewals.^d

Financial Management

All five schemes have a defined process to set the purchaser's budget and have mechanisms in place to track budget execution/spending. Most funds for *Gratuité*, *crédits délégués*, and *crédits transférés* are from the government budget. The annual budget for each is based on an annual budget formulation circular issued by the Head of State and approved by the National Assembly in the annual Finance Act; the funds are used according to public finance management rules. These budget rules are generally enforced, but budget overruns routinely occur, specifically for *Gratuité*. Indeed, at the end of December 2021, five years after the *Gratuité* implementation, the outstanding invoices of health facilities amounted to 32,234,737,356 XOF (about \$58.6 million USD).²⁵

In terms of allocated budgets, *crédits délégués* receives an average of 200 billion XOF (about \$367 million USD) per year and *crédits transférés* receives an average of 6 billion XOF (about \$11 million USD). For *Gratuité*, an estimated 30 billion XOF (about \$55 million USD) is needed to pay for services utilized each year, although less is typically allocated to the program. These amounts constitute 9.6% of the national budget (2019), which is above the average for sub-Saharan Africa of 6.7%¹⁶ but still insufficient to cover estimated needs. The percentage of total health expenditure and of government health expenditure flowing through these schemes is about 5.44% and 13.45%, respectively, for *Gratuité*, 34.23% and 84.68% for *crédits délégués*, and 0.75% and 1.87% for *crédits transférés*.^e

The annual budget of CBHI and OBHI schemes is based on projected member contributions, which for CBHI schemes are generally low. Budget overruns occur frequently and are covered by corporate subsidies for OBHI, which also allow for a more generous benefit package. CBHIs get their financial support primarily from their umbrella organizations, mainly *Réseau d'Appui aux Mutuelles de Santé* (RAMS) and *Association Songui Manegré/Aide au Développement Endogène* (ASMADE), themselves supported by donors. CBHIs are rarely directly supported by external partners and do not receive subsidies from the national budget, which limits their benefits and their ability to cross-subsidize among members. Increasing membership fees is an option, but it is rarely used because of the low socio-economic status of most members.

Purchasing Functions and Capacities

Benefits Specification: What to Purchase

All five schemes have an explicit benefit package (see Table 1 above) and a list of covered drugs that reflect health priorities. But citizens are not directly consulted about their needs and preferences in designing these benefit packages. Furthermore, only OBHIs have regular benefit package review processes that include analysis of health care utilization and service cost data.^f None of the five schemes has explicit service quality standards; even where general or specific service delivery standards exist, no mechanism is in place to ensure that they are enforced.

All schemes except OBHI cover only generic medicines (unless a specific drug does not have a generic equivalent). The list of generic drugs is determined by the National Agency for Pharmaceutical Regulation through a process involving stakeholders in the MOH. The choice of generic drugs was informed by recommendations from bodies such as medical professional societies and the World Health Organization (WHO). The generic drugs list is revised every two years, but drugs may be added or removed between review cycles based on national or international recommendations. OBHI schemes cover both generic and branded drugs.^g

Contracting Arrangements: From Whom to Purchase

None of the five schemes uses selective contracting between the purchasers and public or private providers based on accreditation or other quality standards. Public-sector health organizations are automatically eligible for both *crédits délégués* and *crédits transférés*, so the DAF does not have formal or selective contracts with them. Similarly, public health facilities are automatically included in the *Gratuité* scheme regardless of their status or their level of performance.¹⁷ Public health facilities

belong to the MOH, with which they have a hierarchical relationship, and they are subject to guidelines for service delivery. The ST/CSU has selective contracts with private providers (17 out of 641 nationally in 2020) that agree to comply with four criteria: 1) deliver the *Gratuité* benefit package, 2) agree to reduce service rates to the negotiated level, 3) agree to regular reporting using the *Gratuité* information system, and 4) allow monitoring and audits by the control bodies of *Gratuité*. These requirements are not attractive to most private providers.^h

OBHI schemes have selective contracting with both public and private providers, and CBHI schemes contract mostly with public providers. OBHI schemes negotiate contracts with each provider individually, while CBHI schemes negotiate with providers collectively.ⁱ Compliance with contracts is more rigorous for OBHI schemes than CBHI schemes. OBHI schemes more frequently suspend or cancel contracts in cases of recurring fraud, overbilling, or poor treatment of beneficiaries. CBHI schemes usually simply inform local health authorities of malpractice, and they impose sanctions of varying severity depending on the transgression.^j

Provider Payment: How and How Much to Pay Providers

In all five schemes, payments are not explicitly linked to provider performance. *Gratuité* and CBHI and OBHI schemes pay providers on a fee-for-service basis, linking payment to the volume of services provided. *Crédits délégués* and *crédits transférés* allocate payments to health facilities through line-item budgets based on inputs. To prevent late payments under *Gratuité*, providers are prepaid at the beginning of the year for expected utilization in the first quarter (through a “fund prepositioning” system).¹⁷ The amount is calculated based on the average utilization of *Gratuité* services in the health facility over the previous three months. Subsequent payments during the year are adjusted based on services delivered.¹⁷ The ST/CSU transfers about 80% of the funds to the pharmaceutical depots of public health districts, as advance payment for drugs and medical consumables, and transfers about 20% to health facilities as payment for services. This provider payment method is not regularly evaluated for effectiveness.

Despite the prepayment to providers under *Gratuité*, sometimes the full billed amount from health facilities is not paid or payments are irregular or delayed due to budgetary constraints at the Treasury. Furthermore, although health facilities initially receive the full

payment, shortages in drug supplies have been seen in public PHC facilities and district hospitals due to mismanagement of resources.^k

User fee rates, including in the *Gratuité* program, were set by the government for public-sector health care in the 1990s, but providers do not always adhere to them. In practice, providers ultimately set user fees rates, with some variability and without explicit criteria, although the fees are relatively low due to users’ low financial capacity in a context of high poverty levels. In the private sector, prices are set by mutual agreement between providers through their umbrella organization, the FASPB. Purchasers, particularly in CBHI and OBHI schemes, have little power to negotiate the user fees that private providers charge.^l

Performance Monitoring

Mechanisms for monitoring provider activities vary from one scheme to another. The health information systems are fragmented and are not integrated or interoperable.^m All five schemes have dedicated, trained staff involved in health information management, and data used for payments are accessible in a format that can be easily analyzed. However, data are not used for in-depth analysis of provider performance, and none of the schemes has explicit mechanisms to assess quality of care and act on poor performance.

Gratuité uses an electronic platform called *e-Gratuite*, which is built on the open-source DHIS2 software, to record the quantity of services provided, and provider payment is based on these data. Before payment, data are monitored and audited externally by national and international NGOs, and internally by ST/CSU.¹⁷

Crédits délégués and *crédits transférés* use two systems: 1) *Entrepôt de Données Sanitaires du Burkina Faso* (ENDOS-BF), which is built on DHIS2, and 2) integrated accounting system software. The MOH does not perform routine analyses of *crédits délégués* and *crédits transférés* because it makes payments annually in a lump sum. However, the MOH’s DAF applies internal auditing and controls and considers the results when making purchasing decisions and determining resource allocation to health facilities and municipalities. OBHI and CBHI schemes use scheme-specific information systems or simple Excel-based software. They perform routine analyses to make purchasing decisions on premiums or contributions and on fee schedules for provider payment.

Discussion

Burkina Faso has seen progress in some purchasing functions, including the use of explicit benefit packages linked to population health needs, linking of provider

payment to the volume of services delivered, and prepayment to public providers via the government budget through *Gratuité* to minimize late payments. However, a key remaining upstream issue is the ability to mobilize sufficient resources to pursue strategic purchasing objectives and meet citizens' service entitlements. All five schemes face challenges in this regard. *Gratuité*, *crédits délégués*, and *crédits transférés*, which are publicly funded, form the cornerstone of pooled health funds in the country. Public resources are widely considered the most sustainable and predictable source of health financing to move toward UHC.^{26,27} This suggests a need to explore how to sustainably expand fiscal space despite weak tax collection capacity, to place a higher priority on health in national budgets, and to improve efficiency in resource use.^{28,29}

Governance Arrangements

Mandate and Authority of Purchasers

Appropriate governance mechanisms that include clear mandates for all actors are critical to the successful implementation of strategic purchasing. All five health financing schemes have such mechanisms, enabling their purchasing agencies to carry out their duties fairly well. However, the level of purchaser autonomy over decision making and resource allocation varies by scheme and affects progress toward more strategic purchasing.^{13,30} Purchaser autonomy is relatively high under *Gratuité*, OBHI and CBHI schemes but rather low under *crédits délégués* and *crédits transférés*. For purchaser autonomy to realize its promise, purchasers need the required resources as well as the managerial and technical capacity to act strategically in pursuit of health system goals. This includes negotiating and implementing well-designed contracts, defining provider payment systems, monitoring provider performance, designing cost-effective benefit packages, defining quality requirements, and setting up accountability mechanisms.^{28,31,32}

Autonomy and Power of Providers in Decision Making

Lack of provider autonomy limits the ability of public health facilities to make financial and administrative decisions and respond to incentives embedded in provider payment mechanisms that are intended to expand service delivery and improve quality of care. This is an area for action, particularly for primary health facilities.

Accountability Mechanisms

Accountability mechanisms are poorly coordinated and often depend on external funding, which limits their effectiveness and jeopardizes their sustainability. Areas

for improvement include prompt addressing of dysfunctions, fraud, and corruption. Tackling these issues, especially in the public sector, would improve health system responsiveness and thus increase trust in health services.

Communication with the population on their rights and obligations varies by scheme. The OBHI and CBHI schemes have relatively well-defined target populations—their current or potential members—and contracts that set out their rights and obligations. *Gratuité*, *crédits délégués*, and *crédits transférés* have a much wider population coverage but lack explicit communication strategies with beneficiaries. Specific communications plans that are regularly monitored and evaluated are of utmost importance because information and communication deficits are cited as an obstacle to sound implementation of health financing schemes.^{33–35}

Financial Management

Financial management requirements are well articulated for all of the schemes, but overruns do occur, especially in the *Gratuité* program. Clear procedures for formulating, approving, executing, and evaluating budgets, if properly implemented, promote effective strategic purchasing.

Purchasing Functions and Capacities

Benefits Specification

All five schemes have explicit benefit packages, but lack explicit processes for regularly reviewing the package and lack citizen involvement in specifying it, which may hinder efforts to meet evolving population health needs. Participatory approaches that place equal value on the expressed needs of the population would empower communities to take greater responsibility for their own health.³⁶ This involvement should not be ad hoc; rather, it should be regular and ideally supported and informed by context-specific evidence.³⁷ Furthermore, without explicit quality standards and mechanisms to enforce service delivery standards, the potential of benefits specification as a lever for strategic purchasing is not fully realized.

Contracting Arrangements

The ST/CSU and the DAF do not have formal or selective contracting with public health facilities for *Gratuité*, *crédits délégués*, and *crédits transférés*. But the executive boards of the CBHI and OBHI schemes have more formal and selective contracts with providers—as the ST/CSU has with private providers for *Gratuité*—even though the contract provisions are more difficult to enforce in the case of CBHI. Selective contracting is meant to create

competition among providers, thereby increasing efficiency and value for patients.³⁸ This assumes that contracts contain provisions that are attractive to providers and include incentives that align provider behavior with purchaser objectives. Well-developed contracts minimize conflicts of interest, clearly specify the roles and responsibilities of all actors, provide incentives for better provider performance and quality of care, and establish accountability mechanisms.^{39,40} Capacity building within the ST/CSU and the DAF may be needed to develop “smart” contracts because contracting processes can be complex, time consuming, and expensive, especially when they are new to the health system.³⁸

Provider Payment

Gratuité and the OBHI and CBHI schemes pay providers using fee-for-service, while *crédits délégués* and *crédits transférés* use a line-item budget system. Each of these payment methods has pros and cons, and the choice depends on the purchaser’s objectives as well as contextual factors, including health system capacity.⁴¹ Fee-for-service is useful for increasing the volume of services but can result in cost inflation because providers have an incentive to perform more procedures, even unnecessary ones, to maximize their profit.⁴¹ This can also lead to inefficiencies and waste of resources. The line-item budget may be useful when purchasers and/or providers have weak management capacity or when cost control is a high priority.⁴¹ But its limited flexibility is not ideal for strategic purchasing.⁴ Fee-for-service and line-item budgets are relatively easy to implement, as compared to other output based provider payment mechanisms. Purchasers can also combine payment methods—leading to so-called *blended provider payment methods*—while ensuring that they are complementary.⁴² In any case, regardless of the method or mix of methods, payments must be timely and regular in order for the incentives to be effective.⁴²

Payment delays and accumulated arrears under *Gratuité* may lessen the incentive to providers to improve their performance and quality of care, despite the prepayment system in place. This implies that sufficient resource mobilization, prioritization based on population needs, defined and transparent processes for setting the purchaser’s budget, and mechanisms to ensure budgetary control and prevent overspending are fundamental to strong purchasing arrangements.

Performance Monitoring

Each of the five schemes has a system for collecting data on provider activities, but the data are not used to inform purchasing decisions, which would be a more

strategic use of this purchasing function.⁴² The configuration of the health information systems can vary across different health systems, but it should be user friendly, reliable, transparent, not too fragmented, and have interoperable subsystems.⁴³ This is not the case in Burkina Faso, where existing information systems do not provide adequate data to inform purchasing decisions.

Conclusions

By mapping and analyzing governance arrangements and purchasing functions and capacities across the five main health financing schemes in Burkina Faso, this study has yielded insights about areas that need further attention to make health purchasing more strategic and thus advance progress toward UHC. Despite some areas of progress, a number of weaknesses and limitations in Burkina Faso’s health purchasing arrangements are apparent. Overall, the greatest limiting factor is the high level of fragmentation in health financing and the relatively low share of total health spending flowing through each of the public financing mechanisms. This greatly limits the power of any public purchaser to make resource allocation more effective, create coherent and powerful incentives for providers, and enforce accountability for quality and other aspects of performance.

Specific aspects of purchasing arrangements that could be strengthened include: 1) financial and managerial autonomy for public purchasers and public providers, 2) accountability measures, 3) budget management (particularly for *Gratuité*), 4) quality standards for contracting and service delivery, 5) harmonizing and defining explicit criteria for setting payment rates, 6) linking payment to provider performance, and 7) harmonizing health information systems to generate evidence for purchasing decisions. This study was meant to serve as a baseline assessment and is a first step in defining priorities for action.

Notes

- [a]. Source: key informant
- [b]. Source: key informant
- [c]. Source: key informant
- [d]. Source: key informant
- [e]. Calculations by the authors, based on data from WHO’s Global Health Observatory and the 2021 Budget Act
- [f]. Source: key informant
- [g]. Source: key informant
- [h]. Source: key informant
- [i]. Source: key informant
- [j]. Source: key informant
- [k]. Source: key informant

[l]. Source: key informant

[m]. Source: key informant

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Author Contributions

The authors led the data collection and populated the Strategic Health Purchasing Progress Tracking Framework. JAK led the drafting of the manuscript and all of the coauthors reviewed the manuscript and provided critical input.

Data Availability Statement

The authors confirm that the data supporting the findings of this study are available within the article and under reasonable request.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Ethical Approval

This manuscript did not require ethical approval.

Informed Consent From Participants

Informed consent was provided by key informants.

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References

1. Mathauer I, Dale E, Jowett M, Kutzin J. Purchasing health services for universal health coverage: how to make it more strategic? Health financing policy brief; no. 6. Geneva (CH): World Health Organization; 2019 [accessed 2022 May 28]. <https://www.who.int/publications/i/item/WHO-UCH-HGF-PolicyBrief-19.6>.
2. Mathauer I, Dale E, Meessen B. L'achat stratégique en vue de la couverture sanitaire universelle : enjeux et questions politiques-clés. Résumé des discussions d'experts et de praticiens [Strategic purchasing for Universal Health Coverage: key policy issues and questions. A summary from expert and practitioners' discussions]. Health financing working paper; no. 8. Geneva (CH): World Health Organization; 2017 [accessed 2022 May 28]. <https://apps.who.int/iris/handle/10665/259945>.
3. Cashin C, Chi YL, Smith P, Borowitz M, Thomson S, editors. Paying for performance in healthcare: implications for health system performance and accountability. New York (NY):Open University Press; 2014 [accessed 2022 May 28]. (Figueras J, McKee M, Mossialos E, Saltman RB, Busse R, editors. European Observatory on Health Systems and Policies series). <https://eurohealthobservatory.who.int/publications/m/paying-for-performance-in-health-care-implications-for-health-system-performance-and-accountability>.
4. Reinhardt U, Cheng T. The World Health Report 2000 —Health systems: improving performance. Bull World Health Org. 2000;78:1064–65.
5. Honda A, Hanson K, Tangcharoensathien V, Huntington D, McIntyre D. 'Strategic purchasing' – definition and analytical framework used in the multi-country study. In: Honda A, McIntyre D, Hanson K, Tangcharoensathien V, editors. Strategic purchasing in China, Indonesia and the Philippines. (Comparative country studies; Vol. 2, no. 1 2016). Geneva (CH): World Health Organization; 2016. p. 2–18. [accessed 2022 May 28]. <https://apps.who.int/iris/bitstream/handle/10665/252763/9789290617686-eng.pdf?sequence=1&isAllowed=y#page=8>.
6. Resilient & Responsive Health Systems (RESYST). What is strategic purchasing for health? Topic overview; no. 4, financing research theme. London (GB): RESYST; 2014 [accessed 2022 May 28]. <https://resyst.lshtm.ac.uk/sites/resyst/files/content/attachments/2018-08-22/Whatistrategicpurchasingforhealth.pdf>.
7. Hanson K, Barasa E, Honda A, Panichkriangkrai W, Patcharanarumol W. Strategic purchasing: the neglected health financing function for pursuing universal health coverage in low- and middle-income countries; comment on "What's needed to develop strategic purchasing in healthcare? Policy lessons from a realist review. Int J Health Policy Manag. 2019;8 (8):501–04. doi:10.15171/ijhpm.2019.34.
8. Etiaba E, Onwujekwe O, Honda A, Ibe O, Uzochukwu B, Hanson K. Strategic purchasing for universal health coverage: examining the purchaser–provider relationship

- within a social health insurance scheme in Nigeria. *BMJ Glob Health*. 2018;3(5):e000917. doi:10.1136/bmjgh-2018-000917.
9. Mbau R, Barasa E, Munge K, Mulupi S, Nguhiu PK, Chuma J. A critical analysis of health care purchasing arrangements in Kenya: a case study of the county departments of health. *Int J Health Plan Manag*. 2018;33(4):1159–77. doi:10.1002/hpm.2604.
 10. Ogbuabor DC, Onwujekwe OE. Scaling-up strategic purchasing: analysis of health system governance imperatives for strategic purchasing in a free maternal and child healthcare programme in Enugu State, Nigeria. *BMC Health Serv Res*. 2018;18(1):245. doi:10.1186/s12913-018-3078-x.
 11. Sepey M, Ridde V, Somé PA. Scaling-up performance-based financing in Burkina Faso: from PBF to user fees exemption strategic purchasing. *Int J Health Policy Manag*. 2022;11(5):670–82. doi:10.34172/ijhpm.2020.209.
 12. Witter S, Chirwa Y, Chandiwana P, Munyati S, Pepukai M, Bertone MP, Banda S. Results-based financing as a strategic purchasing intervention: some progress but much further to go in Zimbabwe? *BMC Health Serv Res*. 2020;20(1):180. doi:10.1186/s12913-020-5037-6.
 13. Witter S, Bertone MP, Namakula J, Chandiwana P, Chirwa Y, Ssenyonjo A, Sengooba F. (How) does RBF strengthen strategic purchasing of health care? Comparing the experience of Uganda, Zimbabwe and the Democratic Republic of the Congo. *Glob Health Res Policy*. 2019;4(1):3. doi:10.1186/s41256-019-0094-2.
 14. Rezapour A, Hakimzadeh SM, Panahi S, Teymourzadeh E, Bahadori M, Bastani P, Tahernezhad A. Designing a pragmatic model for strategic purchasing of health services in health insurance companies: the feasible pivot of strategic purchasing in a developing country. *Int J Health Gov*. 2019;24(1):42–55. doi:10.1108/IJHG-07-2018-0030.
 15. Paul E, Brown GW, Ridde V. Misunderstandings and ambiguities in strategic purchasing in low- and middle-income countries. *Int J Health Plan Manag*. 2020;35(5):1001–08. doi:10.1002/hpm.3019.
 16. Global Health Expenditure Database. Geneva (CH): World Health Organization; [accessed 2022 Apr 30]. https://apps.who.int/nha/database/country_profile/Index/en.
 17. Government of Burkina Faso. Arrêté Conjoint N°2018-1211/MS/MINEFID: manuel de procédures descriptives des modalités de gestion, de suivi et de contrôle des mesures de gratuité des soins au profit des femmes et des enfants de moins de cinq (05) ans vivant au Burkina Faso [Joint Order No. 2018-1211/MS/MINEFID: manual of descriptive procedures of management procedures, monitoring and control of free health care measures for women and children under five years of age living in Burkina Faso]. Ouagadougou (BF): Government of Burkina Faso; 2018.
 18. Ministère de la Santé [Ministry of Health]. Document portant révision des critères et clés de répartition des ressources financières du budget de l'Etat aux structures du Ministère de la Santé [Document revising the criteria and keys for the distribution of financial resources from the State budget to the structures of the Ministry of Health]. Ouagadougou (BF): Government of Burkina Faso; 2019.
 19. Cashin C, Gatome-Munyua A. The Strategic Health Purchasing Progress Tracking Framework: a practical approach to describing, assessing, and improving strategic purchasing for universal health coverage. *Health Syst Reform*. 2022;8(2):e2051794. doi:10.1080/23288604.2022.2051794.
 20. Paré F. Sous-secteur de la santé privée au Burkina: un cadre fédérateur mis en place [Private health sub-sector in Burkina: a unifying framework put in place]. *Lefaso.net*; 2013 Mar 17 [accessed 2022 May 28]. <https://lefaso.net/spip.php?article53316>.
 21. Réseau Accès aux Médicaments Essentiels (RAME). Observatoire Citoyen sur l'Accès aux Services de Santé (OCASS). Etat des lieux de l'accès aux soins de santé pour les maladies prioritaires en 2019 au Burkina Faso: rapport alternatif de veille citoyenne [State of play of access to health care for priority diseases in 2019 in Burkina Faso: alternative citizen monitoring report]. Ouagadougou (BF): RAME; [accessed 2022 May 28]. <http://www.rame-int.org>.
 22. Direction de la Communication et de la Presse Ministérielle. Unité de Service à la Clientèle (USC): des agents et acteurs outillés en techniques de traitement de plaintes [Customer Service Unit: agents and actors equipped with complaint handling techniques]. Ministère de L'Éducation Nationale de l'Alphabétisation et de la Promotion des Langues Nationales; 2021 Nov 11 [accessed 2022 May 28]. https://www.education.gov.bf/informations/actualites/articles?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=526&cHash=c42521917c11648b990a9f235b2945c5.
 23. Projet TOPICs (TechnOlogie Participation Citoyenne en santé). Ouagadougou (BF): TOPICs; [accessed 2022 May 28]. <https://www.topics-sante.net/leprojet>.
 24. Rapports d'analyse [Analysis reports]. Ouagadougou (BF): centre d'Information de Formation et d'Études sur le Budget (CIFOEB). [accessed 2022 May 28]. <https://cifoeb.org/rapports-danalyse/>.
 25. Ministry of Health of Burkina Faso, ThinkWell. Retro information on gratuité scheme. GDS Bulletin; no. 6, January to December 2021. Ouagadougou (BF): Thinkwell Global; 2022 [accessed 2022 May 28]. https://thinkwell.global/wp-content/uploads/2022/04/Bulletin-GDS_N%C2%B06_05042022_English.pdf.
 26. Kutzin J, Barroy H, Bertram M, Bigeard A, Cid C, Cowley P, Cylus J, Dale E, Dkhimi F, Jowett M, et al. Financing for universal health coverage: dos and Don'ts. Health financing guidance note; no. 9. Geneva (CH): World Health Organization; 2019 [accessed 2022 May 28]. <https://p4h.world/en/news/financing-universal-health-coverage-dos-and-donts>.
 27. Rifkin SB. Examining the links between community participation and health outcomes: a review of the literature. *Health Policy Plan* 2014;29(suppl 2): ii98–106. doi:10.1093/heapol/czu076

28. Barroy H, Sparkes S, Dale E, Mathonnat J. Can low-and middle-income countries increase domestic fiscal space for health: a mixed-methods approach to assess possible sources of expansion. *Health Syst Reform.* 2018;4 (3):214–26. doi:10.1080/23288604.2018.1441620.
29. Barroy H, Kutzin J, Tandon A, Kurowski C, Lie G, Borowitz M, Sparkes S, Dale E. Assessing fiscal space for health in the SDG era: a different story. *Health Syst Reform.* 2018;4(1):4–7. doi:10.1080/23288604.2017.1395503.
30. Sanderson J, Lonsdale C, Mannion R. What's needed to develop strategic purchasing in health-care? Policy lessons from a realist review. *Int J Health Policy Manag.* 2019;8(1):4–17. doi:10.15171/ijhpm.2018.93.
31. Langenbrunner JC, Cashin C, O'Dougherty S, editors. Designing and implementing health care provider payment systems: how-to manuals. Washington (DC): World Bank; 2009 [accessed 2022 May 28]. <https://openknowledge.worldbank.org/handle/10986/13806>.
32. Figueras J, Robinson R, Jakubowski E, editors. Purchasing to improve health systems performance. New York (NY): Open University Press; 2005 [accessed 2022 May 28]. (Figueras J, McKee M, Mossialos E, Saltman RB, Busse R, editors. European Observatory on Health Systems and Policies series). https://www.euro.who.int/__data/assets/pdf_file/0004/98428/E86300.pdf.
33. Ridde V, Queuille L, Kafando Y, Robert E. Transversal analysis of public policies on user fees exemptions in six West African countries. *BMC Health Serv Res.* 2012;12 (409). doi:10.1186/1472-6963-12-409.
34. Ridde V, Robert E, Meessen B. A literature review of the disruptive effects of user fee exemption policies on health systems. *BMC Public Health.* 2012;12(289). doi:10.1186/1471-2458-12-289.
35. Pablos-Mendez A, Cavanaugh K, Ly C. The new era of health goals: universal health coverage as a pathway to the Sustainable Development Goals. *Health Syst Reform.* 2016;2(1):15–17. doi:10.1080/23288604.2015.1120377.
36. Ridde V, and Olivier de Sardan, JP. Abolishing user fees for patients in West Africa: lessons for public policy. "User Fee Exemption: an Evaluation of Public Policy." *Afrique Contemporaine N°243*; 2013 [accessed 2022 May 28]. <http://www.i4habenin.org/sites/default/files/Abolishing%20user%20fees%20for%20patients%20in%20West%20Africa.pdf>
37. Edwards A, Zweigenthal V, Olivier J. Evidence map of knowledge translation strategies, outcomes, facilitators and barriers in African health systems. *Health Res Policy Syst.* 2019;17(1):16. doi:10.1186/s12961-019-0419-0.
38. Perrot J. Le rôle de la contractualisation dans l'amélioration de la performance des systèmes de santé. (Discussion paper; no. 1). Geneva (CH): World Health Organization; 2004 [accessed 2022 May 28]. <https://apps.who.int/iris/handle/10665/69017>.
39. Busse R, Figueras J, Robinson R, Jakubowski E. Strategic purchasing to improve health system performance: key issues and international trends. *Healthc Pap.* 2007;8 (sp):62–76. doi:10.12927/hcpap.2007.19221.
40. Brinkerhoff DW. Accountability and health systems: toward conceptual clarity and policy relevance. *Health Policy Plan.* 2004;19(6):371–79. doi:10.1093/heapol/czh052.
41. Cashin C, Ankhbayar B, Phuong HT, Jamsran G, Nanzad O, Phuong NK, Oanh TTM, Tien TV, Tsilaajav T. Assessing health provider payment systems: a practical guide for countries moving toward universal health coverage. Arlington (VA): Joint Learning Network for Universal Health Coverage; 2015 [accessed 2022 May 28]. <https://www.jointlearningnetwork.org/resources/assessing-health-provider-payment-systems-a-practical-guide-for-countries-w/>.
42. Mathauer I, Dkhimi F. Analytical guide to assess a mixed provider payment system. (Health financing guidance; no. 5). Geneva (CH): World Health Organization; 2019 [accessed 2022 May 28]. <https://www.who.int/publications/i/item/978-92-4-151533-7>.
43. Adomako-Boateng F, Agada-Amade Y, Alcantara AC, Althausen C. Using data analytics to monitor health provider payment systems: a toolkit for countries working toward universal health coverage. Arlington (VA)/Washington (DC)/Seattle (WA)/Amsterdam (NL): Joint Learning Network for Universal Health Coverage/Results for Development (R4D)/PATH/PharmAccess Foundation; 2017 [accessed 2022 May 28]. <https://www.jointlearningnetwork.org/wp-content/uploads/2019/10/using-data-analytics-to-monitor-ppm-systems.pdf>.