Challenges and Opportunities for Purchasing High-Quality Health Care: Lessons from Armenia

Adanna Chukwuma*, Hratchia Lylozian*, and Estelle Gong*

*Health, Nutrition, and Population Global Practice, World Bank Group, Washington, DC, USA; *Mount Sinai Health System, New York, New York, USA

ABSTRACT

This paper examines how purchasing decisions in Armenia may contribute to barriers in using high-quality health care, particularly for non-communicable diseases, drawing on a review of the literature and key informant interviews. The paper adapts the strategic health purchasing progress framework, to examine how characteristics of purchasing, the health system, and the political, administrative, and macro-fiscal environment may have facilitated or hindered the attainment of service delivery goals. We conclude with six lessons for reforms aimed at improving the coverage and quality of health care in Armenia. First, increasing the political priority of access to quality of health care is a pre-requisite to advancing reforms to address these issues. Second, improved purchasing governance in Armenia will require a purchaser that can make decisions without political interference, with appropriate accountability mechanisms, improvements in technical capacity, and the routine use of data systems. Third, there is a need for the regulatory framework to ensure that revisions of the benefits package contribute to reducing the disease burden and improving access to care. Fourth, regulations governing quality-related criteria for provider selection should be enforced and include considerations for process quality. Fifth, payment incentives should be revised to encourage an increase in the supply of primary health care, reduce bypassing for hospital care, and improve the quality of services. Sixth, the potential of purchasing to improve service delivery will be dependent on increased pre-paid and pooled funds and better governance of the quality of care.

CONTACT Adanna Chukwuma achukwuma@worldbank.org Health, Nutrition, and Population Global Practice, World Bank Group, Washington, DC 20433, USA.

Introduction

Purchasing, which involves decisions on the allocation of health financing for services, is an important policy lever for addressing challenges with access to and quality of care.1 Purchasing policy defines what services are paid for, who receives payment, and how payment is made, affects provider and user behavior, and thus, health care access and quality. To improve population health in Armenia, there is a need to increase access to and quality of care for non-communicable diseases (NCDs), which can be facilitated or hindered by purchasing arrangements.

Over the past two decades, population health has improved in Armenia. However, NCDs have emerged as the predominant cause of disability and death. Between 2000 and 2017, the maternal mortality ratio fell from 43 to 26 deaths per 100,000 births, while the under-five mortality rate decreased from 31 to 13 deaths per 1,000 live births.2 Life expectancy at birth rose from 68 to 75 years between 1990 and 2018, and is at par with the average among upper-middle-income countries.3 NCDs account for 93% of deaths and cost the country an estimated 6.5% of annual gross national income.4 The burden of heart disease and diabetes exceeds the average among countries with similar social and demographic indicators.5

To reduce the burden of NCDs, there is a need to increase the access to primary health care (PHC). Only one in three Armenians visits a primary care facility when sick. In one out of five cases, the high cost of services is the reason for forgoing care when sick.6 Out-of-pocket (OOP) spending as a percentage of total health spending is 85%, above the levels seen in fragile settings, including Yemen (81%).5,7 The levels of utilization of care for NCDs is relatively low. For example, in 2016, while 96% of pregnant women had at least four antenatal care visits, only 24% of individuals aged 15 years and above were screened for diabetes mellitus.8,9

Reducing the burden of NCDs in Armenia also requires improvements in the quality of primary care. Primary care is not comprehensive and excludes services for ambulatory care sensitive conditions such as for uncomplicated diabetes mellitus.10 Primary care
providers do not play a central coordinating role in health care. In 63% of hospitalizations, specialist care was initiated without a referral from primary care. There are discontinuities across service delivery contacts. For example, only 50% of individuals being treated for hypertension are monitored for compliance. Global experience indicates that high-quality health care for NCDs involves a strong primary care level that is the first contact for most needs, ensures coordination across providers, and maintains continuity across service contacts.

In 2015, Armenia adopted the 2030 Development Agenda for Sustainable Development, including the commitment to make progress toward Universal Health Coverage (UHC). This requires addressing the challenges to accessing high-quality health care for NCDs in Armenia.

As Armenia considers adopting reforms that facilitate UHC, it is critical to assess how purchasing decisions contribute to barriers in utilization of high-quality health care and to identify the opportunities for purchasing reforms to address these barriers. Recent contributions to the empirical literature on purchasing in Armenia have analyzed selected dimensions such as benefit package design or user fee introduction. There is also a need to update the more comprehensive but less recent assessments of health financing in Armenia. In this paper, we examine how purchasing has affected access to quality care in Armenia and its implications for the future reforms.

Conceptual Framework

We adapted the strategic health purchasing progress framework (from Cashin et al.) to systematically examine the implications of purchasing arrangements for access to and quality of health care for NCDs in Armenia. This framework draws on a review of existing frameworks, experts in strategic purchasing, and lessons learned from applications of the framework. Purchasing is defined as being “strategic” to the degree that health financing allocations are informed by evidence on provider performance and population health needs, and are aligned with pre-specified health system goals.

The study framework has three dimensions to explain how service delivery goals are facilitated or hindered. First, we consider functions fundamental to purchasing itself. Purchasing functions include processes for selecting 1) health goods and services to purchase, 2) providers to pay for services, 3) how to pay for health care, and the 4) governance of purchasing. Contracts are often the mechanism for specifying these purchasing arrangements, defining the obligations of the purchaser and provider. We also examine health system functions that support purchasing. Health system functions that support strategic purchasing include the sufficiency and institutional flow of resources and service delivery governance and readiness. Finally, we consider how the political, administrative, and macro-fiscal context affects the purchasing and health system functions above. Below, we describe the main dimensions in the framework and their implications for strategic purchasing.

With respect to the goods and services to purchase, countries define benefits, the process for reviewing and costing these benefits, and clinical standards for these services. If purchasing in Armenia were strategic and aimed at improving access to and quality of care for NCDs, benefits would be explicitly defined in light of these goals. The process of revising these benefits may involve stakeholder discussions and assessments of the burden of disease, ethical implications, cost-effectiveness, budget impact, and efficacy. Clinical standards would specify the technical content of care for NCDs and mechanisms for coordination of care, which must be adhered to by providers from whom services are purchased.

Regarding the providers from whom to purchase goods and services, countries define eligibility criteria for service provision and the supply of goods. For purchasing in Armenia that is strategic and aimed at improving access to and quality of care for NCDs, the eligibility criteria for provider selection would be explicit, aligned with these goals, and would reflect provider competency to respond to population health needs. Providers would be contracted to provide care specified by the benefits package, only if they meet specific standards. For drugs and other essential supplies, the purchaser would determine the qualifications of appropriate suppliers and define processes that ensure procurement aligns with the objective of improving access to and quality of care for NCDs.

For decisions on how to purchase, countries define the payment methods for contracted providers and mechanisms for monitoring the implication of these provisions for provider behavior, including the quality of care provided. For purchasing in Armenia that is strategic and aimed at improving access to and quality of care for NCDs, payment methods would be designed in line with these goals, including the basis of payment and rates. Monitoring of provider performance and population health needs would inform revision of payment methods, determine eligibility for payment, or inform selection of providers for future contracts.

Governance of purchasing encompasses purchasing goals and the roles of institutions, technical capacity and
information systems for purchasing, and stakeholder engagement. For purchasing in Armenia that is strategic and aimed at improving access to and quality of care for NCDs, the goals of purchasing would be explicit. The roles and decision rights of purchasing institutions would be clear, with mechanisms for accountability for results and preventing conflicts of interest. Each institution should have the capacity to undertake the assigned roles. Health information systems would support the collection, analysis, and use of data on service delivery to improve purchasing. Strategic purchasing would involve the active participation of providers and users in decision-making to inform improvements in arrangements.

Purchasing functions interact with other health system functions to influence service delivery. Countries define the level of public spending in the health sector and the degree to which contributions and risks are pooled, that is the sufficiency and flow of institutional financial resources. Strategic purchasing in Armenia would be facilitated by pooling sufficient pre-paid funds, which allows the purchaser to institute meaningful and non-conflicting incentives for providers, in line with the goals of improving access to and quality of care for NCDs. Strategic purchasing would also be enabled by sufficient capacity of providers to deliver services included in the benefits package, at high quality. Hence, strategic purchasing is facilitated by service delivery readiness, including adequate inputs, and regulations on standards of care.

The political, administrative, and macro-fiscal context influences purchasing through the above health system functions. In the Armenian context, we explore the extent to which administrative decentralization limits opportunities to pool pre-paid funds for purchasing, commitment controls in public financial management reduce provider ability to restructure facility operations to improve service delivery, and political transitions change the power of key actors involved in purchasing reform. We also examine the implications of economic growth, debt commitments, and the tax regime on the country’s ability to mobilize sufficient public funds for health purchasing.

We draw on the purchasing functions, health system context, and political, administrative, and macro-fiscal context, to explain how purchasing arrangements have contributed to challenges in ensuring access to high-quality health care, particularly for NCDs, in Armenia.

Data and Methods

This study was informed by data collected through a literature review and key informant interviews as part of technical assistance from the World Bank for the design of UHC reforms.18 Methods for data collection and analysis are presented along COREQ guidelines.19

For the literature review, a data extraction form was developed according to the study framework to organize the findings. Documents included in the literature review were policy documents, reports, laws and decrees, regulations and their amendments, peer-reviewed publications, and other relevant gray literature. A member of the team who is Armenian, with a medical degree and Master of Public Health, analyzed the documents in English and Armenian, conducted the literature review, and extracted data in line with the conceptual framework to the data extraction form.

Key informant interviews were guided by semi-structured questionnaires that were developed according to the study framework and revised by the study team. Questionnaires were developed for participants in two categories: 1) experts and former policymakers, and 2) current policymakers and facility managers. We conducted a total of 19 key informant interviews with international experts and current or former leadership from the Ministry of Health (MOH), Ministry of Finance (MOF), State Health Agency (SHA), regional health facilities, the national health information management system, and private insurance companies. Participants were selected from each institution involved in the allocation of health financing and based on their involvement in past or ongoing health financing reform discussions. Participants were contacted by e-mail that explained the purpose of the study and invited them to participate in an in-person interview. Two participants were approached and declined to participate.

Interviews were conducted by the team member who led the literature review and who also had prior experience in conducting key informant interviews. Prior to each interview, informed consent was obtained for participation and audio recording. Discussions were held in quiet, private locations, including the personal offices of key informants. No non-participants were present for the interviews, and any interruptions, such as by phone calls, were noted by the interviewer. The average duration was one hour.

The audio-recordings were verbatim translated to English, anonymized, and translated into English for team analysis in Microsoft Word. The research used a deductive content analysis approach. Two members of the team, who are both medical doctors with graduate training in public health and health systems, read through each transcript twice and identified codes reflecting the meaning of statements into interview. The transcripts were read twice. Codes were identified
as comments that reflected the meaning of statements in the interviews. The codes were discussed and revised where there was disagreement among team members. Similar codes were grouped into themes. Similar themes were grouped along dimensions of the study framework.

After both the literature review and qualitative data analysis were complete, themes were compared between the two sets of findings, to explain the implications of purchasing arrangements for access to and quality of care, particularly for NCDs, in Armenia. The protocol for the study was approved by the Ministry of Health.

Results
In this section, we describe our findings on the implications of purchasing arrangements for access to and quality of health care in Armenia, organized along dimensions of the study framework.

Goods and Services to Purchase
In Armenia, the content of the basic benefits package (BBP) has not adjusted over time to reflect the relative increase in the burden of NCDs and the need to ensure access to services for these diseases. Furthermore, contracts do not hold providers accountable for compliance with clinical guidelines for health services and prescriptions, including for NCDs. We review these findings below.

The initial BBP designed in 1999 was informed by technical assessments of the efficacy, burden of disease, relative cost-effectiveness, and budget impact of services. At this time, infectious diseases and preventable maternal and child ill-health were prioritized. Subsequent revisions to the BBP, as the burden of NCDs has increased, were not informed by similar assessments. The MOH is tasked with updating the BBP. However, the process for revising the package, including stakeholder involvement, analyses considered, and relative weighting of key factors, is not defined.

In the absence of a strong regulatory framework, the frequent changes to the BBP are predominantly influenced by fund availability and strong political interest groups. For example, depending on the budget envelope, the coverage of children changed from 15 years or younger in 1998, to three years or younger in 2001, to 18 years or younger in 2019. In contrast, there is a strong regulatory framework governing the revision of the essential medicines list, involving health technology assessments and stakeholder engagement.

Protection of maternal and child health has remained a high-level political priority and is reflected in service coverage. For example, children are eligible to receive basic inpatient care and outpatient medicines. In contrast, a person living with an NCD who does not belong to specific groups has limited coverage for outpatient medicines. Even among beneficiaries of the BBP, some expenditures for essential NCD care are not subsidized.

Clinical guidelines have been defined at various points. However, the quality of these guidelines is not vetted by any regulatory body. While regulations specify that primary care providers should play a central, coordinating role, these regulations are not enforced, particularly in urban areas, where specialists and primary care providers practice in polyclinics. More than half of hospitalizations are not preceded by a primary care referral.

Contracts with service providers do not consider compliance with clinical guidelines for services and medicine prescriptions. Prescription regulations allow generic substitution but do not monitor or enforce generic prescribing. Physicians typically prescribe brand products despite cheaper generic availability. Less than half of hypertension patients adhere with prescribed treatment.

Providers from Whom to Purchase Goods and Services
In Armenia, the selection and contracting of providers does not systematically account for adherence to clinical guidelines and other standards of care. With decentralized procurement of medicines and supplies at the facility level, there is limited capacity to ensure adequate quality. These findings, which limit the ability of the purchaser to incentivize quality of care, are described below.

All facilities that receive reimbursement for services within the BBP sign contracts with the MOH annually. Decree 49-N defines the requirements for contracting providers, including licensure from the MOH, meeting equipment and personnel standards, reporting financial statements, at least 30% of income from paid services, and access to the ArMed system. This provides a basis for selectively contracting providers that meet minimum standards for service delivery.

However, the criteria for provider contracting do not account for process quality, such as technical content of service delivery, including guidelines for clinical care. Furthermore, in practice, nearly all hospitals are contracted to provide services regardless of whether they meet the requirements stipulated above. Decisions to exclude providers, while they may reflect performance gaps, do not strictly follow established regulations on the requirements for contracting providers.
Outside Yerevan, the national capital of Armenia, there are spatial monopolies in service delivery, such that excluding a provider for poor quality may result in loss of access to care for a community. Contracts are relatively uniform in terms of the scope of services covered and are not tailored to the needs of the local population, including the burden of disease and service utilization patterns. Capacity for procurement of high-quality medicines and supplies varies widely. At the center, the MOH has the capacity to develop technical specifications for pooled procurement of medical supplies. However, there is decentralized procurement for medicines and smaller facilities have less technical capacity to develop appropriate specifications and tend to select suppliers based on the lowest price. This contributes to gaps in service delivery quality.

**How to Purchase**

Overall, Armenia has introduced payment mechanisms in facility contracts to increase preventive care in PHC facilities, including for detection of NCDs. However, the combination of low salaries and wages, the lack of payments linked to quality or coordination of care, and nonexistent or weak contract monitoring reduces incentive to improve the quality of care. These findings are described below.

Armenia has undertaken significant payment reforms since the late 1990s, transitioning from line-item budgets to output-based payments for care within facility contracts. For inpatient facilities, a case-based reimbursement mechanism was introduced. For PHC facilities, providers receive a per-capita payment for each enrolled patient, covering the services under the BBP and facility maintenance costs. These payments incentivize preventive care and over-referrals to hospitals to contain costs.

There is also a performance-based financing mechanism that rewards improvements in service coverage for 27 indicators, including screening for NCDs. Some services, such as laboratory tests in outpatient facilities, are reimbursed through fee-for-service, for vulnerable groups and government workers. Health workers are paid wages defined at the discretion of the facility, and to a lesser extent, supplementary bonuses. Remuneration at the PHC level is relatively low.

For inpatient care, case-based payments encourage efficiency. However, as specialists at the hospital level can be reimbursed for services that can be received at the primary care level, there is incentive for over-referrals. There are no payments linked to outcome or process quality indicators. There are also no bundled or population-based payments that encourage coordination between PHC and hospital care. Contract monitoring tracks provider output linked to the above payment methods, including registration of service users and quantities of services. The quality of services is not routinely monitored by the purchaser.

**Governance of Purchasing**

In Armenia, the goals of purchasing have not evolved with changes in the burden of disease, to reflect the increasing importance of NCDs. The roles of institutions involved in purchasing overlap and do not prioritize quality of care, which is reflected in the gaps in technical capacity. Purchasing institutions do not routinely collect, analyze, and use data on service delivery, particularly quality of care, to inform decisions on the benefit package or provider payment. We review these findings below.

Purchasing in Armenia has prioritized cost containment and maternal and child health. Facing a severe economic crisis after the Soviet Union collapse in 1991, the Government could not continue to guarantee access to all services. Covered services were limited by establishing the BBP that increased the predictability of health spending, and prioritized mothers and children. The Obstetric Care State Certificate and Child Health State Certificate facilitated financial access to obstetric and pediatric services by reducing informal payments.

Over the past decade, there has been limited attention to NCDs. Unlike maternal and child health, responding to the burden of NCDs is often not noted as a priority in national policy documents. Quality has only recently become an explicit goal in the 2019 draft concept note for the introduction of Universal Health Insurance, which proposes monitoring and payments that reward high-quality service delivery.

The roles of institutions involved in purchasing overlap and do not currently prioritize quality of care. The SHA was created in 1997 as the purchaser of all publicly funded medical services and contracted with local facilities. The SHA, originally subordinate to the Government of Armenia (GOA) and independent from the MOH, was intended to be a third-party purchaser to separate funding from purchasing and increase accountability in spending.

However, due to concerns about the loss of financial leverage by the MOH over providers, the decision rights of the SHA have been reduced. In 2002, the SHA was assimilated into the MOH. The SHA contracted providers and processed claims from 2002 to 2011, after which the MOH began to contract with providers directly. The introduction of multiple private insurers
to process claims for a sub-set of the population, including civil servants, has been associated with higher hospital care use and inefficiency. Debates over restoring the independence of the SHA from the MOH have highlighted the need for strong accountability mechanisms.

The SHA and private insurers use data systems primarily to process claims and detect fraud, and not to monitor quality of care, population health needs, and provider behavior. The privately operated ArMed information system was launched in 2017 and allowed real-time access to data on service use. However, this information is underutilized. Prior to 2020, the fully implemented registries in ArMed were those that supported coding of medical services, claim authorization and reimbursement, and registration of contracted health care providers.

The modules that supported electronic referrals and coordination across service delivery levels were not utilized until 2020. The e-prescription registry remains partially implemented. However, this registry could support the monitoring of prescription patterns, potentially preventing harmful drug interactions and polypharmacy. Data not required for provider reimbursement are often incomplete. Data collected through ArMed are not routinely analyzed to understand service delivery performance or emerging health care needs.

Technical capacity in the SHA and MOH reflects the current scope of purchasing. The approximately 70 staff are involved in the management of financial flows and contracts, and supportive functions. There is limited capacity within these agencies that would support purchasing decisions. These activities include health technology assessments, information and communication technology management, actuarial costing of benefits, and analysis and reporting of quality metrics. The SHA is also unable to attract highly skilled technical staff to close the identified gaps, given the caps on wages that can be offered.

Initially, the SHA had arrangements for formal representation by providers and patients in purchasing decisions, but they were subsequently dissolved. Currently, there are no formal regulations to guide consultations with stakeholders on changes to benefits, modifications in provider payment mechanisms, or the selection of providers for contracting through public funds. Engagement of stakeholders by the MOH has improved since the Velvet Revolution in 2018. But engagement is not mandated by law, which is a lost opportunity to ensure responsiveness to service delivery needs through allocative decisions.

**Health System Functions**

The ability of the purchaser to improve access to and quality of care, including NCDs, is limited by the low level of public health spending, fragmentation of fund flows, and the challenges in the governance of the quality of health workers, facilities, and service delivery. We review these findings below.

The Armenian health system has relatively low public financing with fragmented financial flows, both of which limit the potential of the public purchaser to improve service delivery. Current health expenditure increased between 2000 and 2017, from 6.5 to 10.4% of GDP, exceeding the European and Central Asian regional average of 9.36%. However, in 2018, public spending accounted for 16.5% of total health spending, below the average of 77.7% in Europe and Central Asia. This reflects a relatively low priority for health, which receives about 5 to 6% of the state budget.

The high current health spending levels are driven primarily by OOP payments, for outpatient medicines and inpatient care that is not covered for some groups, and for co-payments. The proportion of households in Armenia that spend over 10% of their income on health is 16.1%, far in excess of the regional average of 7.4%. In approximately 20% of cases, the cost of care is the reason given for foregoing services when needed.

Most public spending flows through the MOH to the SHA. Funds for some state employees flow from the SHA to private insurers. There are separate pools for health services provided by the Ministry of Defense and the Police. There are also employer-subsidized voluntary health insurance schemes. OOP payments, by their nature, are not pooled. The fragmentation in health financing leads to lost opportunities to cross-subsidize risks for people with more health needs, including NCDs, with lower, healthier risks.

The readiness of the service delivery system to support high-quality health care is limited by gaps in the distribution of skilled workers. Armenia has a lower density of physicians, at 28.1 per 10,000 in 2015, than neighboring Georgia (47.8) or Estonia (33.5). This is in part due to outmigration owing to the higher salaries in other European countries. The density of physicians varies from 84.6 per 10,000 in the capital city Yerevan to 13.8 in Gegharkunik Marz. The undersupply of physicians outside the capital reflect lower remuneration, fewer career advancement opportunities, and adverse social conditions in underserved areas.

Armenia has made significant investment since the 1990s in the equipment and infrastructure for service delivery, particularly in hospitals. However, there are challenges in the governance of the quality of health workers, facilities, and service delivery interactions. Formal licensure of physicians was suspended in 2001 and facility licensure is rarely reviewed. Challenges with the development and regulation of clinical guidelines have been discussed above.
However, Armenia has a relatively strong regulations for pharmaceutical products, overseen by the Scientific Center of Drug and Medical Technology Expertise.

**Political, Administrative, and Macro-fiscal Context**

The potential to increase purchasing power through higher public health spending and pooling of funds is limited by administrative decentralization, renewed political commitment to fostering competition in the private sector, economic contraction in the short term, high debt, and fiscal capacity. We review these findings, which may prevent improvements in access to and quality of care through purchasing, below.

With respect to the administrative context, devolution in Armenia has extended to the management and ownership of health facilities. Marz governments are significantly involved in facility management, and there is significant autonomy on decisions regarding service delivery organization in response to purchasing incentives. Per the political context, the government transition that followed the Velvet Revolution has led to a renewed commitment to foster private-sector competition and decentralized administration, while strengthening governance. This presents challenges to building political support to further pool health financing and centralize purchasing in a public agency.

In the macro-fiscal context, the COVID-19 pandemic and falling commodity prices have contributed to a lowering of 2020 real Gross Domestic Product (GDP) growth projections to −1.5 to −2.8%. In 2019, real GDP had grown by 7.6%, driven by private consumption. Between 2000 and 2017, the elasticity of public health spending to real GDP was approximately 1.41. While growth is projected to recover in the medium term, contraction of the Armenian economy will probably be accompanied by constraints on social spending and limit reforms to expand the public health budget, to finance an expanded BBP.

While there is room to increase excise consumption taxes on tobacco and alcohol, the potential for revenue raising via direct wage taxes is limited. Between 2002 and 2018, tax revenue increased from 15% to 21.4%, buoyed by a stronger economy and better tax administration. About 44.5% of the employed population is in the informal sector and 49% of women are unemployed. High informal employment and an aging population limit opportunities to raise revenue, including health revenue, via direct taxes on wages. A further constraint on public health spending is the central government debt, which rose to 51.9% of GDP in 2016, leading to a consolidation effort that has lowered the fiscal deficit and increased the controls over current spending.

**Discussion**

In this paper, we explore how purchasing may have contributed to challenges in ensuring access to high-quality health care, particularly for NCDs, in Armenia. Our findings align with recent empirical evidence from other settings, including high-income countries with otherwise advanced health systems, suggesting that purchasing arrangements are often not deliberately designed to respond to population needs and change provider behavior. Below, we reflect on lessons from this analysis for the next generation of health reforms in Armenia.

First, increasing the political priority of access to quality of health care for NCDs is a pre-requisite to advancing reforms to address these issues. Improvements in maternal and child health have been supported by political prioritization reflected in both policy documents and spending patterns. Reform champions can build political support for investments in purchasing reforms by aligning with the priorities of influential stakeholders. In Mexico, for example, highlighting the impoverishing effect of medical care and linking the proposed reforms to social protection helped the Ministry of Health build legislative support. Policy options in Armenia include involving private insurers in purchasing health services outside the BBP and leveraging data to demonstrate potential efficiency gains from planned reforms.

Second, improved purchasing governance in Armenia will require a purchaser that can make decisions without political interference, with appropriate accountability mechanisms, improvements in technical capacity, and the routine use of data systems. There is a need for regulation that separates the distinct roles of the MOH, SHA, and private insurers. In restoring the autonomy of the SHA from the MOH, it would be important to define mechanisms for accountability of the agency to the Government and service users. A good example in this regard is Estonia, where the Health Insurance Fund Act specifies the decisions over which the management board of the purchaser has autonomy, appoints a supervisory board with broad representation to approve critical decisions by the management board, and requires regular reporting and audits. In addition to specifying legal processes guiding the use of data, there is a need in Armenia to build capacity to collect, analyze, and use data in purchasing. In Argentina, there was an effort to hire technical staff for IT departments at the central and provincial levels and introduce
incentives at the provider level for reporting. Capacity for health technology assessments and actuarial costing can be built-in academic institutions.

Third, there is a need for a regulatory framework to guide the revisions of the benefit package consistent with reductions in the disease burden and improvements in access to care. Services in the benefits package should be informed by health technology assessments aimed at maximizing value in terms of health returns and other health system goals, within the available funding. Formal guidelines should specify the revision process and incorporate stakeholder consultation to deter capture by strong political interests. In this regard, the development of the benefits package by the Health Reform Commission in Chile, is a pertinent example. The package was informed by rigorous analysis of population health needs and transparent stakeholder dialogue, which helped build support for a difficult reform. To better coordinate services for patients, gatekeeping in Armenia can be incentivized by reviewing the scope of reimbursed primary versus hospital care. Similarly, prescription of generic medication should be enforced, to reduce financial barriers to health care use.

Fourth, regulations governing quality-related criteria for provider selection should be enforced and include considerations for process quality. Licensing requirements should be reinstated and regularly reviewed for contracting with providers to deliver services under the BBP. Contracts should reflect provider performance on process quality, including adherence to clinical guidelines. Where spatial monopolies result from low provider density in rural areas and provider exclusion is not feasible, financial incentives may attract new entrants to the market. If these facilities serve small populations, it may be preferable to incentivize a change in management of the existing facility by new leadership, invest in improvements in management capacity of the current leadership, and avoid fragmentation of demand that may introduce inefficiencies. For selection of suppliers, procurement capacity should be strengthened in facilities to develop technical specifications and conduct tenders that reflect quality considerations.

Fifth, payment incentives should be revised to encourage an increase in the supply of primary health care, reduce bypassing for hospital care, and improve the quality of services. For example, add-on payments can reward provider coordination and care initiation at the primary care level before referral to specialty and inpatient services. Population-based payments are another option, where a fixed payment to a network of providers, including PHC and hospital care, can incentivize increased PHC use to increase savings. In the United States, Accountable Care Organizations contracted by Medicare receive population-based payments to incentivize quality and efficiency. These payments have been shown to result in improvements in care for NCDs, including better blood pressure control, and enhanced coordination between providers. Coordination may further be encouraged by mandating the use of modules in the e-health system for managing patient flow.

Sixth, the potential of purchasing to improve service delivery will be dependent on increased pre-paid and pooled funds and better governance of the quality of care. Increased funds are required for health spending for better coverage for necessary services and increase the SHA’s purchasing power. Pooling public funds for different groups covered by the state will improve equity and reduce inefficient duplication in administrative procedures. In South Korea, merging health insurance funds led to a fall in administrative costs as a proportion of health insurance costs from 7.87% in 1996 to 2.38% in 2008. Global experience suggests that the longer countries wait, the more difficult it is to merge separate pools, due to resistance from groups covered by wealthier pools with more generous benefits, as has occurred in South Africa. The governance of health care quality should be improved by defining the responsibility for reviewing and monitoring compliance with clinical guidelines. Improving the supply of health workers in underserved areas can be facilitated by introducing financial and non-financial incentives, including continuous professional development, as has been seen in other low-, middle-, and high-income countries.

This study has limitations. While our study triangulates data from a literature review and key informant interviews, the investigation focused on only one context, Armenia. Hence, the findings may not be generalizable to other countries. However, this study could be useful in demonstrating how the conceptual framework could be utilized to systematically identify how purchasing arrangements contribute to service delivery challenges in other contexts. There is also the possibility of selection bias from key informant interviews, given that two participants (one a senior policymaker and the other a researcher) declined to participate. It is possible that those with different opinions on the domains investigated were more likely to opt-out of participation in interviews. However, we validated findings with empirical literature, which reduces the potential for selection bias.

In conclusion, our paper draws on a conceptual framework for strategic purchasing that examines interactions with the health system and broader organizational and political contexts, in explaining the implications for access to high-quality care. This approach can be used to explore the implications of allocative decisions for UHC in other contexts.

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Disclosure of Potential Conflicts of Interest

The motivations, findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The authors declare that they have no competing interests.

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ORCID

Adanna Chukwuma (http://orcid.org/0000-0001-7873-7633)

Data Availability Statement

Summaries of the interview transcripts are available from the corresponding author on email request.

Ethics Statement

This study involved data collection through key informant interviews as part of the protocol for technical assistance under the Advisory Service and Analytics, “South Caucasus: Strengthening the Strategic Purchasing of Health Care Services to Improve Health System Efficiency and Equity.” The protocol for the study was approved by the Ministry of Health.

Author Contributions

AC conceptualized the study. HL collected and analyzed the data. All authors contributed to the drafting and approved the final manuscript.

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