Research Article

National Scale-Up of Results-Based Financing in Primary Health Care: The Case of Armenia

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Abstract—Results-based financing (RBF) has been integrated into the national health care financing system of Armenia covering all primary health care (PHC) facilities in the country. The RBF program contributed to a substantial increase in the utilization of PHC services and improved provider performance. Based on document and literature review and key informant interviews and focus group discussions, this article describes the successful scale-up and integration of RBF into Armenia’s primary health care system throughout the period 2000–2015.

The article shows how an interaction of contextual factors, actors, and processes contributed to the successful scale-up and integration of RBF into Armenia’s primary health care system. Though international agencies, in this case the United States Agency for International Development (USAID), had a significant influence on the introduction and initial design of the RBF scheme, an important enabler was a well-sequenced reform process that included the most politically important stakeholders, including the State Health Agency. Embedding of RBF in national regulatory frameworks and the provision of funds from the national budget were also key contributors to success. Finally, an important enabler to the subsequent scale-up and integration of RBF into the PHC system was its introduction as part of a larger reform of the primary health care system.

INTRODUCTION

Results-based financing (RBF) has been successfully integrated into the national system for financing primary health care (PHC) in Armenia. The RBF program focusing on PHC was piloted in Armenia in late 2003 and discontinued in 2005. It was relaunched in 2006, when a decision was taken to implement RBF nationwide for primary health care.
Nationwide implementation of RBF was ultimately achieved in 2011.

Armenia is one of the few middle-income countries to successfully scale-up RBF for its PHC nationwide. The main objectives of this article are to describe the successful scale-up and integration of RBF into Armenia’s primary health care system during the period 2000–2015 and to examine how the program’s content, policy processes, and actors interacted with each other and with contextual factors to bring about this success.

Armenia’s experience has important lessons for other countries and health systems at similar levels of economic development. Moreover, whereas most documented RBF programs focus on maternal, newborn, and child health, Armenia’s RBF program also addresses noncommunicable diseases (NCDs), a key public health challenge in countries of all income levels. Finally, Armenia’s case provides an interesting example of an RBF program that has been largely supported through domestic funding. This contrasts with the situation in most low- and middle-income countries (LMICs) that have implemented RBF and has implications for national ownership of the program.

The article is divided into the following sections: a brief description of the Armenian health system and the RBF program as it is currently implemented; an overview of the theoretical framework; data sources and methods including limitations; and a description of the evolution of RBF in Armenia from initial piloting to the present. The next section analyzes the interaction of factors that explain the policy’s evolution followed by a brief conclusion.

Armenia’s Health System and RBF Program Today
The Republic of Armenia is an Eastern European country with a population of about three million and territory of 29,800 km² divided into ten provinces (marzes) and the capital city Yerevan. After gaining independence from the Soviet Union in 1991, Armenia went through a severe economic crisis that negatively impacted its health system and health indicators. The subsequent strong economic growth in 2000–2008 greatly reduced the poverty rates; this trend was reversed by the global financial crisis of 2008.

In 2015, secondary- and tertiary-level health services in Armenia were delivered through 87 public and 45 private hospitals (most of them in Yerevan) and PHC services through 363 public and 141 private/other PHC units. Public PHC units include urban polyclinics, health centers, and rural ambulatory facilities that work with 552 small centers (called FAPs [Feldsher Acousher Posts]) run by nurses or midwives who are supervised by physicians from a nearby larger PHC unit and legally belong to that unit. PHC services are publicly funded and they are provided to Armenian citizens free of charge.

According to the National Health Accounts, 34% of total health expenditures came from the government budget in 2015 (a significant reduction from about 45% in 2008) and 64% from private sources (mainly out-of-pocket payments). Nearly 40% of total public expenditures were allocated for primary health care (PHC) services in 2015.

In 2015, the RBF system in Armenia covered all 363 public PHC facilities. It is financed through the State Health Agency (SHA) of the Ministry of Health (MOH), which also serves as the fund holder and verifier. RBF in Armenia consists of two components: open enrollment (OE) and pay for performance (P4P). The OE system, introduced nationally in 2007, allows for free choice of providers and pays each PHC provider according to the number of people registered with that provider. The system replaced the previous local catchment area system. In addition, starting in July 2014, the OE has paid facility-level global budgets according to the number of people registered with that facility.

Through the P4P component, PHC providers receive bonus payments based on their performance with respect to 27 indicators (Table 1). Bonus payments are distributed to PHC facilities according to the following formula: 80% to medical staff (70% to physicians and 30% to middle-level medical staff), 13% to administrative staff (data entry staff and accountants), and 7% to the PHC facility for additional direct costs. Thus, the PHC Physicians receive a mixture of capitation-based payments (OE) and bonus payments (P4P), with the latter based on their performance on the selected indicators.

In terms of RBF’s impact, the 2016–2018 Medium Term Expenditure Framework (MTEF) for Armenia reported that the average number of visits to PHC facilities per person per year had increased from 2.0 in 2000 to 4.0 in 2013, suggesting that the nationwide reforms to strengthen the PHC system reached the goal of increasing population utilization of PHC services in Armenia; introduction of RBF was one of the most important components of the PHC reforms. Moreover, the 2016 World Bank (WB) report Implementation Status and Results Report concluded that the RBF scheme to improve the maternal and child health and NCD services in PHC facilities was progressing well and meeting annual targets.

DATA SOURCES AND ANALYTICAL METHODS
The American University of Armenia Institutional Review Board and the World Health Organization Research Ethics Board...
Review Committee approved the study protocols to ensure compliance with locally and internationally accepted ethical standards. This study draws on data collected from both document reviews and qualitative data collection through in-depth interviews (IDIs) and focus group discussions (FGDs). Documents examined included policies, laws and regulations, project reports and presentations, and published articles. Interviews were conducted with five categories of respondents: policy makers (PMs), experts (Es), facility managers (FMs), PHC physicians (PHC Ps), and PHC nurses (PHC Ns); they were selected through purposive and snowball sampling. The key informant interviews included 26 IDIs with PMs, local and international experts, and FMs. Six FGDs were conducted with 50 PHC providers. Overall 76 individuals (67 women and nine men) participated in the study.

| Disease Prevention Indicators |
|--------------------------------|
| **Indicator 1** | Screening of 35- to 68-year-olds for early detection of hypertension (blood pressure measurement) |
| **Indicator 2** | Screening of adults for early detection of weight disorders (body mass index) |
| **Indicator 3** | Screening of 35- to 68-year-olds for early detection of diabetes (measuring blood glucose level) |
| **Indicator 4** | Screening of 35- to 68-year-olds for early detection of lipid metabolism disorders (measuring blood total cholesterol level) |
| **Indicator 5** | Screening of adults 40 years old and over with family history (high-risk group) for early detection of glaucoma |
| **Indicator 6** | Healthy lifestyle counseling among adults |

| Noncommunicable Disease Control Indicators |
|-------------------------------------------|
| **Indicators for Adult Patients Diagnosed with Type II Diabetes** |
| **Indicator 7** | Body mass index calculation |
| **Indicator 8** | Complete urine analysis |
| **Indicator 9** | Checking for existence of pulse in feet and counseling on foot care |

| Indicators for Patients with Cardiovascular Disease |
|----------------------------------------------------|
| **Indicator 10** | Regular electrocardiogram monitoring of adult patients with coronary artery disease |
| **Indicator 11** | Testing for total cholesterol levels in adult patients with coronary artery disease |
| **Indicator 12** | Hypertension control among adult patients diagnosed with hypertension |
| **Indicator 13** | Testing for total cholesterol levels in adult patients diagnosed with hypertension |

| Maternal and Reproductive Health Indicators |
|--------------------------------------------|
| **Indicator 14** | Early registration (before 12 weeks of gestation) of pregnant women |
| **Indicator 15** | Counseling of 30- to 60-year-old women on reproductive health and family planning |
| **Indicator 16** | Prevention and early detection of breast cancer through clinical breast examination of women 40 years old and over |
| **Indicator 17** | Screening of women for cervical cancer prevention through PAP smear |
| **Indicator 18** | Conformity of actual examinations conducted during the course of pregnancy with the established minimum volumes |
| **Indicator 19** | Additional laboratory examinations conducted during the course of pregnancy |

| Child Care–Related Indicators |
|------------------------------|
| **Indicators Related to Disease Prevention** |
| **Indicator 20** | Timely vaccination coverage of 18- to 22-week-old children in accordance with the national immunization calendar |
| **Indicator 21** | Timely vaccination coverage of 12- to 13-month-old children in accordance with the national immunization calendar |
| **Indicator 22** | Timely vaccination coverage of 18- to 19-month-old children in accordance with the national immunization calendar |
| **Indicator 23** | Screening for anemia among healthy 9- to 13-month-old children |
| **Indicator 24** | Screening for early detection of weight disorders among 7- to 18-year-old children (body mass index) |
| **Indicator 25** | Prevention of vision-related diseases among 12-year-old children |
| **Indicator 26** | Assessment of sexual maturity through ultrasound examination of girls 15 years old and over |

| Indicator for Detection of Tuberculosis Patients |
|-----------------------------------------------|
| **Indicator 27a** | Percentage of 0- to 18-year-old individuals referred by PHC physicians to tuberculosis health care providers with a confirmed diagnosis of tuberculosis |
| **Indicator 27b** | Percentage of adults referred by PHC physicians to tuberculosis health care providers with a confirmed diagnosis of tuberculosis |

**TABLE 1.** List of Indicators Used to Assess PHC Provider Performance for P4P
The IDIs and FGDs were conducted in Yerevan and two provinces (marzes), Lori and Ararat. These two provinces were selected based on (1) maturity with regard to RBF schemes (Lori was one of the pilot sites) and (2) socioeconomic characteristics including proximity to the capital and the poverty rate. The IDIs and FGDs were audio-recorded with participants’ approval; if approval was not given, one researcher took detailed field notes. All interviews were transcribed verbatim and translated into English by the study team. While carrying out the interviews, the project team concentrated on both manifest and latent content, documenting body language and expressions of participants from the FGDs and IDIs.

The design of the IDI and FGD guides, data collection methods, and analysis, were guided by the health policy triangle proposed by Walt and Gilson. This framework emphasizes four elements necessary for understanding how health policy is developed and implemented: policy process, context, content, and actors. The progression of Armenia’s RBF from a pilot to integration into the national health system was analyzed in terms of the transitions described in the paper by Meessen et al.

Data analysis used a grounded approach described by Corbin and Strauss, in combination with a deductive content analysis according to Walt and Gilson’s health policy triangle. Data were triangulated among the five participant groups to ensure identification of common understandings of the relevant experiences and differences of opinion between stakeholders.

This study has some limitations. First, many participants, particularly PHC providers, could not recall specific details about the pilot stage; to address this limitation we used multiple data sources, including textual sources, and made conclusions based on triangulated results. Second, researcher bias was a potential issue, with researchers having pre-existing views on the factors underlying successful scale-up and implementation. This was mitigated by the research team meeting frequently to reflect and review their evolving understanding of the collected data. The researchers’ views and understandings of the collected data were validated through the principal coinvestigator’s review of the results and comparison with a selected number of transcripts from in-depth interviews and FGDs.

The Evolution of RBF: Post-Soviet Changes

Armenia inherited the Semashko model of health care system from the Soviet Union, which was centrally financed and managed, with universal access to care and a well-developed PHC system. Following independence, public spending on health care substantially decreased and the burden of health care financing was put on users. This resulted in declining utilization as well as worsening performance on key health indicators, including life expectancy.

In response, in the mid-1990s the government passed regulations to set the stage for health care reforms, with an aim to strengthen the PHC system of the country, improve health care financing, and optimize utilization of health facilities and personnel. A basic benefit package was established in 1996, which included publicly funded PHC services for the whole population. In 1998, the SHA was established in the system, separating the provider and financing functions of the state in the delivery of the basic benefit package.

However, the utilization of and funding for PHC remained extremely low. In 2000–2001, the health team of the United States Agency for International Development (USAID)-supported Armenia Social Transition Project (USAID/ASTP) confirmed extremely low utilization of PHC services and gaps in the financing system, which motivated them to look for innovative solutions to addressing these issues. One of the key informants mentioned, “We started with various types of financial assessments . . . quite soon we came to the conclusion that any change in provider payment method, if it doesn’t reach a particular provider/health worker, is not sufficient and doesn’t make much sense” (E, IDI).

National policy makers embraced the RBF concept from the beginning as an innovative solution that presented an opportunity to address some of the challenges in provision of health services, including lack of means to measure provider performance, low utilization of PHC services, low motivation of staff, and widespread out-of-pocket payments (about 65% of total health expenditure in 2003) due to low remuneration of PHC providers. A policy maker stated: “We wanted to try and have a measurable outcome for the work of the therapists [PHC physicians], so we could evaluate the activities that had been performed. From this point of view, the project was very attractive” (PM, IDI).

The Pilot Project

The pilot project preparation took place in 2002 and 2003; this was followed by a two-year pilot phase (2004–2005). USAID/ASTP proposed a new mechanism that provided that, along with base salaries, PHC personnel would receive bonus payments depending on achieving specific performance targets.

The MOH and USAID/ASTP were responsible for the development and piloting of an open enrollment mechanism, which moved PHC away from an automatically assigned catchment area approach (where patients could not choose their provider) to one giving patients a choice of provider.
Implementation of the pilot began in 2004 at three polyclinics, funded by the State Health Agency of the MOH. Later ten additional facilities were added, for a total of 13 facilities. One indicator was chosen to assess the performance of the pilot PHC facilities in 2004: the number of enrolled individuals with specific PHC physicians. In the pilot system, each PHC provider would receive, in addition to capitation payment (termed the base remuneration), a performance bonus payment based on the number of patients enrolled (incentive remuneration). This was intended to motivate providers to actively work with the population and seek additional patients.

Over time six other performance indicators were added to determine the incentive remuneration (bonus), including the average number of PHC visits per person per year among the adult population and the percentage of eligible children who received vaccination for the reporting period. The USAID/ASTP team discussed and emphasized the importance of financial incentives with the government and the initial proportion for bonus payments during the piloting was set at 10% of the annual remuneration amount to be paid by the SHA:

At that time we spoke about meaningful amounts of funds, so it was initially established at 10% for all our pilot sites. . . . this mechanism should be providing sufficient incentives to have real impact on the behavior of providers, because, as you know, when the amount is small, you cannot expect much change. (E, IDI)

During the pilot, multiple challenges surfaced: inadequate infrastructure, limited human resources, and insufficient information systems. In the words of one key informant:

There were many issues: with the registration system, with monitoring, the agency [State Health Agency] didn’t have sufficient capacity, the ministry was not prepared, both from a political and other points of view, and there were issues with organization of proper coordination. (PM, IDI)

The MOH and SHA presented all of these issues to USAID/ASTP. The government provided funding through SHA only for 2004, after which the public funding for the pilot stopped and was not provided in 2005. These were the main reasons for discontinuing phase one of piloting. The key informants and PHC providers agreed that although the initial phase of piloting had only a short-term and localized effect, it helped to identify important issues and provided an opportunity for addressing them during the second phase of piloting—the adoption phase in 2006–2010.

The Decision to Scale Up RBF Nationally

Despite the issues faced by the RBF model piloted in 2003–2005, the adoption of OE and P4P for nationwide implementation was facilitated by USAID through their second Primary Health Care Reform (PHCR) project, which focused on six areas, including preparation of policies and procedures for nationwide extension of reforms, introduction of open enrollment, improvement of PHC financing, improvement of quality of PHC, introduction of family medicine, and improvement of health-seeking behavior of the population. The USAID/PHCR engaged Armenian policy makers in intensive policy dialogues, organized study tours, and disseminated policy briefs on lessons learned from the PHC model piloting in 2003–2005, demonstrating that the key principles of the model were still valid for further development of PHC financing. As a result, by the end of 2006, the government of Armenia adopted an important decision for the nationwide implementation of the RBF scheme.

The initiative came from the donor organizations, but the SHA was a great partner and cooperated in all details during these activities. Moreover, the government welcomed this initiative . . . all the decisions [by the government] were passed in a timely manner. (PM, IDI)

The decision to adopt OE and P4P for nationwide implementation was perceived by most stakeholders as a natural continuation of the health care reform process:

In fact, all our steps were already going in that direction [referring to RBF]: the process of establishment of family medicine, development of a family medicine system, etc. . . . Introduction of the P4P program was one of the steps to improve the PHC system. (PM, IDI)

To avoid multiple challenges in implementing the OE and P4P components at scale together, the government decided to first introduce the OE in 2007, which improved the PHC-level registration; this enabled the subsequent implementation of P4P in 2009.

RBF Implementation at the National Level

Once the decision to implement the RBF program in a stepwise fashion was adopted by the government of Armenia, in particular the MOH and the SHA, the second phase of preparation for RBF scale-up began. Technical assistance was provided by the PHCR project. During this stage, specific regulations were developed and adopted for the OE implementation. An OE information system was established (patient registration forms, software and hardware, medical and information technology [IT] staff trainings), a patient
encounter form was introduced in all PHC facilities, and a computerized information management system was implemented. The implementation of the computerized OE system began in 2007, and by mid-2009 it was implemented in all 366 PHC public sites in Armenia. By 2011, more than 90% of the Armenian population was enrolled with a PHC provider.

The launch of P4P was preceded by nationwide trainings of medical, accounting, and IT staff supported through USAID/PHCR and testing of the indicators on a small scale: “The P4P project was launched in all health care facilities. We were piloting the developed indicators. . . . We currently have 30 indicators; in the past we began with only six, seven, ten indicators and then started to increase the number” (PM, IDI).

To better monitor performance of facilities and individual physicians, the USAID/PHCR developed, piloted, and supported nationwide implementation of a computerized system integrating the Patient Encounter System and Chronic Disease registries. Computerized recording of patient encounter data began in 2010 in all PHC facilities and was used by the SHA to make initial payments in early 2011 based on performance achievements. According to key informants, this was the most challenging element necessary for the P4P implementation because facilities were not used to working with a computerized information system: “The most interesting and challenging part was the implementation of software when we worked with the IT team. . . . Entering a given indicator into the system incorrectly would result in its incorrect recording, evaluation and allocation of [financial] resources” (E, IDI).

The national PHC P4P system was launched in 2009, and by 2011 all PHC public facilities in the country were fully included in the P4P system, receiving bonus payments for 30 indicators.

**Tweaking the RBF Approach at Scale**

In 2013, the WB initiated the Disease Prevention and Control Project (DPCP). The project introduced three new P4P indicators related to noncommunicable disease services in PHC facilities. The P4P system was seen by policy makers as an opportunity to improve NCD screenings: “We [WB Project Implementation Unit] are conducting screenings for hypertension, diabetes, and PAP smear tests. In 2005 we had a nationwide program for cervical cancer screening, but the performance level was very low; now we have improved those services” (E, IDI).

The WB team came to an agreement with the SHA to merge the WB and state funds and distribute them evenly for all indicators. This resulted in an almost twofold increase in bonus payment amounts (about 6% of PHC provider annual income in 2015, from the 3% seen during the earlier days of nationwide implementation in 2011–2014). Moreover, the SHA decided to provide the bonus payments twice a year instead of annually to keep the providers motivated. The revised P4P approach was executed throughout the country starting January 2015 with 27 indicators (the SHA removed six of its older indicators and adopted three new NCD-related indicators; see Table 1). In addition, the WB helped to develop an open web-based portal that gives all PHC health providers access to reports on P4P indicators, OE, and other related data through individual accounts.

**ANALYSIS**

The successful scale-up and integration of RBF into Armenia’s primary health care system was enabled by an interaction of contextual factors, actors, and processes. We analyze each of these below with a view to explain the Armenian case and identify broader lessons for other middle-income countries, particularly post-Soviet transitional countries with similar underlying health system architectural characteristics seeking to go down a similar path.

**The Convergence of Global and National Contexts**

*The Proposed Policy Was Popular at Both National and International Levels*

The initiation of the first P4P pilot in Armenia in 2000–2003 was preceded by the introduction of RBF in the international development agenda, as a continuation of international efforts to make development aid more effective and improve health outcomes. Proponents of results-based funding (with USAID and WB as key development partners) worldwide hoped that it might deliver results that could not have been achieved by other aid modalities.

Though external agencies were key to introducing the idea of RBF to Armenia, national policy makers embraced the RBF concept from the beginning, evident from the funding for the pilot from the SHA right from the start. One of the key informants stated:

> A very important element of the Armenian project (which I think was tremendously successful) is that in our pilot we had government funding since day one, as we agreed with the ministry and the SHA that a specific fund would be established and managed by the SHA. (E, IDI)

RBF presented an opportunity to address some of the key challenges in provision of health services. In such a situation, the government of Armenia prioritized PHC reforms as
reflected in the MTEF 2003 and the PHC strategy documents, a commitment also evident from allocating a larger portion of the state budget for health on PHC services to improve access to care and utilization of PHC services. In the words of a policy maker: “Motivating physicians was among the successes of this project [ASTP]. It was a new thing, a new concept in our system” (PM, IDI).

The National Economic Situation Made the Solution Both Attractive and Feasible for National Spending on this, Allowing for Country Ownership

In addition to addressing a clearly recognized problem, the adoption of RBF was enabled by Armenia’s economic recovery after nearly a decade of economic crisis following independence in 1991. From 2000 onwards, Armenia began slowly recovering, with a positive gross domestic product annual growth during the period 2000–2008, moving from “low-income” category of the World Bank to “lower middle-income” in 2004. Stable economic growth enabled the government to begin implementing much needed reforms of its social system, spending significant resources of its own in the process and building a sense of national ownership for programs such as the RBF program:

I think that the fact that this mechanism was financed through government sources really indicated that it was the right moment to try, as it was economically possible for the country. . . . Consultations and negotiations with MOH and State Health Agency took some time, but did not last long. . . . I think it was a uniquely great opportunity. (PM, IDI)

To summarize, though the introduction of the RBF idea in Armenia was largely the work of international agencies, USAID in particular, reflecting a global development context that was increasingly emphasizing results, national-level receptivity was largely due to P4P addressing a need felt among policy and decision makers to improve the utilization of PHC services in a background of stable economic growth and a concomitant increase in available public resources for PHC.

Coming Together of Global and National-Level Actors

Multiple Institutions Were Able to Agree on the Approach and Each Was Able to Contribute Something Different to the Roll-Out

Both global and national level actors played significant often complementary roles in the process of introducing and scaling up RBF in the country. The idea to introduce an RBF program was largely that of USAID, as part of its ASTP project (2000–2005); the agency continued to contribute to RBF scale-up and implementation through the PHCR (2005–2010) and HS-STAR (2011–2013) projects. These projects focused on improving the performance of the PHC sector, introducing the RBF system, developing the necessary infrastructure and information systems for implementation, and conducting trainings.

However, the Ministry of Health, through its State Health Agency, was centrally involved, including through the provision of resources right from the beginning of the pilot, something that sets Armenia apart from the other three country studies in this series (Cameroon, Cambodia, and Chad) where initial pilots were largely donor funded.

The importance of the USAID and the SHA working together was underscored by the following quote: “The program [scaling up] was mainly performed by the State Health Agency and Ministry of Health. Mainly it was implemented by the SHA . . . the process was mainly performed together with USAID” (PM, IDI).

In addition to the SHA, other MOH departments involved during the national scale-up included the Medical Care Department, Primary Care Division, Maternal and Child Health Protection Department, and the National Institute of Health. The Ministry of Finance, which engaged early on, was an important stakeholder, as were the Ministry of Territorial Administration and Provincial Governor’s offices.

At a later stage, the World Bank contributed by providing support for the inclusion of three NCD indicators in the national RBF system for PHC through its DPCP program. In the words of one key informant:

It would be better to say that this is a project [DPCP] being implemented by the MOH with support from the WB and is directed at the early detection and prevention of noncommunicable diseases. We have three target diseases included here: cardiovascular disease, diabetes, and cervical cancer in women. (PM, IDI)

Enabling Policy Processes

The successful introduction, scale-up, and integration of RBF in Armenia entailed the actors mentioned above engaging in a series of policy processes enabled by the coming together of the national and global contextual factors discussed previously.

A Well-Sequenced Reform Process

An important enabler was a well-sequence reform process that included the most politically important stakeholders (see Table 2). The pilot project was designed and
implemented over a three-year period, with indicators added progressively, a practice that persisted even after the nationwide implementation and scale-up.

Learning from the pilot informed nationwide implementation and, cognizant of the difficulties of simultaneously rolling out different components, a decision was taken to sequentially introduce open enrollment and P4P, enabling P4P to take advantage of the expected improvement in patient registration that would be a result of the open enrollment policy.

The sequencing extended to the introduction of appropriate regulation relevant to the OE and P4P components of the RBF program, as well as to the provision of training for staff to manage the RBF program, learning from the challenges in implementing the initial pilot.

The learning from evidence included learning from abroad; according to key informants, one important event that influenced the indicator development process for the P4P was MOH-USAID study tour to the UK in 2008, after which the team immediately developed ten indicators that would be suitable for Armenia given the disease burden. In the words of a key informant: “We had a study tour to London, where we were introduced to their health system. This had a huge impact on our future work, because we studied everything: contracting, developing indicators, and thresholds for indicators” (E, IDI).

However, it is important to note that though the pilot and national scale-up processes themselves were well planned, the transition from pilot to the decision for national adoption was less so, with the pilot discontinued without any clear plans for further implementation or policy adoption.

Another enabler was the embedding of RBF in national regulatory frameworks and the provision of funds from the national budget. Both the piloting and subsequent scale-up of the OE mechanism were brought about through legal decrees and the amendments of earlier rules and regulations. With respect to funding, not only did the SHA provide funds for the initial piloting of the program but there was also a medium-term budgetary commitment for the RBF program through the MTEF, reflecting a degree of national ownership of the program.
Finally, an important enabler to the subsequent scale-up and integration of RBF into the PHC system, as opposed to it remaining a vertical program, was its introduction as part of a larger reform of the primary care system. This reform included efforts to enhance financing for primary care, to introduce OE, to introduce measures for improving quality of care, to strengthen family medicine, to renovate facilities and provide equipment, to develop a health information system as well as to prepare policies and procedures for nationwide extension of all aspects of PHC reforms.

Built Gradually on Initial Successes, Showed Concrete Benefits to Stakeholders, Continual Innovation

Key informants identified two key factors related to the content of the RBF policy that contributed to the successful adoption and continuation of the RBF program in Armenia. The first was the move to open enrollment, replacing the local catchment system that assigned individuals to particular facilities and providers, thereby giving people free choice of providers.

In the words of one of the key informants: “It really was like a revolution and I know that this pilot became very successful in the country because we established the notion of population enrollment with primary health care providers. We developed enrollment criteria and databases” (E, IDI).

The second factor, linked to the staged and carefully sequenced policy process discussed above, was the process of testing and gradually expanding the number of performance indicators as well as changing them over time based on the current needs of the country and to prevent provider gaming.

The first indicator selected for the pilot project in 2004 was one supporting the OE process through the provision of a financial incentive: “In 2004 we started this pilot with only one indicator. . . . Basically it was capitation but on top of capitation it was an additional bonus for every enrollee” (E, IDI).

Six additional indictors were tested in 2005 in the pilot facilities. The team came up with a “blind” rotation model, which meant that every few months the indicators would be changed without notifying the providers:

No performance based payment is good once providers get used to working only toward a specific set of indicators, as they may neglect other duties. . . . We had a very big list of 26, 28 indicators. . . . However, we were paying bonuses only for a selected number of indicators [seven] and it was a blind method; they would not know for which indicator. . . . So there was three-dimensional coverage: for enrollment, quantity, and quality. (E, IDI)

CONCLUSION

In common with most other LMICs, the Armenian RBF scheme was initiated and supported externally in a global context that was looking for ways to link development assistance to results. National policy makers embraced the RBF concept from the beginning, because in their opinion it presented an opportunity to address some of the pervasive problems of the PHC system, such as low utilization of PHC services and low remuneration of PHC workers, resulting in low motivation and effectiveness of PHC personnel. An environment characterized by stable economic growth allowed the national government to invest resources, providing supplemental budget funding for the RBF pilot and thereby building national ownership for the program right from the start.

Though international agencies, in this case USAID, had a significant influence on the introduction and initial design of the scheme, with the World Bank contributing more recently, the provision of Armenian public funds (from the pilot stage on through the SHA and the medium-term budgetary commitment throughout the project) meant that this influence was balanced by national-level actors, including the SHA, who had a leadership role in the process, and the Ministry of Finance.

The coming together of global and national contextual enablers allowed the actors to engage in policy processes that helped take the pilot to full implementation and be successfully scaled up. These included a well-sequenced, evidence-informed reform process that, in addition to the progressive introduction of technical solutions such as development of a new software and training staff to use it, included putting in place appropriate regulation and enabling legal frameworks. The introduction of the RBF program as part of a larger package of reforming Armenia’s Primary Health Care System facilitated its scale-up and brought in funds for the program.

Among policy content factors, interviewees noted the open enrollment component as central to the pilot’s success; on the other hand, the process of routinely changing performance indicators was seen as vital to prevent providers from prioritizing only a narrow set of services while neglecting others that were not incentivized.

Though implemented nationwide and as an integral component of the country’s primary health care system, Armenia’s RBF program faces a challenge in maintaining
the extent of bonus payments currently paid to providers. Funding from the World Bank’s Disease Control and Prevention Project runs until 2019. The 2016–2018 MTEF does not suggest any increases in the health budget. As mentioned above, the WB funding has enabled an approximate doubling of bonus payments to 6% of provider income, and a return to the earlier situation of lower bonuses for the P4P component is likely to lead to significant dissatisfaction among PHC providers. The need to maintain current bonus levels will thus require additional resources for the health sector.

The implementation and scale-up of RBF in Armenia reflects the relative power of different stakeholders within the country, in particular that of PHC providers. This is clear from implementation of the OE policy. Facility managers and providers had mixed feelings about this policy due to potential conflict among providers overenrolling patients, people often changing their providers, transportation issues while making house calls to residential areas far away from the PHC facility, and difficulties with registration and registration databases. In their opinion, these factors often outweighed the positive aspects.

Despite these concerns and the fact that PHC providers were the group most influenced by RBF reforms in Armenia, the study did not reveal any evidence of extensive consultations conducted with PHC providers during the design, piloting, or scale-up of the RBF. The lack of political power among providers was noted by some providers: “They did not ask our opinion when they were making decisions to implement this project. They met us and informed us about it only after they had already made the decision to implement this bonus system” (PHC P, FGD).

The design of Armenia’s RBF program offers important lessons for other middle-income countries. It demonstrates the potential role that relatively small bonus payments can play in increasing utilization of desired services. Its implementation of capitation-based payment with P4P indicators offers other LMICs an example that might be useful in settings where there is a justifiable concern regarding the long-term financial sustainability of substantial performance bonuses paid.

Finally, this analysis reveals the limits of Walt and Gilson’s policy triangle framework.\textsuperscript{12} Though useful for organizing data collection and developing categories for analysis, it is less informative in shedding light on how actors, context, and processes interact to influence policy content. Future research could examine more specifically the processes of agenda setting, policy formulation, and implementation of RBF in Armenia. Using narrower theories more appropriate to these specific research questions could help expand our understanding of health policy processes in Armenia and other post-Soviet countries with similar demographic, epidemiological, and health system challenges.

DISCLAIMER

Zubin Cyrus Shroff is a staff member of the World Health Organization. He is himself alone responsible for the views expressed in this article which do not necessarily represent the views, decisions, or policies of the World Health Organization. Varduhi Petrosyan and Dzonivar Melkom Melokiman are affiliated with the American University of Armenia, Akaki Zoidze is affiliated with the Curatio International Foundation Georgia; they alone are responsible for views expressed in the article.

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

Zubin Cyrus Shroff is a staff member of the Alliance for Health Policy and Systems Research, World Health Organization. All other authors declare that they have no conflicts of interest.

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