

Designing and Implementing
Health Care Provider
Payment Systems

How-To Manuals



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Published in 2009 by the World Bank and the United States
Agency for International Development

Summary for web of chapter 1, pp. 27–120

Strategic purchasing of health services involves a continuous search for the best ways to maximize health system performance by deciding which interventions should be purchased, from whom they should be purchased, and how to pay for them. In such an arrangement, the passive cashier is replaced by an intelligent purchaser that can focus scarce resources on existing and emerging priorities rather than continuing entrenched historical spending patterns. Having experimented with different ways of paying providers of health care services, countries increasingly want to know not only what to do when paying providers, but also how to do it, particularly how to design, manage, and implement the transition from current to reformed systems, and this how-to manual addresses this need.

The book has chapters on three of the most effective provider payment systems: primary care per capita (capitation) payment, case-based hospital payment, and hospital global budgets. It also includes a primer on a second policy lever used by purchasers, namely, contracting. This primer can be especially useful with one provider payment method: hospital global budgets. The volume's final chapter provides an outline for designing, launching, and running a health management information system, as well as the necessary infrastructure for strategic purchasing.*

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Primary Health Care (PHC) Per Capita Payment Systems: Summary of Key Aspects of Design and Implementation

SUMMARY BY CHERYL CASHIN*

Introduction

Provider payment systems can be powerful tools to promote the development of health systems and achieve health policy objectives. The primary health care (PHC) sector is the most visible and used part of the health care system. It is also the part of the system that potentially has the largest impact on the population's health. International evidence confirms that a stronger PHC sector, particularly in low-income countries, is associated with greater equity and access to basic health care, higher patient satisfaction, and lower aggregate spending for the same or better outcomes. The role of the PHC sector in the health system also sets the stage for the entire interaction between the government, purchasers, providers, and the population throughout the health care system. Therefore, the financing of PHC and the provider payment system(s) that are used play a critical role in driving health system change well beyond that of financial incentives.

There are three main types of PHC payment methods: line-item budget; fee-for-service (with or without a fixed-fee schedule); and per capita. It is also possible to pay PHC providers per case or treatment episode, but such payment methods are rarely used for PHC services because they do not correspond to the fundamental PHC set of services, which should be oriented toward health promotion, disease prevention, and case management. Per capita payment systems increasingly are being used as part of more comprehensive approaches to shift the orientation of health systems toward primary health care and prevention, health promotion, and disease management.

In per capita (or capitation) payment systems, the provider is paid, in advance, a predetermined fixed rate to provide

a defined set of services for each individual enrolled with the provider for a fixed period. The key principle is that the payment to a provider is not linked to the inputs that the provider uses or the volume of services provided. Therefore, some risk is shifted from the purchaser to the provider. If the provider incurs costs that are greater than the per capita budget, the provider is liable for them. If the provider achieves efficiency gains, by for example keeping its enrolled population healthier, it can typically retain and reinvest these savings.

This document is based on a synthesis of international evidence and experience related to the design and implementation¹ of per capita PHC payment systems. It summarizes lessons learned and consolidates specific technical recommendations about steps in the design and implementation of capitated payment systems. A brief case study is presented from the Karaganda region of Kazakhstan, where a PHC per capita payment system has driven profound changes in the relationships between the government/purchaser, providers and the population and set in motion a dynamic of change in the region's health sector in spite of system barriers.

Defining the Health Policy Context

A per capita payment system should be designed in the context of broader health policy goals, the current capacity of the system, and the desired or expected changes in the system. The payment system will likely stimulate changes in the PHC sector that also will be felt in other parts of the health care system. A new interface and continuum between PHC, outpatient specialty care, and inpatient services will develop, which may improve resource use and quality of care, but may also create tension between specialists and primary care providers. The planning of the

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new capitated payment system should therefore include an analysis of the expected impacts and potential unintended impacts within and beyond the PHC sector. Some questions that should be addressed before a capitated payment system is selected and the new system is designed include:

- What are the main characteristics of the health system and key health policy challenges?
- How are health services organized?
- What are the goals of the per capita PHC payment system?
- What conditions must be met and what steps are required to ensure that the goals will be achieved?
- Is there a desired service delivery model for PHC?
- What changes can be expected in the PHC sector and other parts of the health care system and community after the per capita payment system is introduced?

PHC payment systems are often reformed in response to fundamental shortcomings in the performance of a country's health system that require a major reorientation of overall financing and service delivery. For example, in 2002 New Zealand introduced PHC reforms, which included the formation of new nonprofit PHC entities funded through capitated payment. The objective was to address marked health and health care disparities across socioeconomic and ethnic groups that arose from the fee-for-service payment system. In Costa Rica in the early 1990s rapidly declining quality of health services, low morale among providers, and long waiting lists for some services reflected structural inefficiencies in the health care system. PHC reforms to address these inefficiencies included the reorganization of public PHC clinics into autonomous cooperatives paid by capitation. In another example, many of the post-Soviet countries embarked on comprehensive health financing and service delivery reforms to address the gross imbalances in their inherited health systems, with the restructuring and strengthening of PHC, supported by new per capita payment systems, at the center of the reform strategy

Goals to be supported by a per capita PHC payment system may include, for example, one or more of the following:

- Improve equity in the distribution of health care resources, access to basic health services, and health status

- Improve the transparency of resource allocation
- Drive restructuring of the health service delivery system
- Create or strengthen PHC institutions that can operate autonomously and provide comprehensive, integrated, first-contact care for individuals and the wider community
- Introduce competition for providers and choice for patients or otherwise increase the responsiveness of the health system to patients and the population
- Create incentives for PHC providers to improve efficiency through more rational resource use, including increasing health promotion and disease prevention services, and supplying higher-quality services with the resources available
- Increase provider management autonomy (decentralize health facility management)
- Improve PHC service delivery and quality of care, and expand the scope of PHC services
- Engage communities in PHC and change the relationship between the community and providers.

Steps in Developing a Per Capita PHC Payment System

In a per capita PHC payment system, all providers in the payment system are paid, in advance, a predetermined fixed rate to provide a defined set of services for each individual enrolled with the provider for a fixed period. The system can be of the simplest form, with PHC providers all paid the same average per capita rate (the base per capita rate), or the system can be more complex, with adjustments to the per capita rate to reflect expected cost variations (risk adjustment).

Per capita payment systems have a minimum of three components:

- definition of the package of services paid for through the per capita rate,
- the base per capita rate,
- and a mechanism for determining the number of individuals enrolled with each provider.

Systems with risk adjustment also require a set of risk adjustment coefficients and more detailed information on the characteristics of the population enrolled with each provider.

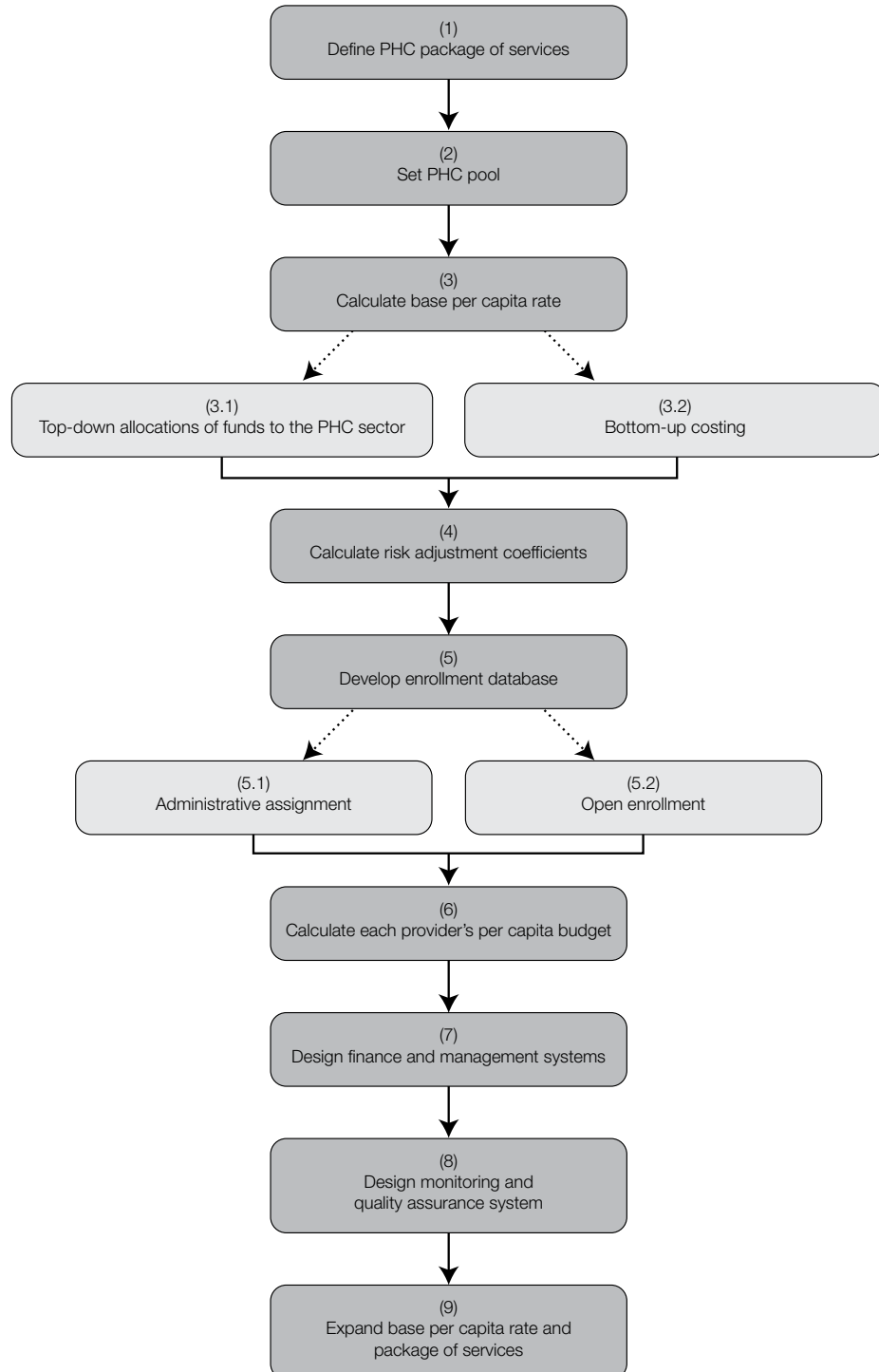
The steps for developing a per capita PHC payment system are summarized in Figure 1.

Step 1. Define PHC Package of Services

The definition of the services included in the PHC package of services and paid for through the capitated rate should

reflect the current capabilities of the PHC providers, the desired expansion and integration of the PHC scope of services, and the priorities for improving the health of the population. Defining the PHC package of services is an opportunity to clarify and shift the boundary between primary and outpatient specialty services, and to drive the

Figure 1. Steps in Developing a Per Capita PHC Payment System



integration of vertical programs into primary care. Defining the package is also linked to the benefit package that the population is entitled to receive for free or with copayments.

Most definitions of the PHC package of services are broad and emphasize basic health promotion, prevention, first-line services for diagnosing and treating illness and injury, and chronic disease management. In general there must be a balance between over- and under specifying the package of services. Specific services may include basic first-contact medical care, emergency services, maternal and child health, gynecology, home care, and preventive services such as immunization and screening. Whether specific diagnostic services, such as X-rays and laboratory services, are included depends on the equipment and capabilities of providers, as well as the entitlements specified in the government-approved benefit package. Whether outpatient drugs are included in the PHC package or reimbursed separately (if at all) is an important policy decision, particularly given the high share of total out-of-pocket payments for health typically accounted for by outpatient drugs. There are few examples of low- and middle-income countries that include outpatient drugs in the PHC package in a per capita payment system, although the Kyrgyz Republic is one successful example.

Steps 2 and 3. Set the PHC Pool and Calculate the Base Per Capita Rate

The base per capita rate is computed from an estimate of the amount of funds that the purchaser has available in one year to pay for PHC services for all providers included in the payment system—the PHC pool—divided by the total number of individuals enrolled with all providers. The PHC pool is a commitment of resources for PHC services, excluding direct out-of-pocket payments. The PHC pool may include funds for capital expenditures, or as is more common, only operational expenditures. The population estimate to calculate the base per capita rate should be exactly equal to the sum of the population enrolled with each primary care provider in the payment system (either administratively or through open enrollment) to ensure that total payments to providers are exactly equal to the level of funding in the system (budget neutrality).

The PHC pool can be estimated either by bottom-up costing or top-down allocation. In bottom-up costing, the cost of all inputs used to provide PHC in the most

recent year (or years) is aggregated. The costs can be based on actual expenditures in the previous year(s) or on projections from historical expenditures and utilization. Because PHC services are often underfunded, however, this approach may not provide an accurate estimate of the funds needed for the PHC pool. More complicated methods of imputing costs based on desired expenditure patterns can also be used, but in general, bottom-up costing does not provide an appropriate estimate of the PHC pool in low- and middle-income countries. The data typically are insufficient to establish the true costs of delivering the package of PHC services, and the current cost structures (both within the PHC sector and between PHC and other levels of care) are usually inefficient, and the objective of the new payment system is to drive a new cost structure.

In the top-down allocation approach, the PHC pool is typically specified as a percentage of the total health care budget, which can then be used as a policy tool to administratively direct health care resources toward primary care. The allocation can be adjusted over time as PHC expands its scope of services or vertical programs (e.g., immunization, TB-DOTS) are integrated into PHC. In addition, allocating a fixed percentage of the health budget to primary care ensures that PHC does not disproportionately bear cuts in the general health care budget.

The PHC pool may also be set through a combination of bottom-up costing and top-down allocation. Initially, a bottom-up calculation is made to determine the minimum cost per person of providing basic PHC. This minimum can then be expanded by increasing the top-down allocation of resources to PHC. Combining the two approaches gives a budget-neutral resource allocation mechanism that is linked to the costs of services provided in PHC but not tied exclusively to historical funding patterns

Step 4. Calculate Risk Adjustment Coefficients

To ensure that the per capita payment system promotes the appropriate incentives and compensates providers for serving populations with different health care needs, some method of risk adjustment may be applied to the base per capita rate. This is particularly necessary given the often small risk pools managed by PHC providers. PHC providers who happen to have in their pool a disproportionate share of, for example, the elderly or chronically ill

population would face much higher utilization and costs. In that case, there would be a strong incentive for those providers to attempt to attract health patients (“risk-select”) and avoid costly patients.

To risk-adjust the per capita rate, risk adjustment coefficients are applied to the base per capita rate to scale up or scale down the payment for an individual on the basis of the relative expected costs of the particular risk group to which that person belongs. At PHC level, much of the predictable cost variation is accounted for by age and sex. It can be expected that children and women of reproductive age use more PHC services than average, whereas young adult men typically use fewer PHC services than average. Therefore, significant improvement in the per capita PHC payment system can be achieved by adding age/sex risk adjustment coefficients to the base per capita rate. Such coefficients can be developed for the specific country or region, or coefficients can be adapted initially from other systems. Figure 2 shows the relative costs of

PHC services by age/sex group in rural Kazakhstan, and the risk adjustment coefficients that were developed based on the cost patterns are shown in Table 1.

Geographic adjustment coefficients may be developed if there are significant cost variations for delivering the same package of services in different locations, such as rural areas where fixed costs may be higher. Other adjustments to the per capita rate may be added to achieve specific policy objectives, for example, to provide additional resources or incentives to focus on priority services or populations.

Step 5. Develop an Enrollment Database

A per capita payment system relies on individuals being enrolled (registered) with a single provider for a fixed period. The number of individuals enrolled is one of the determinants of the total amount that a provider will be paid, and so the reliability of population enrollment estimates is critical for the acceptance and credibility of the

Figure 2. Relative Costs of PHC Services by Age/Sex Group in Rural Kazakhstan

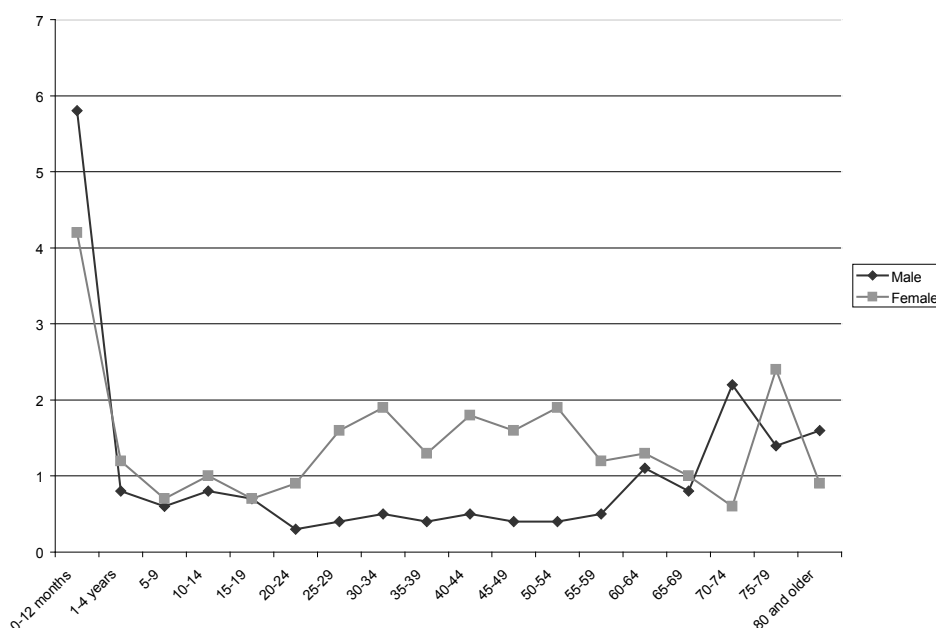


Table 1. Age/sex adjustment coefficients in Kazakhstan

Adjustment coefficient	Age/sex group				
	Children < 5	Children 5–14	Women 15–49	Men 15–49	Adults > 50
	3.0	0.8	1.3	0.8	1.2

payment system. Individuals can be enrolled with providers in one of two ways: administrative assignment or open enrollment (free choice).

OPEN ENROLLMENT

Open enrollment allows individuals to choose their PHC provider and to be enrolled with that provider for a fixed period. A system is needed to carry out the open enrollment registration process and to establish, maintain, and update the individual enrollment database after each enrollment registration period. It may be necessary to establish a database of basic information on the entire population (such as through a census) prior to the open enrollment process to accurately develop the base per capita rate. In many countries, however, establishing the population database may be problematic. For example, if there is significant migration or large populations with undocumented addresses, locating and documenting the entire entitled population would require extensive resources. In addition, government agencies and financing bodies may not accept population statistics that were not generated by an official government statistical agency. Alternative approaches include using the open enrollment process itself to populate the enrollment database; using existing population registers (such as voter registers) as a starting point, and expanding them/verifying them through enrollment campaigns and spot-checks; or advertising the benefits of registering for PHC benefits and encouraging the population to come forward and register.

For a per capita PHC payment system to achieve its full potential for creating new incentives and driving change in the health system, individuals should have free choice of their PHC provider. If the payment system allows the money to follow the choice of patients, strong economic incentives are created for providers to be more responsive to patients. Therefore, open enrollment should be the ultimate goal wherever possible. In some rural areas there may be no choice in effect, because the distance between providers is too great. Therefore, additional quality assurance measures may be necessary to motivate providers to be responsive. Whether open enrollment is feasible immediately, depends on the capacity of the purchaser to assemble or collect disaggregated data on individuals.

ADMINISTRATIVE ASSIGNMENT

If only aggregate population data are available, the purchaser must set the criteria for assigning the popula-

tion to PHC providers. For example, the purchaser may use geographic area (village, or streets/neighborhoods in urban areas), the number of the population per physician employed by the provider (such as 1,500 population per physician), or some combination of these criteria. The criteria and assignment process should be transparent, and a process for managing questions and complaints from providers should be established.

Step 6. Calculate Each Provider's Per Capita Budget

When the elements of the PHC per capita payment system are constructed—the base per capita rate; population size, characteristics, and enrollment with providers; and adjustment coefficients—the per capita budget for each provider can be calculated as follows:

$$\text{Per capita budget of facility } i = \sum_A \left[\frac{(\text{Adjustment coefficient for group A}) \times (\# \text{ of enrollees in group A})}{(\text{Base per capita rate})} \right]$$

If there is a set of geographic coefficients, the formula is as follows:

$$\text{Per capita budget of facility } i = \sum_A \left[\frac{(\text{Adjustment coefficient for group A}) \times (\# \text{ of enrollees in group A}) \times (\text{Geographic coefficient } g)}{(\text{Base per capita rate})} \right]$$

Adjustment coefficients serve to redistribute funds within the PHC pool, but they do not increase the amount of funds available. Therefore, if adjustment coefficients are used in the payment system and they are not completely normalized or calibrated to 1.0, the base per capita rate must be adjusted to maintain the budget neutrality of the system. The base per capita rate is calculated from the weighted average amount of funds per person available in the PHC pool, weighted by the age/sex composition of the population enrolled with each PHC provider.

Step 7. Design a Finance and Management System

As PHC providers take on more managerial independence and responsibility, they must perform a set of core finance and management functions including general management, financial management, information systems, performance monitoring, and human resources. The PHC provider must develop and implement internal systems, policies, and procedures to ensure that its goals are met and that it is compliant with all local laws and regulations, including taxes. The general management function may also include a business plan, which is a traditional private-sector tool that helps to both identify the short-term objectives and tasks of an organization, and define, mobilize, and commit resources to the optimal fulfillment of these objectives and tasks.

With greater financial autonomy, the PHC provider becomes responsible for planning and executing budgets, operating bank accounts, purchasing inputs, operating an accounting system, and preparing financial reports. Providers should have systems for analyzing financial performance and for producing reports that can be used to improve resource allocation and the provider's financial position. The provider will need to develop and operate internal information systems (computerized or paper) to monitor and manage financial and human resources and the performance of clinical/service delivery functions. Information systems may also be needed to assist in registering and reporting enrollees; tracking changes in the enrolled population due to birth, death, or migration; and meeting any other information requirements of the new systems.

Developing the finance and management functions and building capacity among PHC providers to carry them out effectively are key to developing PHC as a profession with a stake and say in the health system. Finance and management functions should be carried out by trained, dedicated professionals, rather than added to the clinical and leadership functions of medical personnel, who typically do not have the skills or the time for them. To build this capacity among providers, it may be necessary to create a new position of finance (or practice) manager, and to develop a training program to prepare individuals for a new role as manager in a clinical setting.

Step 8. Design a Monitoring and Quality Assurance System

Per capita payment for PHC potentially creates strong financial incentives for reducing the inputs to provide PHC services, which may have the positive effect of shifting toward less expensive health promotion and disease prevention, but also the potential negative effect of reducing the quantity and quality of necessary care. Checks and balances are needed to ensure that resources are devoted to maintaining quality and access to necessary services.

In countries where the organization of the medical profession is mature, professional self-regulation and clinical practice guidelines are used to keep pressure on quality standards. Several approaches include clinical practice audits, peer review groups, and practice visits. These methods are highly resource intensive, require clinical practice to be grounded in evidence-based medicine, and rely on well-developed medical professional organizations. Many low- and middle-income countries may not yet have the foundation for these methods to be reliable.

Open enrollment can provide a useful method to ensure that providers maintain quality and responsiveness to patients. If individuals choose their PHC provider through open enrollment, and “money follows the patient,” competition between providers to attract more enrollees creates a financial incentive to be responsive to patients, which can also counter the negative incentive to reduce inputs and services. It may take time for open enrollment to create real pressure on provider performance, however, and patients may not be perfect judges of the quality of care and providers may focus on those changes that are observable to them. Also, in some geographic areas with low population density or where it is difficult to attract providers, competition may be too weak to create effective choice. For all these reasons, the purchaser may often have to establish a simple performance indicator-based system to monitor the effects of the financial incentives in the new per capita payment system on the quality and outcomes of PHC services. Such systems may be related to providers' own internal quality improvement activities and licensing and accreditation activities.

The PHC monitoring and quality assurance system should be linked to mechanisms that encourage improvement in provider behavior and performance. There can be a direct link between an individual provider's performance

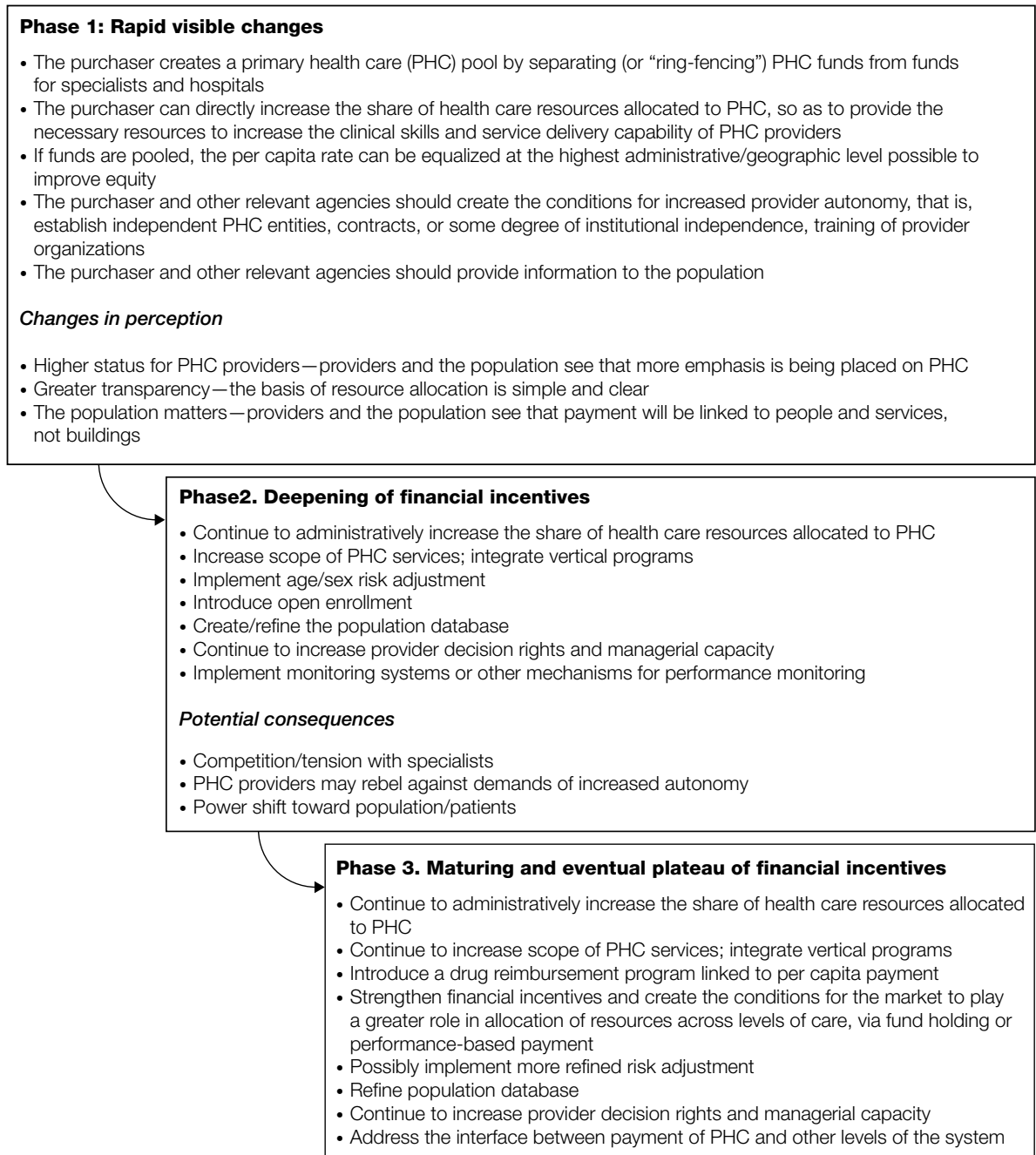
and financial consequences, as in performance-based payment. The consequences also can be indirect, through public reporting of results either to influence consumer and patient choice or to appeal to professional pride (“reputational incentives”). Providers should use the results of the monitoring system as a source of information for focusing on internal quality-improvement efforts. There also should be a clear link between the monitoring results and system

change to remove barriers and create a more enabling environment for providers to improve performance.

Step 9. Expand the Base Per Capita Rate and Package of Services

As the operation of the per capita payment system matures it can be refined and the base per capita rate expanded. In this way, the per capita payment system

Figure 3. Three Phases of Implementation of a Per Capita Payment System



can support, or even drive, an expansion in PHC clinical services' scope. Per capita payment can be set initially to fund more PHC services, and as PHC providers' clinical capacity increases, the capitated rate can be raised to pay PHC providers for additional services.

The expansion of the per capita rate through an increase in the PHC pool provides the resources to pay PHC providers for increasing their package of services. The clinical capacity of the providers also must increase simultaneously. Concurrent investment in training, equipment, and the development of clinical practice guidelines may be necessary to enable PHC providers to expand their range of services. In Kazakhstan, the Kyrgyz Republic, and Uzbekistan, for example, the scope of PHC clinical services was increased by first strengthening the core PHC services through evidence-based short courses, such as the Integrated Management of Childhood Illness from the World Health Organization (WHO), and a longer-term approach to retraining PHC providers as family physicians or general practitioners providing the full range of first-contact care to families.

Implementation Issues

The way in which per capita PHC payment systems are designed, operated, and tailored to the context of a country or region strongly influences how well the new payment systems contribute to achieving health policy goals. Key aspects of implementation include:

- Links between per capita PHC payment systems and health system strengthening, such as:
 - pooling health care funds
 - streamlining the hospital sector
 - strengthening the capacity of the health purchaser
 - strengthening the clinical and management capacity of PHC providers
 - increasing the engagement and involvement of the population

Legal and regulatory changes may be needed to address some of these issues, but many of these changes are beyond the control of the health sector. For example, labor laws and regulations may interfere with health sector policies to grant PHC providers autonomy over hiring and firing or setting salaries. Or Ministry of Finance funds-flow policies and procedures may restrict pooling of health care funds, reinvestment of savings from hospitals in

PHC, or the ability of providers to determine allocation of resources or other financial management decisions. These legal and regulatory changes may be made through temporary waivers in the short term, as policy dialogue and broader-based legislative reform are undertaken to achieve longer-term solutions. In some contexts the legal and regulatory challenges may be most easily addressed by altering the legal status of providers from public entities to some other type of enterprise (such as an autonomous public provider) and, possibly, privatized.

- Phases of implementation in a per capita PHC payment system

The financial incentives of a per capita PHC payment system take time to mature, and the effects of the new payment system on broader health system change are likely to be felt incrementally over three broad phases (Figure 3). These phases largely reflect different levels of maturity, and therefore the importance or effectiveness, of the incentives. These phases are illustrative and based on patterns observed in various countries implementing new payment systems. Depending on the context and the extent to which experience from other countries or regions is adapted, some steps may be skipped. For example, some countries choose to move directly to a risk-adjusted capitated rate by adapting adjustors from other countries or regions.

Case Study: Overcoming System Barriers to New Financial Incentives for PHC in Kazakhstan

Overview

The Karaganda region (*oblast*) of Kazakhstan has been at the forefront of comprehensive PHC-centered reforms in the country since 1996. The region, which has a population of 1.4 million, has been a leader in developing, testing, and refining health financing and service delivery innovations, many of which are now codified in national health policy legislation and are being adapted for use throughout Central Asia. Karaganda was one of the earliest regional health departments in the former Soviet republics, beginning in 1998, to initiate comprehensive restructuring of the PHC sector and implement a per capita PHC payment system.

The Karaganda region adopted a comprehensive approach to PHC strengthening, which has achieved impressive results even in the face of a constantly

changing policy environment and ongoing barriers to full provider autonomy and to open enrollment for the population. Its experience demonstrates that even when the financial incentives of the payment system are blunted by barriers in the system and implementation challenges, per capita payment can set in motion a dynamic of change.

Restructuring the PHC sector and clinical upgrading

Karaganda embarked on PHC restructuring in the late 1990s, establishing more than 50 new independent PHC practices in urban areas and 123 family medicine centers in rural areas. In addition 18 private PHC providers opened in urban areas and were awarded government contracts to provide free services to the population alongside public providers. The restructuring of the sector created a platform to shift resources to PHC, to begin a large-scale initiative for upgrading the clinical skills of PHC providers, and to introduce the new per capita payment system. The regional health department invested heavily in upgrading clinical skills. Extensive training programs in evidence-based practices were carried out over several years.

Shifting resources to PHC through per capita payment

In the Karaganda region all budgets for cities and sub-regions are consolidated into one regional health budget, giving regional pooling. A portion of this budget is set aside for directly funded activities, such as public health. The remainder is divided into three pools through a top-down percentage allocation: hospital, outpatient specialty care, and PHC. The per capita rate paid to PHC providers is calculated by dividing the total PHC pool by the population, with adjustments according to nationally legislated for age and sex adjustment coefficients. The percentage allocation to each pool is a policy variable that is amended each year. The allocation to the PHC pool increased from 12 percent to 21 percent between 1997 and 2007. The annual per capita rate grew by about 40 percent in real terms (from about \$7 to \$10) between 2006 and 2007 alone.

Incomplete financial incentives

The per capita PHC payment system was designed in Karaganda to support an overall strengthening of PHC. This payment system has improved equity and created new financial incentives for PHC providers to be more

responsive to their populations and to increase services aimed at health promotion, disease prevention, and chronic disease management. The new payment system has, however, come up against implementation challenges and rigidities in public sector financing that have limited the ability of the financial incentives to bring about significant change in PHC performance.

The treasury system in Kazakhstan has posed some barriers to true autonomy for the mostly publicly owned PHC providers. The providers now receive per capita budgets, but they are disbursed according to strict line items, severely limiting flexibility to redirect expenditures to new services or to update clinical practices. Providers in some parts of the region also have experienced intrusions into their management autonomy through repeated top-down restructuring, which has resulted in ad hoc consolidations and reorganization of PHC providers. This lack of organizational consistency and say in their affiliations has been an additional demotivating force for providers, limiting both staff loyalty and cultural change.

Plans for introducing population choice and open enrollment also have met various obstacles. Attempts to establish a population database were frustrated by population migration and unofficial residency. Significant financial and human resources were invested in an open enrollment campaign, but the results were contentious because of discrepancies between the enrollment database and official census data. Consequently, the open enrollment results have not yet been accepted officially as the basis of provider payment, and the population is administratively assigned to PHC providers in most of the region, with the exception of Zhezkazgan city, where open enrollment has been used since 1997.

Overcoming system barriers

Although the new financial incentives have not reached their full potential, the PHC reforms have set in motion a new dynamic that has motivated PHC providers to improve their performance. The regional health department has worked with providers to improve their clinical practices and to move toward the goal of a strong PHC sector that can manage most of the population's health problems. In 2001 the health department established a PHC monitoring system, which has allowed it to analyze the results of its PHC strengthening activities, refine its policies, and share lessons with other countries. The monitoring system has

created a source of motivation through its open process and the opportunity it offers to providers to discuss the remaining barriers in the system. Providers and policy makers now have a sense of mutual responsibility for improving the performance of PHC.

The monitoring system also created a form of competition among providers, who have become interested in gauging their performance relative to others and publicly demonstrating their ability to enhance their services. For example, the share of PHC visits for preventive services was an early focus of the monitoring system stakeholder group. At the end of the monitoring system's first year, the average share of preventive visits across PHC providers was 24.8 percent, with the lowest at 16.8 percent. In 2004 the average had increased to 30.3 percent, with the lowest at 21.4 percent, also indicating less variation across providers. The improvements in PHC service delivery were not only observed in process indicators reported by the providers themselves, but also in outcome indicators that were recorded in other parts of the system. For example, the hospitalization rate for the PHC-sensitive conditions of asthma, ulcer, and anemia declined almost consistently between 2001 and 2006.

The monitoring system also exposed some areas where the performance of providers did not significantly improve. For example, hospitalization rates for the PHC-sensitive conditions of hypertension and diabetes stayed the same or even increased (Figure 4). The stakeholder group concluded that stronger financial incentives were needed to stimulate outreach into the community to identify individuals with hypertension and diabetes and to bring them into the PHC system. It also identified the high cost of drugs to treat these chronic conditions as a barrier to improvement. These experiences have fed into a national policy

dialogue that led to the next steps of per capita PHC payment reform, including an outpatient drug reimbursement program and refinement of the payment system to include performance-based payment to strengthen the financial incentives for outreach and health promotion in communities, possibly focusing on priority conditions such as hypertension and diabetes.

Lessons learned

The Karaganda experience highlights some important lessons for the implementation of per capita PHC payment. First, the new payment system is not a goal in itself and, even when it involves a shift in resources to PHC, it must be accompanied by a comprehensive approach to improve PHC performance. Barriers in the system to increased provider autonomy and to organizational stability will limit the effect of the financial incentives on the motivation and ability of providers to make the changes necessary to serve their populations better. Furthermore, engaging the population and promoting its active involvement in PHC system change through free choice and open enrollment can pose significant implementation challenges, but these moves are an important force for change and should not be abandoned. Second, even in the face of system rigidities and implementation challenges, a new per capita payment system can set in motion a new dynamic. Individual providers can become motivated to upgrade their clinical practices and more actively pursue performance improvement. If health authorities support these providers to continue developing, documenting, and disseminating best practices, the health system will continue moving toward its goals, even while the more intractable system barriers are gradually dismantled. A valid and well-accepted PHC monitoring system is important to track the progress of change both among individual providers and in the system as a whole.