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4.4 Ineffective payment systems for health care providers



About the Health Finance and Governance Project

The Health Finance and Governance (HFG) Project works to address some of the greatest challenges facing health systems today. Drawing on the latest research, the project implements strategies to help countries increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The project also assists countries in developing robust governance systems to ensure that financial investments for health achieve their intended results.

With activities in more than 40 countries, HFG collaborates with health stakeholders to protect families from catastrophic health care costs, expand access to priority services – such as maternal and child health care – and ensure equitable population coverage through:

- ▶ Improving financing by mobilizing domestic resources, reducing financial barriers, expanding health insurance, and implementing provider payment systems;
- ▶ Enhancing governance for better health system management and greater accountability and transparency;
- ▶ Improving management and operations systems to advance the delivery and effectiveness of health care, for example, through mobile money and public financial management; and
- ▶ Advancing techniques to measure progress in health systems performance, especially around universal health coverage.

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About the Technical Efficiency Guide

Health system stakeholders in low- and middle-income countries are exploring ways to achieve more with available resources, and realize savings that can be used to fill the gap in resources needed to expand effective health coverage to all. Where other guides and tools focus on improving allocative efficiency (“doing the right things”), this guide focuses on technical efficiency (“doing things right”) (WHO 2010). It is intended to **help diagnose and address technical inefficiencies** across health systems.

4.3 Corruption from weak public financial management



4.4.1 Some payment system designs incentivize providers to waste resources

What's the inefficiency?

All payment systems have pros and cons – that is, ways in which they influence providers to perform actions beneficial, or harmful, to the health system. However, theory and evidence indicate that the payment systems listed below can lead to technically inefficient use of resources when health care providers are predominantly paid through them (Cashin et al. 2015; Langenbrunner, Cashin, and O’Dougherty 2009).

- **Input-based line item budget** determines payment for providers at government-owned facilities *before* services are delivered based on the estimated number of inputs (e.g., clinical and non-clinical staff, supplies, drugs, fuel, utilities) needed over some period. Usually input-based payment comes with strict public financial management (PFM) rules restricting flexibility in the type and level of inputs providers can purchase and gives no incentive to choose an efficient mix (See Module 4.1). Theory predicts that input-based budgets incentivize the under-provision of care and low levels of productivity in the health workforce. Also, the facility and its staff are not specifically and explicitly paid to oversee the successful assembly of inputs purchased to produce the service or output and manage its delivery to clients and communities. In fact, higher payment is often directed to those purchasing inputs than to those assembling and managing outputs. Rigid controls from input-based line item budgeting (with corresponding labor and tax issues) make it hard to negotiate mutually agreeable contracts with private sector providers (See Module 4.1).
- **Fee-for-service** pays providers for each individual service *after* the services are delivered. Theory predicts that fee-for-service incentivizes providers to deliver more services and create demand for needed, but also unnecessary care. Evidence indicates that it is rare to avoid the cost escalation and overuse of services resulting from this payment system. Also, when fee-for service pays for intermediate outputs (e.g., number of HIV tests), payment is closer to impact than paying for inputs, but still does not pay for final outputs (e.g., viral suppression), which carries the most value for the health system.
- **Per diem** is a daily rate for inpatient hospital stay. Theory predicts that it incentivizes providers to encourage longer inpatient stays and/or re-admission to hospitals.

Few health systems in low- and middle-income countries (LMICs) rely purely on these payment systems, but may still be affected by the inefficiencies they create or their inefficient effects.

Why does this happen?

Although they may result in inefficient spending, the payment systems listed above were adopted because they also have favorable aspects (Cashin et al. 2015; Langenbrunner, Cashin, and O’Dougherty. 2009). All three are popular among providers because most of the risk (that patients and their providers will choose more costly care than there is money to cover) is born by the government and not the providers. In addition, each payment system has specific advantages:

- **Input-based line item budgeting** gives “strong administrative control” to the Ministry of Finance (MOF), an institution that typically prefers rigid order and control. In these systems, the MOF is the de facto purchaser of health care. However, this preference for central



planning and strong top-down control puts limits on the autonomy providers have to manage their resources effectively and efficiently to deliver high-quality services to the population. In these situations, providers lack motivation in part because they lack the ability to manage and control their spending decisions, and they are not paid or recognized when they perform well. Input-based line item budgeting is also attractive because it is relatively easy to design and implement, with relatively simple processes for managing budgets and payments.

- **Fee-for-service** is, relative to line item budgeting, more directly linked to the actual delivery of services, incentivizes productive behavior, helps stimulate demand, and has been shown to increase access to underused services. If information systems are strong, fee-for-service can generate data on service utilization that can help managers within facilities or at the purchasing or policy level understand population needs and preferences. Fee-for-service creates a very direct incentive for providers: if they deliver another service – a lab test, for example – they will get paid immediately. Contractual restrictions aside, providers have autonomy to decide what care to provide to their patients and they tend to consider cost and efficiency less in their decision process. For these reasons, providers tend to like this payment method.
- **Per diem** is easy for purchasers to calculate and administer.

In addition, many LMICs have a historical legacy of payment through these mechanisms. Input-based line item budgeting has been used since taxation began in their countries. It continued as some countries developed large government health delivery systems. In many LMICs that added government health insurance, government purchasers shifted purchasing for variable and other direct costs of care to fee-for-service to improve productivity and increase demand where data indicated underuse of essential health services.¹ Many of these governments left purchasing of health worker labor as salaries paid through line item budgets. This created conflicting incentives and corresponding inefficiencies because input-based line item budgeting incentivizes provision of fewer services and fee-for-service incentivizes provision of more services.

In recent decades, stakeholders have recognized that this combination of payment methods has led to **unintended consequences**, including technical inefficiency in service delivery. In response, there has been a shift toward payment systems that aggregate specific services like lab tests into another unit of service like a hospital admission. These payment systems “bundle” payments: they pay for groups of services, rather than individual services as in fee-for-service (Fuenzalida-Puelma et al. 2010). An example of a high level of bundled payment is capitation, such as payment for all primary health care (PHC) services for a patient per year. Another example is case-based payment, a single payment covering all services in one episode of care at hospitals with the unit of service defined by hospital admission and discharge. Relative to fee-for-service, capitation is the most indirect form of payment or contains the most indirect incentives, since payment will not change unless the number or type of enrolled people changes. Case-based payment is less direct than fee-for-service, but more direct than capitation. Theory predicts that more efficient, indirect, bundled methods may lead to lower levels of services and possibly

¹ In retrospect, use of fee-for-service might have been the best first step or payment system choice to start the insurance program. However, not refining the payment system over time often puts the government at a disadvantage in the purchaser-provider negotiation game as providers become addicted to fee-for-service and may effectively lobby political elite, making it hard to move away from fee-for-service later (as the Ghana National Health Insurance Fund discovered over the last few years).



quality (which has its own technical inefficiencies, see Module 1.1), since providers may reduce the number of inputs not only below excessive levels of service, which wastes resources, but also below needed levels of service, which jeopardizes health.

Finding the optimal balance between the extreme outcomes – full risk for purchaser or provider, or incentivizing over-provision (waste, inefficiency, cost) versus under-provision of services (access, quality) – is one of the biggest challenges in payment system design and implementation. To address these extreme unintended consequences, governments are considering a middle ground: payment systems that mix bundled, indirect methods with fee-for-service, to improve efficiency while also prioritizing some set of specific outputs and helping to ensure quality. However, even when reforms begin as simple interventions, they inevitably grow more complex as purchasers and providers attempt to manage and adapt. For example, purchasers may respond with volume caps to reduce incentives for inefficiency or wasting resources and providers may over- or under-refer in response to the incentives they face. Many stakeholders are concluding that purchasers should continuously refine payment systems as providers adapt and respond. These processes help create a culture of continuous improvement and avoid the need for more extensive future course corrections. However, in most countries, these systems remain underdeveloped, and adaptation and revision occur haphazardly.

However, while many governments have shifted purchasing design, **transitioning from legacy mechanisms** to new ones is difficult due to multiple political and technical obstacles (Demark and Jedrey 2016). Most broadly, transition incurs a fundamental change in winners and losers of reform, with changes to the distribution of money, power, control, and influence all at stake. The more bundled the payment is, the more risk – previously completely assumed by purchasers – is shared by individual providers. This change typically is not popular with providers, who tend to like the directness of fee-for-service and who in some countries form formidable opposition to reform. This is particularly true if providers' risk increases without a comparable increase in reward, or if they do not have the infrastructure and staff to manage bundled payment. Also, over time, payments that lead to reduced reliance on hospitals mean that hospital revenue and volume will also fall, with implications for hospital capacity (including staffing in some places, or overall financial viability in others). In other cases, winners and losers will be different (Demark and Jedrey 2016). Purchasers need to navigate the complex social and political questions surrounding these changes, but may not have the political backing or technical capacity to be successful.

What makes it technically inefficient?

All three payment mechanisms described above can encourage decisions that result in technically inefficient spending of resources with the actual level of inefficiency dependent on both payment system choice and design, and implementation context, sequencing, and process management.

- **Input-based line item budgeting**, when associated with PFM rules that limit the autonomy of providers in what inputs to purchase, causes providers to not have the ability to select an optimal mix of inputs, regardless of their motivations. Also, it may encourage under-provision of care, which will translate into the need for more expensive treatment later on (See Module 1.4).
- **Fee-for-service** encourages increases in utilization, which is good in contexts where underuse of needed services is a problem. However, it can also lead to increases in utilization regardless of need – that is, in increases in inappropriate care and wastage. In these cases, services and payment exceed health status achieved. In worse cases, excess hospitalizations is linked to greater need for services, since hospital infections or mistakes can create need where none previously existed (Hoogervorst-Schilp et al. 2015).



- **Per diem** encourages a higher number of unnecessary inpatient days, along with higher rates of readmission. This is both higher quantity and price of services, if (as above) more time in the hospital also increases likelihood of complications.

What questions can help us diagnose the inefficiency?

- What set of incentives do providers who receive at least some general government funding to deliver services face? Consider incentives across all financing flows, including government-managed systems, households paying out-of-pocket, private insurance, and donor funding.
 - What are the incentives regarding type of services?
 - What are the incentives regarding the number of services provided?
 - Are services prioritized? Do the incentives result in providers prioritizing the desired services over others?
 - What are the incentives related to referral (across public and private sectors and by level of care)?
- Based on your understanding or available data, how are providers responding to these incentives? Responses could be related to:
 - Management, prioritization, and appropriateness of services provided
 - Workforce productivity
 - Health system objectives, especially efficiency
 - Use of inputs, mix of inputs
 - Referrals to higher levels of care
- Do providers have the autonomy in management and spending they need to respond to changes in incentives?
- In what ways could payment design reform help improve alignment for these providers?
- If the government is currently considering reform, what are the perspectives of different groups on the proposed reform? (MOF, government purchaser, providers, population).

Whom should we interview?

This list of potential interview respondents is given as an example. Their titles and positions may change depending on context and are not always representative of their level of knowledge in a particular domain. Thus, the list should be adapted and can change over the course of the interviews.

- ▶ Individual providers
- ▶ Provider organizations including associations and networks. Include representatives at multiple levels of care
- ▶ Relevant Ministry of Health (MOH) departments or staff (e.g., planning, finance, service delivery)
- ▶ Government purchaser
- ▶ Other health sector thought leaders
- ▶ Civil society organizations, patient groups



What indicators can help diagnose the inefficiency?

Indicator	Calculation/precise definition*	What it measures	Potential sources of data	Source of indicator
1. Total health expenditure on PHC as a percentage of total health expenditures	Numerator: health expenditure on PHC (at all levels of care, including primary, secondary, and tertiary facilities) Denominator: total health expenditure (as defined in System of Health Accounts (OECD, Eurostat and WHO. 2011))	Ability of payment system to incentivize a greater share of health spending on PHC relative to secondary and tertiary care	Health Accounts	HFG n.d.
2. Percentage of health providers paid through output-based payment systems**	Numerator: # providers (public and private) paid through output-based payment systems Denominator: total # providers paid at least in part through government-managed health financing schemes	“The degree to which payments are matched to priority services and tied to more efficient provider outputs/performance” (HFG n.d.)	Literature review; government documents	HFG n.d.

*Definitions have been taken directly or adapted from the listed sources, which provide indicator reference sheet information. **Note that output-based payment systems include fee-for-service, which has its own tendency for technical inefficiency. Thus this indicator needs to be interpreted carefully.

What are some examples of the inefficiency?

- ▶ Kyrgyzstan moved from line item to case-based payment for hospitals: After the dissolution of the Soviet Union, health systems in newly independent countries like Kyrgyzstan were characterized by massive excess hospital capacity and weak PHC. The line item budget payment system contained substantial PFM rigidities that both created the excess hospital capacity and hampered restructuring because savings could not be retained and reinvested. If a hospital rationalized its structure or created other efficiencies, the savings would be lost to both the hospital and the health sector, creating an enormous incentive to waste resources. In Kyrgyzstan, a shift to a case-based hospital payment system produced substantial savings in fixed costs (e.g., utilities); “the total number of buildings decreased by 47 percent, floor space decreased by 40 percent.” The savings were redirected to cover the costs of patient care in hospitals and resources were shifted to a PHC per capita payment system to strengthen this most cost-effective sector (Fuenzalida-Puelma et al. 2010; author experience).



- ▶ In Tanzania, the government purchaser uses capitation payment to pay for a bundle of PHC services and fee-for-service to pay for achievements on a set of prioritized maternal and child health indicators: Due to insufficient infrastructure and operational funding, PHC providers in Tanzania, particularly those in rural areas, face routine problems securing the inputs they need, resulting in poor service quality and stock-outs of medicines. In this context, the theoretical concern that capitated payment will incentivize public PHC facilities to use excessively few inputs or over-refer is not relevant: the bigger struggle is to ensure they have the money to buy, and the supply chains to deliver, the supplies, fuel, utilities, and medicines they need to serve their patients and communities. Thus, in 2017, the Government of Tanzania implemented direct facility financing, including a shift to PHC per capita payment in all dispensaries and health centers for the development partner-supported health basket fund (HBF) using government PFM systems. This shift has helped address severe shortages in operational budgets, and allowed the capitated payment to more effectively fund PHC services. To further reduce waste and/or incentivize efficiency, the government also 1) harmonized the PHC payment system for the health basket fund and the Community Health Fund (community-based health insurance), reducing fragmentation in funds flows and conflicting incentives; 2) implemented results-based financing, direct incentives using fee-for-service, to complement the capitation payment; and 3) introduced a new Facility Financial Accounting and Reporting system for all health facilities and schools to support improved financial management, and ensure that accounting and reporting for all revenues and expenses from all funds flows is done in one integrated system.
- ▶ Thailand's Universal Coverage Scheme adopts mixed payment methods to strengthen purchasing: The scheme pays providers of outpatient care a capitated rate that has adjusted rates depending on beneficiaries' age. The scheme pays inpatient care providers a case-based rate (diagnostic related groups), with a global budget set as a cap to reimbursement. This cap contains total costs to inpatient care (RESYST 2016).

4.4.2 Duplicative information systems result in administrative waste and inhibit effective implementation of payment systems

What's the inefficiency?

Clinical staff and purchasers are burdened by duplicative information systems. For example, there may be separate systems for financial accounting and health information, with the health information system (HIS) further fragmented by disease/health area. Countries may also have a claims management system, separate from both the HIS and financial accounting system. The administrative burden can be severe: a time-motion study in Kyrgyzstan reported that physicians spent 23 percent of their work day on reporting and documentation – 164 percent more than the time allotted for it in normative documents (Ibraimova, Isaeva, and Smith 2008).

Moreover, the data generated through these systems are not always routinely or effectively used by providers and purchasers for analysis, refinement, and improvement. In many cases, providers do not even have access to aggregated, analyzed data, and thus cannot apply lessons from them. This further



weakens implementation of and accountability in the provider payment system, which lowers the value of the data generated at great administrative cost.

Why does this happen?

Why are there duplicative information systems? As described in 4.4.1, the starting point for many LMICs was input-based line item payment systems that did not purchase health service outputs, match payment to priority services in underfunded systems, or stimulate providers to improve performance or create technical efficiency gains. At this starting point, finance and clinical information systems were split: finance information systems were largely driven by the MOF, with the previous year budgets informing the next year's; clinical information was gathered through the HIS, and used by health sector agencies and stakeholders for health statistics, quality improvement, and monitoring. The HIS was often even further fragmented by development partners, especially those working in vertical health programs (e.g., HIV, TB, malaria, family planning, and maternal and child health).

As governments began to consider provider payment system reform, the first step was often to fee-for-service. Governments often complemented this reform with the establishment of a separate vertical claims management system extending from the centrally located purchaser to the smallest provider. This claims management system was separate from the one or more HISs already in place and the MOF finance information system. It included clinical and financial data, separately, to determine the claim amount due and to pay it. All of a sudden, providers had to report not only to one or more HIS and the MOF's finance information systems, but also to the claims management system. To make matters worse, reporting requirements (reporting dates and frequency, indicator definitions, formats and modalities for reporting) and even basic reference codes often differed across the three or more systems.

Are there other reasons for excessive administrative burden? Other reasons may include a preference among central authorities, and donors, to maintain strong controls over spending at local levels (Glassman and Sakuma 2014). For these actors, it may seem hard to balance the need to simplify systems and give autonomy with a desire to monitor carefully (thus demanding more extensive reporting) and control spending at lower levels (thus limiting their autonomy). This tendency to prioritize control may be linked to cultural mistrust between providers and purchasers, and can lead purchasers to fear leakage from fraud more than waste due to administrative burden.

Information system design may also become influenced by "experts" who lack true understanding of local context. For example, foreigners from high-income contexts, familiar with health systems that have already developed mature information technology infrastructure at all levels of care and management, may suggest data systems that will create more burden than value in a LMIC context (Ibraimova, Isaeva, and Smith 2008). Stakeholders taking a high-level view of the health system may focus more on monitoring and less on management at the base of the pyramid, where a myriad of routine operational tasks must be performed on a daily basis to deliver services to the population. High administrative or reporting burden can undermine this service delivery management.

Why are the data not used by providers and purchasers for analysis, refinement, and improvement?

One reason why providers may not use the data generated is that the data gathered reflect the needs of higher-level decision makers and are not centered on the provider-patient relationship (Shaw 2005). Top-down, fragmented reporting requirements can result in a sense among providers that information required is not helpful, just required reporting (Nyella 2011; Galimoto 2007). Also, in many cases, local health officials (district and subdistrict) and facility managers lack the autonomy to make any



adjustments (see Module 4.1), and thus lack the incentive to analyze the data. Finally, providers, already facing a heavy administrative burden, may not have the bandwidth to analyze and apply findings from the data collected. Or they may not ever see it in an analyzable format if they just submit raw data up to higher levels of the system.

For purchasers, a heavy administrative burden can also overwhelm limited staff and introduce stress that reduces productivity (Sodzi-Tetty et al. 2012). This is particularly true when processes are manual. In this context, purchasing staff may stay focused on responding to immediate crises, rather than acting intentionally to ward them off through analysis of data and application based on results.

What makes it technically inefficient?

Administrative waste due to duplicative information systems contributes to a technically inefficient use of inputs. It wastes the time of valuable human resources, including facility managers and clinical staff, and purchasers.

- Clinical staff will have less time to spend with patients, leading to poorer quality and quantity of health care delivered for their time. This is particularly problematic at the PHC level at periphery or in remote rural areas where facilities are very understaffed. This exacerbates insufficiencies in health workforce supply (See Module 2.1).
- As providers spend more time reporting, they also have less time for other important management roles, including “interpersonal roles” – e.g., training and motivating staff, or liaising with contacts – and “decisional roles” – improving operations or conducting negotiations, or deciding how to allocate resources (Mintzberg 1975 in Galimito 2007).
- The duplication is also problematic for purchasers: some may spend more money processing small claims than the value of the claim paid. Because of the extra administrative burden it brings, duplication can also lead to delays in payment to providers, leading to a cyclical bottleneck in implementation and weakening trust in the system. This is particularly true when purchasers lack the information technology infrastructure for efficient processing. This may prevent purchasing design from achieving intended objectives, while also limiting options for future reform.

More generally, fulfilling duplicative reporting requirements takes more than just time away from providers and purchasers: in an environment with excessive administration and associated high costs, workers become more stressed, less empowered to perform well, and thus less productive and motivated (See Module 2.2). It will leave them less interested or empowered to use the data they generate to improve their performance. This may be particularly true of providers, many of whom chose their career intending to practice medicine and serve patients. Finally, duplicative reporting requirements are associated with lower data quality (Shaw 2005).

What questions can help us diagnose the inefficiency?

- To how many distinct reporting systems must providers at primary, secondary, and tertiary levels report?
 - For each: How were indicators selected? Was there any room for facility staff to have a say in the data collected? To what extent do they have the autonomy to act on the results of analysis they conduct using the data?
 - Are the same stakeholders or institutions involved in setting up each system still managing them? What motivations do they have for maintaining separate systems? What might they gain or lose by merging or making systems interoperable?



- How much time do managerial and clinical staff at providers spend to report
- Are reporting systems manual or electronic? At what level?
- To what extent/in what ways are data used by actors at central, district, sub-district, and facility levels of the government-managed service delivery system? What factors limit opportunities or motivation to use them more effectively/more routinely/as part of routine monitoring, evaluation and learning processes?
- Are purchasing staff motivated to use the data? Do they have sufficient staff to support the purchasing activities and tasks they are responsible for? In what ways could some of their activities (including reporting) become streamlined to help reduce the burden?
- What opportunities are there to merge or make interoperable two or more distinct information systems?

Whom should we interview?

This list of potential interview respondents is given as an example. Their titles and positions may change depending on context and are not always representative of their level of knowledge in a particular domain. Thus, the list should be adapted and can change over the course of the interviews.

- ▶ Individual providers
- ▶ Provider organizations including associations and networks. Include representatives at multiple levels of care
- ▶ Relevant MOH departments or staff (e.g., planning, finance, service delivery)
- ▶ Government purchaser
- ▶ Other health sector thought leaders
- ▶ Civil society organizations, patient groups

What indicators can help diagnose the inefficiency?

Indicator	Calculation/Precise definition*	What it measures	Potential sources of data	Source of indicator
1. Administrative costs as percentage of total costs	Numerator: administrative costs (facilities) Denominator: total costs (facilities)	Administrative burden on providers	Government documents; costing studies	Authors
2. Number of reporting systems to which providers (disaggregated by institution/program and level/type) report clinical and financial data on service delivery		Measures fragmentation in information systems and burden on providers	Government documents; key informant interviews	Authors
3. Average number of days that payments to health providers		Predictability of financial flows to health	Health Provider Survey; Payer Claims &	HFG n.d.



are delayed or early in relation to scheduled transfer

providers, functioning of purchaser information systems, and capacity of purchaser to fulfill their responsibilities

Expenditure Data

*Definitions have been taken directly or adapted from the listed sources, which provide indicator reference sheet information.

What are some examples of the inefficiency?

- Ukraine shifts payment for TB hospitalization from inputs to outputs: Ukraine continues to face a high incidence of multi-drug resistant tuberculosis. Like many countries in Eastern Europe, Ukraine inherited a hospital-centric delivery system, with specialized TB hospitals that were paid by the number of bed-days. This payment mechanism incentivized longer inpatient stays, which is not efficient or effective TB care. Even after the payment system changed, government and hospital administrators also lacked the data they needed to fix the system. One oblast TB administrator “had no compiled data or analysis to allow them to determine how many hospital beds they really needed. They didn’t have a comprehensive overview of what kinds of patients they treated and how long various types of cases stayed in the hospital. They didn’t have a way to calculate how much each type of patient cost to treat, and how costs varied across facilities.” In recent years, the government has developed and implemented an early-warning system that demonstrates potential cost savings from closing hospitals that under-provide services and shifting to ambulatory care where appropriate. Using this tool has helped downsize their hospital system significantly – in one oblast from 4,000 beds for TB to under 700 (HFG 2018; Cashin, Eichler, and Hartel 2017).
- Ghana’s National Health Insurance Fund bore heavy administrative burden: A 2012 paper documents how staff at Ghana’s National Health Insurance Fund (NHIF), which purchases services for the government-managed insurance scheme, became overwhelmed with manual administrative tasks. As a result, payments were late, the flow of information between providers and the NHIF was weak and contested, and purchasing staff were stressed (Sodzi-Tettey et al. 2012). In recent years, the NHIF has started to use an electronic claims application along with an Excel-based summary form that allows for easy aggregation and analysis of claims data. Using this system has allowed NHIS to monitor technical efficiency by assessing provider responses to payment systems (Cashin, Eichler, and Hartel 2017).
- Manual operations costs Vietnam: The lack of strong IT systems to support strategic purchasing in Vietnam hinders the ability of the Vietnam Social Security to identify beneficiaries who visit multiple providers within a short period of time, thereby leading to excessive costs (Cashin, Eichler, and Hartel 2017).
- After insurance reform, providers spend 23 percent of their time reporting in Kyrgyzstan: In the 1990s, the government of Kyrgyzstan launched the Manas health reform program that restructured excess hospital capacity, created a new PHC sector, established a single health



purchaser using both general revenue and payroll tax to reimburse providers using PHC per capita and case-based hospital payment systems. This reform substantially improved clinical practice including introducing evidence-based medicine and increased community involvement. The reforms also developed new information systems where one integrated system collected data from providers and used it for financial claims management and payment, clinical practice and quality improvement, health statistics, and health research. However, even with an integrated system, two problems arose: 1) deciding which data to collect from understaffed PHC providers – only limited information is needed to operate a PHC per capita payment system but the MOH wanted to collect clinical and statistical information from all providers; 2) vertical service delivery systems and programs (e.g., HIV, TB, STIs, family planning), including those supported by donors, did not agree to use the integrated information system and continued to collect data through fragmented information systems extending to the PHC provider level. A 2008 time and motion study showed that, on average, 23 percent of a provider's work day was spent reporting. "Of this time, 60% is spent completing patient charts, 14% is spent on the clinical information form, 16% on MOH-mandated forms, and an additional 10% on non-required forms and journals," (Ibraimova, Isaeva, and Smith 2008). Importantly, for most providers in Kyrgyzstan, these forms are filled out by hand. According to this study, spending 23 percent of the work day on reporting is more than what is spent in the United States, which itself spends more on administration than other OECD countries (Bentley et al. 2008). In summary, it's a good news and bad news story – even when information systems are integrated, pressure to fragment continues and determining the level of data to collect from understaffed PHC providers is always a dilemma.

4.4.3 Payment systems fail to influence providers

What's the inefficiency?

In many health systems, the complexity of the financial incentives facing providers may serve to further confuse, rather than clarify, a set of decisions that, together, would lead to better health system outcomes. For example, a small public outpatient clinic may serve poor patients who are beneficiaries of a government-managed financing scheme, through which the clinic is paid a capitated rate for an essential service package, and fee-for-service for achieving targets for high-priority diseases/health areas. For serving elderly patients, the clinic may receive a capitated rate, but for a slightly different set of benefits, associated with slightly different clinical guidelines, through a social security scheme. The clinic might also serve non-poor informal workers who are not eligible for those benefits, and who pay out-of-pocket, with fee-for-service. In addition, each health worker at the clinic receives a salary through the Civil Service Agency. As 4.4.1 suggests, fee-for-service encourages providers to deliver more services, while salaries (input-based) encourages them to deliver fewer, and to more frequently refer patients to higher levels of care.

In this context, using or tweaking any one provider payment method to further motivate individual providers at this clinic may not result in the intended improved efficiency and quality in the health system. In these types of scenarios, providers face **conflicting incentives** – that is, unclear signals about what choices will result in financial rewards. What financial incentives are then likely to dominate provider behavior? As discussed in 4.4.1, if an input-based budget payment system dominates, it is likely



to incentivize the under-provision of care and low levels of productivity in the health workforce. If fee-for-service dominates, it is likely to incentivize overuse of services, leading to cost escalation. In contrast, this inefficiency relates to the potential for conflicting incentives across various payment systems to create confusion, and to cancel out the systems' desired incentives. When this happens, there can be multiple unintended consequences, ranging from unfairness or inequity for individual patients, to substantial management complexities with corresponding administrative cost increases without corresponding contributions to policy objectives. Of particular concern is the combination of inefficiencies and inequity that usually occur when different groups of patients are paid under different payment systems for the same benefits. If a poorer individual's services are paid through a line item budget, there may be effectively lower payment than for a richer individual whose services are paid by fee-for-service (as more services may be used resulting in high payment). This situation sets up individual patient-level underservice and stigma and can substantially contribute to often hidden but severe inequities in the health system.

It is important to note that input-based line item purchasing in-and-of-itself creates conflicting incentives for providers. These incentives originate in the fact that this type of purchasing is unclear about the purpose, population, or type of care of the inputs. For example, salaries unclearly direct individuals how to spend their time, with all tasks thus having equal priority. This could also be true for variable costs: a provider with a limited supply of syringes could then use them for any number of purposes. In this environment, providers may feel inertia or uncertainty about priorities and this leads to ineffective decisions.

Why does this happen?

Provider payment mechanisms will alter service delivery outcomes by changing the decisions made at providers. Whether it is a small rural facility staffed with one nurse or a large hospital, the unit of decision-making is the individual (Christian and Crisp 2012). Motivation driving individual behavior is complex. Most individuals are not by nature maximizers, as economic theory predicts. They are not always "rational" but make decisions based on multiple factors internal and external to their organizations. Without perfect information, they do what they can with what they do know. Individuals want to please, and clear guidance and rules can help them do so, but they also want to avoid responsibility, and the constraints on them that are established through the same rules and regulations (Christian and Crisp 2012). Many health care providers choose their career because of an altruistic desire to serve a higher good; they may have less interest in finances, and feel uncomfortable defining their goals in financial terms (Korlen et al. 2018).

Financial incentives must find relevance within this complex kaleidoscope of factors shaping individuals' decisions. But these incentives, as described in the example above, are complex and sometimes conflict with each other. Fragmentation in pooling arrangements, as described in Module 4.2, is one important factor contributing to these conflicting incentives. For example, financing for formally employed workers may be separate from financing for the poor and elderly, with each population group having access to a slightly different set of services with different depths and breadths of coverage. In addition, different institutions, across public and private sectors, may govern rules and implementation of provider payment for each pooling arrangement separately. Providers may face varying restrictions for each funding flow they manage, and may not be allowed to shift funding, based on their immediate needs, across the pools. This problem is exacerbated when these various institutions have a competitive, rather than cooperative relationship with each other. Finally, as noted above, the situation with the same benefit entitlement purchased by different payment systems may lead to provision of different levels of service to individuals both within and across health providers, resulting in substantial inequities, unfairness, and stigma.



There may be opportunities for providers playing a management role to bridge the gap between the needs and perspectives of clinical service delivery providers and system financiers – but they are hard to seize. As discussed in 4.4.2, managers may not have time to spend leading and motivating staff, including through effective communication, because they are overwhelmed with reporting responsibilities. Managers may not actually have any management training. Their management task is not easy: One study describes how managers need to “continuously repeat and communicate the regulations to maintain awareness among staff” – particularly when these regulations, for purchasing, were difficult to understand. In these communications, they found it was best to communicate less explicitly about financing and more in terms of patient outcomes (Korlen et al. 2018).

Incentives created through provider payment mechanisms may also fail if the rates for payment fall below the real costs providers incur to deliver them, even through the most efficient processes. In some cases, purchasers lack the needed up-to-date costing information that tells them how much services actual cost to deliver in any given location. They may also lack information needed to create rate adjustments that reflect differences across local contexts and by complexity/severity of the clinical intervention (Kukla, Johns, and Thin 2016). A result is that new payment systems do not pay providers what they need to deliver quality services. Ultimately, payment rates may fall below the real costs because resources in the financing scheme are insufficient. Use of the optimal provider payment system at any point in time can produce substantial results including increasing access, equity, efficiency, and quality of services. However, at some point efficiency gains to extend coverage are harder to produce, resources run out, and more revenue is needed to improve health purchasing and ensure the incentives in payment systems stimulate the desired behavior and results.

What makes it technically inefficient?

This inefficiency is technically inefficient because it blocks intended improvements in efficiency, through provider payment, from successfully influencing service delivery outcomes.

What questions can help us diagnose the inefficiency?

- What set of incentives do providers who receive at least some general government funding to deliver services face? Consider incentives across all financing flows, including government-managed systems, households paying out-of-pocket, private insurance, and donor funding.
 - What are the incentives regarding type of services?
 - What are the incentives regarding the number of services provided?
 - Are services prioritized? Do the incentives result in providers prioritizing the desired services over others? And do providers face incentives to treat individuals with the same or largely the same benefit package differently?
 - What are the incentives related to referral (across public and private sectors and by level of care)?
- Based on your understanding or available data, how are providers responding to these incentives? They could be related to:
 - Appropriateness of services provided
 - Workforce productivity
 - Health system objectives, especially efficiency
 - Use of inputs, mix of inputs
 - Referrals to higher levels of care



- Do providers have the autonomy in management and spending they need to respond to changes in incentives? Do they have the technical capacity and infrastructure to manage and report effectively and efficiently?
- Are providers satisfied with reporting requirements? What suggestions do they have for improving them?

Whom should we interview?

This list of potential interview respondents is given as an example. Their titles and positions may change depending on context and are not always representative of their level of knowledge in a particular domain. Thus, the list should be adapted and can change over the course of the interviews.

- ▶ Individual providers
- ▶ Provider organizations including associations and networks. Include representatives at multiple levels of care
- ▶ Relevant MOH departments or staff (e.g., planning, finance, service delivery)
- ▶ Government purchaser
- ▶ Other health sector thought leaders
- ▶ Civil society organizations, patient groups



What indicators can help diagnose the inefficiency?

Indicator	Calculation/Precise definition*	What it measures	Potential sources of data	Source of indicator
1. Total health expenditure per capita	System of Health Accounts (2011) definition (recurrent spending only)	Sufficiency of funding for health (top-down perspective) and therefore potential for incentives in payment systems to providers to work as planned	Health Accounts; World Bank; WHO	HFG n.d.
2. There is an adequate level of pay or pay package		Sufficiency of funding for health (bottom-up perspective)	Provider surveys/interviews	Martinez 2001
3. Number of risk pools		Level of fragmentation and potential for conflicting incentives to undermine impact of payment systems	National systems, provider surveys/interviews	HFG n.d.
4. Number/type of provider payment systems	Distinguish number/type by level/type/sector of provider	Level of fragmentation and potential for conflicting incentives to undermine impact of		USAID 2012, in Diana, Yeager, and Hotchkiss 2017.



<p>5. Enabling environment exists for health workers and staff to achieve goals and targets</p>	<p>payment systems Ability of payment system to produce desired effect on the behavior of health workers or staff</p>	<p>Provider surveys/interviews</p>	<p>Martinez 2001</p>
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*Definitions have been taken directly or adapted from the listed sources, which provide indicator reference sheet information.

What are some examples of the inefficiency?

- Multiple funding streams pay for services in Cambodia: Health Equity Funds are government subsidies that pay a capitated rate for outpatient and inpatient care, covering user fees at accredited government health facilities for poor Cambodians. The rates for reimbursing providers are not adjusted for regional differences in prices or the complexity/severity of the clinical interventions. In addition to payments through equity funds, these facilities are paid salaries and receive out-of-pocket fees from those who are not beneficiaries (Kukla, Johns, and Thin 2016).
- In the United States, conflicting incentives from two government purchasers created inefficient outcomes for the health system: Two government-managed health schemes pay providers in the United States: Medicare, funded exclusively by the federal government, and Medicaid, funded by both local and federal governments. As of 2007, both covered some long-term care services: generally Medicare covered acute care, while Medicaid covered non-acute long-term care. There is a small, but expensive, population of people who are eligible for both programs. Particularly when funding is tight for local governments, Medicaid has an incentive to shift more care to acute settings, where Medicare will pay the bill. However, this arrangement is more risky for patients (who pick up infections in hospitals) and more costly to the system as a whole, since basic care is more efficiently delivered in non-hospital settings (Gabrowski 2007). Recent efforts are underway to give Medicaid an incentive to keep patients out of hospitals.

Materials for Team Leading Next Steps

While beyond the scope of the Technical Efficiency Guide process, the sections below share some ideas that may be a useful starting point for the team responsible for leading next steps, if inefficiencies covered in this module are prioritized. If the country/region needs more detailed information, these leaders can consider using some of the tools and resources listed. If they want to brainstorm areas for potential efficiency gain, they can browse the table with high-level ideas to consider.

Additional tools and resources



- ▶ Langenbrunner, Cashin, and O’Dougherty (2009) is a manual to help LMIC purchasers of health care goods and services and other health system stakeholders better understand how to design, build, and run more strategic provider payment systems.
- ▶ Cashin et al. (2018) presents a framework for strengthening purchasing in health systems.
- ▶ Cashin et al. (2017) considers how PFM and health financing systems can be better aligned in support of universal health coverage, including through productive dialogue between the MOH and MOF.
- ▶ Cashin et al. (2015) presents a systematic, assessment process for LMIC health system stakeholders to consider ways to refine/reform their provider payment systems.
- ▶ Figueras, Robinson, and Jakubowski (2005)’s “Purchasing to Improve Health Systems Performance” provides a cross-national analysis of purchasing in Europe, presenting background, outcomes, and lesson learned through purchasing reform.

Potential areas for efficiency gain

Cause of inefficiency	Potential activity areas	Resources
4.4.1. Design of payment system incentivizes providers to waste resources	<p>Assess provider payment across all revenue streams or funds flows to health providers to analyze the extent to which the incentives in each payment system contribute to policy objectives vs. contribute to wasting resources. Consider mixed models (potentially including a balance of more and less direct, and more and less bundled purchasing methods as part of a comprehensive design or unified purchasing framework), that also reflect the technical, IT, information, and other system capacities and realities in your country.</p> <p>Determine weaknesses and strengthens, and opportunities to improve alignment of purchasing across schemes and with health system objectives</p> <p>Take steps to increase the autonomy and accountability of providers in government service delivery system</p>	<p>Cashin et al. 2015 Cashin et al. 2018</p>
4.4.2. Duplicative information systems result in administrative waste and inhibit effective implementation of payment systems	<p>Work toward this network of systems: all clinical information is collected through one system – a “trunk of an information system tree.” This system should then transfer its information to the institution(s) responsible for statistics, quality, monitoring, etc. This clinical information should also be transferred to the health purchaser finance systems, which will use interoperable systems to convert it to payment information. This approach</p>	<p>JLN 2017</p>



streamlines administration and reporting for both providers and purchasers.

4.4.3 Payment systems fail to influence providers

Assess provider payment systems across all revenue streams or funds flows to health providers to analyze the extent to which conflicting incentives create unintended consequences, including some incentives dominating in an unproductive way or incentives in essence cancelling each other out, thus adding administrative costs but producing minimal results.

Cashin et al. 2015

Include providers in dialogue about provider payment reform, including during assessments and design.

Ensure public providers have the autonomy to make spending decisions (see Module 4.1). Assess and strengthen their capacity (technical, infrastructure) for management and finance.

Make guidelines and rules around provider payment clear; this may mean (as above) conducting an assessment of providers' experience of the purchasing system, and using this information to inform reform.

Streamline institutional roles for provider payment across schemes.



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