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Lessons learned for reducing out of pocket health payment in Afghanistan: a comparative case study of three Asian countries

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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ABSTRACT

Background: In Afghanistan, out-of-pocket (OOP) health costs provoke inequities of access and have pushed 2.55% of the population below the poverty line.

Methods: This multiple case study consists of 3 countries' experience in OOP reduction (Afghanistan, Korea, and Thailand). Our analysis is based on "The Five Control Knobs" first proposed in 1997.

Results: In the financing knob, government domestic revenue is the most important contributor to health financing in Korea and in Thailand, where OOP has been replaced. While relying on foreign donations for OOP reduction, household OOP remains the most important source of healthcare revenue in Afghanistan. As for the payment knob, OOP reduction is assisted by the following reforms in the 3 countries: 1) abolition of user fees in Afghanistan, 2) unification of health insurance agencies in Korea, and 3) introduction of a Universal Coverage Scheme (UCS) in Thailand. In regard to the organization knob, increasing the number of health care facilities and expanding available health services have significantly contributed to reducing OOP in all cases. In relation to the regulation knob, the following reforms have reduced OOP burdens: regulation of the private health sector in Afghanistan, separation of drug dispensing from prescribing in Korea, and introduction of the UCS in Thailand. As for the behavior knob, further improvements require patients to behave differently, as encouraged by social marketing, access to reliable health information, and effective complaint management.

Conclusion: Reduction of OOP in Afghanistan could result from coordination among several reforms in the control knobs. Increasing government participation and earmarking surplus taxes for health, replacing passive provider payment methods to active ones, and including needed health services in the public standardized health packages, are actions that Afghanistan could adopt, and adapt, from the experience of Korea and Thailand for further success.

Keywords: Out-of-pocket payments; Health policy; Health care reform; Case study; Universal health coverage

Author Contributions

Conceptualization: Akbari F, Machida M, Goto A, Hara A. Data curation: Akbari F, Machida M. Formal Analysis: Akbari F, Machida M. Investigation: Akbari F, Machida M, Hara A, Goto A. Methodology: Akbari F, Goto A, Machida M. Validation: Goto A, Nagase K, Nakamura H. Writing - original draft: Akbari F, Machida M, Hara A, Goto A. Writing - review & editing: Machida M, Hara A, Goto A, Nagase K, Nakamura H.

INTRODUCTION

Discourse about using insurance schemes to promulgate healthcare services go back to at least 1883.¹ In 2005, the concept of universal health coverage (UHC) was endorsed at the 58th World Health Assembly,² and health insurance has become a hot topic in the global health community. Subsequently, UHC became an important endpoint among the Sustainable Development Goals (SDGs) proposed in 2015 at the United Nations General Assembly.³ UHC means “people in any part of a country can receive the required healthcare services of sufficient quality, without facing any financial difficulties.” This definition reflects three dimensions of coverage: population coverage, service coverage, and financial coverage.⁴ The financial aspect of UHC emphasizes reducing the percentage burden of peoples' out-of-pocket (OOP) healthcare expenses. Fear of catastrophic financial burden arising from OOP expenses discourages poor people from seeking healthcare services. This lack of equity and financial risk protection stands in the way of achieving UHC.⁵ In spite of global efforts toward UHC, at least half of the world's population still does not have access to essential health services, and 100 million people are being pushed annually into extreme poverty due to catastrophic healthcare debt.⁶

Years of civil war and Taliban dominance in Afghanistan destroyed infrastructure in all sectors, including the health service delivery system. After defeating the Taliban and establishing a new government, Afghanistan started on its path to UHC by introducing the Basic Package of Health Services (BPHS) in 2003, a package of services necessary to address major health problems.⁷ However, Afghanistan still has a long way to go before achieving UHC, including the need to address health inequities between urban and rural areas,⁸ dependence on donors to sustain health service delivery, and OOP payments, which account for more than 70% of health service costs.⁹ Many studies have correlated high OOP with major health problems in Afghanistan, highlighting the seriousness of this issue and the urgent need to address it. For example, a 2016 report found that household OOP is a major barrier to accessing BPHS in Afghanistan,¹⁰ with high costs and inability to pay being reasons for not seeking treatment in 50% of those who responded to a survey in 2004–2005.¹¹ Wealth quintile has been identified as the strongest predictor of health-care-seeking behavior in Afghanistan.¹¹ Also, the Afghanistan Multiple Indicator Cluster Survey (AMICS 2011-12) showed a huge difference in access to and utilization of healthcare services between poor and rich families.⁸

Korea, a high income country, is noteworthy for its introduction of a stable unique health insurance scheme, and, after 12 years of sustained effort, successful achievement of Universal Insurance Coverage for all citizens.¹² Thailand, a middle income country, implemented a Universal Coverage Scheme (UCS) that includes citizens of its informal sector (currently around 75% of the Thai population), within 2 years, based on long-term public health activities. Thailand is well known globally for achieving Universal Insurance Coverage for all citizens in 2002.¹³ These prominent achievements in Korea and Thailand provide lessons to be learned for low- and middle-income countries seeking paradigms of Universal Insurance Coverage achievement, including Afghanistan, which has a relatively low Gross Domestic Product (GDP).

The aim of this study is to identify plausible health system reforms that reduce OOP in Afghanistan, by analyzing experiences in Korea and Thailand that led to OOP reduction in the years that followed reforms in each country.

METHODS

Study design

This study is an embedded multiple case study with a literal replication design,¹⁴ pertaining to the experience of 3 countries (Afghanistan, 2008–2009; Korea, 2000–2001; and Thailand, 2005–2006) to significantly reduce OOP contribution to total health expenditure (THE). This multiple embedded case study contains more than 1 sub-unit by using “control knobs” in analysis, which allows for integrating quantitative and qualitative methods within one unit. The literal replication in this study means that the cases were selected to corroborate each other with regard to the OOP reduction.

Data sources

The World Health Organization (WHO)'s Global Health Expenditure Database and Global Health Observatory (GHO) provided health-financing data. Local and international reports were found via PubMed, Web of Science, and Oxford Academic with search logic ([“health system” OR “Out of Pocket” OR “financial risk protection” OR “UHC”] AND “Afghanistan”). Afghan Ministry of Public Health (MoPH) officials also provided valuable information.

Analysis framework

To guide data collection and analysis, the units of our analysis framework were defined according to “The Five Control Knobs” (Financing, Payment, Organization, Regulation, and Behavior), as initially proposed by William Hsiao in 1997.¹⁵ In order to achieve a desired result in a complex system, the performance of different inputs must be modified to produce specific outputs. This concept can be applied to health care delivery systems. Five control knobs (Financing, Payment, Organization, Regulation, and Behavior) are defined as the primary inputs for producing intermediate outputs. Control knobs are key features that influence the performance of a health care delivery system and can be changed by policy.¹⁵ By exploring delivery system control knobs, a health sector reformer can undertake a diagnostic journey, and determine the causes for health care delivery system outcomes.¹⁵ In this study, our target outcome for health care delivery was OOP reduction. We assessed reforms in the 5 control knobs over the years preceding the year in which the OOP was substantially reduced in each country to determine which factors played significant roles. After comparing reforms among all cases, this study proposes health system reforms to reduce the health OOP burden in Afghanistan. For assessing each control knob, we formulated a question for each one to inform and guide our efforts (Table 1).

Table 1. Brief description of each control knob and its associated question

Control knobs	Description	Questions
Financing	Comparing participation of different financing options between the year in which the OOP was significantly reduced and the previous year.	What are the financing options that can successfully substitute OOP?
Payment	Identify the payment methods for health professionals, organizations, and patients at different levels of health service delivery in the year that the OOP was significantly reduced and the previous year.	What are the payment methods for health professionals, organizations, and patients that can contribute to OOP reduction?
Organization	Assess the specific macro organizational reforms contributing to OOP reduction.	What are the specific reforms in health service delivery organizations that can contribute to OOP reduction?
Regulation	Major laws and regulations relating to health service delivery, and health insurance that assisted in OOP reduction.	What are the regulatory reforms that affected the OOP rate in each case?
Behavior	What are the behavior changing activities adopted in each country.	How does each country's health system use social marketing for spreading health information and changing the behaviors of health workers and patients?

OOP = out-of-pocket.

Analysis procedures

First, the “Questions” in **Table 1** were drafted and revised until agreement was reached through discussions among members of the research collaborating group in the MoPH in Afghanistan. During these discussion, we concluded that OOP payment reduction will enable all citizens, regardless of income, to access and purchase health services. So, we set the question “What are the financing options that can successfully substitute OOP?” in the Financing control knob. We analyzed country-specific data on healthcare reforms in each control knob for each case separately, to determine the most significant contributors to OOP reduction. The researchers discussed data collected from previously mentioned sources and the conclusions among themselves, and consulted with experts in each area and inside the target countries, in order to improve the data interpretation. We then compared the results for the 3 cases to make final recommendations according to the main study goals.

RESULTS

Indicators and trends in OOPs

Comparison of the general healthcare financing indicators among Afghanistan, Korea, and Thailand (**Table 2**) indicates that the highest healthcare expenditures overall (15,282 million USD) and per capita (217.1 USD) are in Korea, and the lowest are in Afghanistan (1,984 million USD and 60.1 USD, respectively). Although Korea shows the highest percentage of people who spend a considerable amount of their income on healthcare services, the percentage of people pushed below the poverty line by healthcare payments is almost zero; this percentage is higher in Thailand, and highest in Afghanistan. The percentage of domestic general government expenditures for healthcare is highest in Thailand and lowest in Afghanistan, but the percentage of private healthcare expenditure and OOP are the opposite in these countries.

In all 3 cases, the percentage of OOP contributing to THE has decreased significantly. The reduction started in different years: 2008–2009 in Afghanistan, 2000–2001 in Korea, and 2005–2006 in Thailand (**Fig. 1**). We focused on each of these OOP-changing transitions and

Table 2. General and health financing indicators of the 3 countries

Indicators	Source	Data from year	Afghanistan	Korea	Thailand
GDP per capita (in current USD)	The World Bank	2018	520	31,362	7,273
Population (in millions)	The World Bank	2018	37.2	51.6	69.4
CHE (in current million USD)	Global Health Expenditure Database	2016	1,984	103,812	15,282
CHE as a percentage of GDP (%)	Global Health Expenditure Database	2016	10.20	3.71	7.34
CHE per capita (in current USD)	Global Health Observatory	2015	60.1	2,012.7	217.1
Percentage of population with household expenditure on health (%)	Global Health Observatory	- ^a			
> 10% of income			4.84	13.53	3.38
> 25% of income			0.07	4.01	0.68
Percentage of population with health care expenditure a day (%)	Global Health Observatory	- ^a			
Below 1.90 USD			0.58	0.00	0.12
Below 3.10 USD			2.55	0.04	0.34
Domestic general government health expenditure as a percentage of the general government expenditure (%)	Global Health Observatory	2015	2.0	12.9	16.6
Domestic private health expenditure as a percentage of CHE (%)	Global Health Expenditure Database	2015	78.4	43.6	21.1
OOP as a percentage of the CHE (%)	Global Health Observatory	2015	78.4	36.8	11.8
OOP per capita (in current USD)	Global Health Observatory	2015	47.1	740.5	25.5

GDP = Gross Domestic Product; CHE = current health expenditure.

^aData from year are 2007, 2008, and 2010 for Afghanistan, Korea, and Thailand, respectively.

Fig. 1. The percentage of OOP participation in THE in all cases. The database does not include data from Afghanistan prior to 2002. OOP = out-of-pocket; THE = total health expenditure.

presented case study findings in terms of current status, reforms in each control knob, and OOP trend affected by reforms, to evaluate and compare the influential issues in the reforms in all cases (Table 3).

Experiences in reducing OOP

Financing

Household OOP is the main source of health care revenue in Afghanistan, while social insurance contributions and government domestic revenue predominate in Korea and Thailand, respectively. OOP reduction in each case was attempted by different financing options. In Afghanistan, when the OOP contribution to THE fell by 10% between 2008–2009, it was replaced by direct donations from foreign-aid agencies to the healthcare sector. In Korea, when the OOP contribution to THE fell by almost 5% between 2000–2001, it was replaced by social health insurance (SHI) and transfers by the government on behalf of specific groups (e.g., payments to SHI on behalf of specific population groups such as children, and the elderly). On the other hand, in Thailand, when the OOP contribution to THE fell by almost 10% between 2005–2006, it was mainly supplanted by government domestic revenue payments (Fig. 2).

Payment

1) Payment methods to healthcare professionals

In Afghanistan, a monthly salary is the most common payment method for professionals in the healthcare sector.^{16,17} This is also true for Korean health professionals working in hospitals and public institutions, but others in primary and ambulatory care are paid on a fee-for-service (FFS) basis.¹⁸ In Thailand, salary and salary plus bonus are the common payment methods.^{19,20} From 3 countries' experience, no OOP reduction can be traced to how healthcare professionals are paid.

2) Providers' payment mechanism

In Afghanistan, since the introduction of BPHS⁷ and Essential Package of Hospital Services

Reducing out of pocket health payment in Afghanistan

Table 3. Current situation and major reforms in each country

Control knobs	Afghanistan	Korea	Thailand
Financing	<ul style="list-style-type: none"> Households' OOP and foreign donations are the main source of health revenue. Between 2007–2009; the OOP share in THE was substituted by foreign donations. 	<ul style="list-style-type: none"> Households' OOP and SHI contributions are the main source of health revenue. Between 2000–2001; the OOP share in THE was replaced by SHI and government domestic revenue. 	<ul style="list-style-type: none"> Government domestic revenue constitutes more than half of the health revenue source. Between 2005–2006; the OOP share in THE was replaced by government domestic revenue.
Payment	<p>Health professionals:</p> <ul style="list-style-type: none"> Either by contracting with NGOs or MoPH, and salary is the common payment method. <p>Organizations:</p> <ul style="list-style-type: none"> Between 2006–2015; capitation was replaced by global budget for the contracting out to facilities, and line item budgeting for the contract. <p>Patients:</p> <ul style="list-style-type: none"> Previously, NGOs had their own cost-sharing policies and were charging user fee for patients, which was abolished by the government in 2008. 	<p>Health professionals:</p> <ul style="list-style-type: none"> Two payment methods are used: FFS for those working in PHC, and salary for those in hospitals and public institutions. <p>Organizations:</p> <ul style="list-style-type: none"> RBRVS replaced the FFS payment method for OPD in 2001. The DRGs payment method replaced the FFS for payment to acute care providers in 7 disease categories in 2013. <p>Patients:</p> <ul style="list-style-type: none"> For services covered by NHI, a varying copayment is paid according to level of the health services, for the services not covered, FFS is required. In 2000, the NHI integrated all the insurance societies under same co-payment and premium rate. 	<p>Health professionals:</p> <ul style="list-style-type: none"> Salary and salary plus bonus are common payment methods. <p>Organizations:</p> <ul style="list-style-type: none"> The common payment methods have been capitation for OPD and DRGs for IPD. Since the purchaser-provider split in 2002, demand side financing has been implemented. <p>Patients:</p> <ul style="list-style-type: none"> Covered health services are almost free of charge at the point of receiving for all patients since 2006. For services not covered by health insurance, or when people bypass the required steps FFS is required. Antiretroviral therapy, and renal replacement therapy were added in UCS free benefits in 2004 and 2008 respectively.
Organization	<p>Mix of health service delivery organizations:</p> <ul style="list-style-type: none"> Public facilities dominate health service delivery. Number of public and private health facilities have increased since 2001. <p>Division of tasks among healthcare service delivery organizations:</p> <ul style="list-style-type: none"> BPHS is provided by 6 levels of health centers, and EPHS is provided by 2 level of hospitals. <p>Interaction among health service delivery organizations and their relationship with the rest of the political and economic system:</p> <ul style="list-style-type: none"> Contracting out relies on competition between NGOs for BPHS and EPHS delivery, and, private health facilities get their resources from direct user fees paid by patients. <p>The health service delivery organizations' internal structure:</p> <ul style="list-style-type: none"> NGOs are decentralized for decision-making about BPHS and EPHS implementation. 	<p>Mix of health service delivery organizations:</p> <ul style="list-style-type: none"> Private facilities dominate health service delivery. Private health facilities have increased, due to government encouragement of privatization of health service delivery. <p>Division of tasks among healthcare service delivery organizations:</p> <ul style="list-style-type: none"> There are 4 levels of healthcare providing facilities; clinics (0–30 beds); small hospitals (31–100 beds); general hospitals (> 100 beds); “specialized general hospitals.” <p>Interaction among health service delivery organizations and their relationship with the rest of the political and economic system:</p> <ul style="list-style-type: none"> Getting resources for health service delivery organizations is based on competition between them. <p>The health service delivery organizations' internal structure:</p> <ul style="list-style-type: none"> Health insurance and social policy programs are highly centralized; public health care, long term care, and MAP are the responsibilities of local governments. 	<p>Mix of health service delivery organizations:</p> <ul style="list-style-type: none"> Public health facilities dominate health service delivery. Public health facilities have increased steadily since the early 2000s. <p>Division of tasks among healthcare service delivery organizations:</p> <ul style="list-style-type: none"> Health services provided at different levels: starting from PCUs with no beds to tertiary hospitals with 1,000 beds. <p>Interaction among health service delivery organizations and their relationship with the rest of the political and economic system:</p> <ul style="list-style-type: none"> The purchaser-provider split after 2001 has promoted competition among health facilities. <p>The health service delivery organizations' internal structure:</p> <ul style="list-style-type: none"> Local governments and ministries have their own regulatory mechanisms for their hospitals; private facilities have to be licensed and need to be relicensed annually by the MoPH.
Regulation	<p>Public health and health services regulations:</p> <ul style="list-style-type: none"> Regulations, policies, and strategies for private for-profit organizations were passed by the MoPH in 2008. <p>Health insurance regulations:</p> <ul style="list-style-type: none"> User fee at the point of receiving BPHS was abolished in 2008. 	<p>Public health and health services regulations:</p> <ul style="list-style-type: none"> Separation of drug dispensing and prescribing was implemented in 2000. <p>Health insurance regulations:</p> <ul style="list-style-type: none"> NHI act was introduced in 1999, and all insurance societies were unified by 2000. 	<p>Public health and health services regulations:</p> <ul style="list-style-type: none"> After the decentralization act of 1999, different health activities have been decentralized from the MoPH to other public organizations. <p>Health insurance regulations:</p> <ul style="list-style-type: none"> The UCS was introduced in 2001 by integrating two insurance bodies, and UHC was achieved by 2002.
Behavior	<ul style="list-style-type: none"> Social marketing has been applied to the Afghanistan health system since 2008; the focus areas are mother and child care and PHC. 	<ul style="list-style-type: none"> Health information is provided via different channels to the general public and patients (through the NHIC website, distributing leaflets, and holding training sessions). 	<ul style="list-style-type: none"> A 24-hour call center was created along with the introduction of UCS, for providing health information and managing complains. Health information is available through media, brochures, and leaflets as well.

OOP = out-of-pocket; SHI = social health insurance; THE = total health expenditure; NGO = non-governmental organization; MoPH = Ministry of Public Health; FFS = fee-for-service; PHC = primary health care; RBRVS = resource-based relative value scale; OPD = outpatient department; DRG = Diagnosis-Related Groups; IPD = inpatient department; NHI = National Health Insurance; BPHS = Basic Package of Health Services; EPHS = Essential Package of Hospital Services; PCU = primary care unit; UCS = Universal Coverage Scheme; MAP = Medical Aid Program; UHC = universal health coverage; NHIC = National Health Insurance Corporations.

Fig. 2. CHE by the percentage of revenue of health care financing schemes (source: Global Health Expenditure Database).

CHE = current health expenditure; SHI = social health insurance.

(EPHS; a standardized package of secondary health services provided by provincial and regional hospitals throughout the country),²¹ a capitation payment system had been used to pay contracted non-governmental organizations (NGOs) for delivering the covered healthcare services.¹⁷ However, during the 2010s, a global budget payment method was introduced, in which organizations must meet predetermined outcome targets before getting their budget allocation; organizations that exceed their targets will be paid more, with freedom to reassign budget lines.²² However, this reform does not seem to affect the OOP trend significantly because non-contracted BPHS and EPHS facilities were still assigned to predetermined, unmodifiable budget lines.²² Furthermore, since 2010, result-based financing has been applied to incentivize health service delivery.²³

In Korea, FFS had been the most common way to pay health care facilities since the establishment of the current health system in 1961.^{18,24} However, efforts were made to replace it with a resource-based relative value scale (RBRVS), which determines payments for outpatient care based on the cost of the resources for providing the services,²⁵ and prospective payments for inpatient care, according to a Diagnosis-Related Group (DRG) scheme.¹⁸ Efforts led to implementation of the RBRVS in 2001²⁶ and implementation of DRGs for acute care providers under 7 disease categories in 2013.²⁷ Yet, the trend of OOP contribution to THE has not significantly changed since 2001.

In Thailand, provider payment methods since 2002 have differed among 3 major health services purchasers: the National Health Security Office (NHSO), the Comptroller General Department (CGD), and the Social Security Office (SSO).²⁸ The NHSO reimburses the UCS based on age-adjusted capitation for outpatient services, and DRGs for inpatient services.²⁹ The CGD has reimbursed the Civil Servants Medical Benefits Scheme (CSMBS) for monthly

outpatient bills since 2007, and replaced FFS with DRGs for inpatients in 2007.³⁰ The SSO uses inclusive capitation for outpatients,²⁹ and applies DRGs partly for inpatient services to reimburse SHI providers.³¹ Through the reforms above, OOP burden has gradually decreased.

3) Patients' payment methods

In Afghanistan, during the first years of BPHS and EPHS implementation, there was no formal cost-sharing policy between patients and the government, and most NGOs were charging patients point-of-care user fees.³² This policy was abolished in 2008, based on a health financing study from 2005,³³ and OOP contribution to THE fell by 10% the following year. Ever since, BPHS and EPHS are available free of charge, while patients have to pay high user fees for other medical services sought from private healthcare providers.³⁴

In Korea, for services included among National Health Insurance (NHI) benefits, people are required to make a copayment that varies according to the level of the healthcare services facility. For services not covered by the NHI benefit, people have to pay FFS.³⁵ Vulnerable and low income earners (3.8% of the population in 2009), are covered by a Medical Aid Program funded through general tax revenue, and those persons pay no or discounted fees for health services.³⁶ Before health insurance reform in the early 1990s, different insurers had different methods to assess the contributions of the participants.³⁵ Since 1998, the National Health Insurance Corporation (NHIC) has managed all insurers, and after 2000, when the OOP contribution to THE trended down by almost 5%, all insurance agencies were unified under the NHIC, and the contributions and co-payment rates became similar for all beneficiaries.³⁷

In Thailand, after the introduction of UCS in 2002, a small copayment of 30 baht (0.96 USD) per visit was required, but this requirement was discontinued in 2006, after which the OOP contribution to THE trended down almost 3% the next year).³⁸ Also, coverage of services by the UCS has expanded; for example, antiretroviral drugs began to be covered in 2004, after which the OOP contribution to THE trended up 1% but significantly declined by 10% in 2005, and renal replacement therapy for end stage renal disease began to be covered in 2008, after which the OOP contribution to THE dropped gently by almost 1.5%.³⁹ Currently, the services covered under all insurance schemes are entirely free,¹⁹ unless people buy non-prescription medication, visit private health facilities whose charges are not covered by insurance, or bypass the required steps for seeking health care at specific facilities.²⁰

Organization

1) Mix of healthcare service delivery organizations

In Afghanistan, mainly NGOs are in charge of public health facilities (BPHS- and EPHS-delivering facilities) with the MoPH overseeing their activities.¹⁶ Although data about the private health facilities are still insufficient,⁴⁰ 60% of Afghans reported that private health facilities were their first referral point.^{40,41} Between 2001 and 2010, the number of public health delivery facilities increased 3-fold,^{42,43} and between 2004 and 2011, the number of BPHS facilities increased more than 2-fold. The OOP contribution to THE trended down from almost 89% to 74% between 2004–2011.⁴⁰

Korean health care, by tradition, came from private sector practitioners,³⁵ and the government strongly promoted privatization of health service delivery during the 1960s.²³ While in 1962, 41.8% of all hospital beds were in the private-for-profit sector,³⁵ this increased to 76.8% in the 1990s³⁵ and to 94% in the 2000s.¹⁸ Privatization and promotion of competition have resulted in a tremendous increase in the number of health care facilities

over the past decade.⁴⁴ For example, between 2000 and 2013, the number of health care facilities in Korea increased from 61,776 to 84,971, during which OOP contribution to THE trended down from about 41% to 35%.⁴⁵

In Thailand, health services are delivered mainly in the public sector, with almost 70% of hospital beds owned by the government.¹⁹ While the private sector controls almost 20% of hospital beds,¹⁹ most large hospitals are concentrated in big cities like Bangkok,⁴⁶ and some public institutions, such as the military, have their own health facilities.¹⁹ Since 2002 after the implementation of UCS, the number of public health facilities has increased,⁴⁶ and OOP contribution to THE trended abruptly down in the years that followed.

2) Division of activities among healthcare service delivery organizations

In Afghanistan, primary health care is provided by the BPHS via 6 types of standardized health facilities: Health Posts (with 2 community health workers and no beds), Health Sub Centers, Basic Health Centers, Comprehensive Health Centers, Mobile Health Teams, and District Hospitals (which have at least 4 medical doctors).⁷ Secondary health services are provided by the EPHS via 2 levels of hospitals in provinces and regions.²¹ In addition, there are 22 specialized national hospitals in Kabul city,²² and private healthcare facilities provide different levels of service.⁴⁷ After its initial development, the BPHS was revised in 2005 and 2010 to include services such as mental health, disability, and primary eye care. New facilities were launched, such as Health Sub Centers and Mobile Health Teams, and special populations like nomads and prisoners became eligible for BPHS.^{22,48} OOP contributions to THE trended down by 4% between 2005–2006, then trended up almost 5% in 2011, followed by a drop of 8% in 2012. The EPHS was revised in 2013 to describe standards for delivering secondary healthcare in Afghanistan. While district hospitals were EPHS facilities before the revision in 2010, they began to be identified as BPHS facilities after the revision.^{22,48}

In Korea, there are 4 levels of health care facilities: clinics (0–30 beds), small hospitals (31–100 beds), general hospitals (> 100 beds), and specialized general hospitals.²⁷ Emergency care is provided by emergency departments through a mix of private and public hospitals. The emergency care system is separate from the general healthcare system and is mainly composed of regional and local referral centers.²⁷

In Thailand, health care delivery facilities are structured as follows: health centers and primary care units (PCUs) with no beds, community hospitals (10–90 beds), and central/regional hospitals (300–1000 beds).⁴⁹ All prevention and promotion services were being provided free of charge by the MoPH to the whole population until the UCS was introduced to take responsibility for providing these services. Furthermore, the Thai Health Promotion Foundation (ThaiHealth, financed by a 2% excise tax on tobacco and alcohol), established in 2001, supports health promotion activities.¹⁹ The National Institute for Emergency Medicine (NIEM) was established in 2008 and took over the entire responsibility of delivering prehospital emergency care from the NHSO.^{19,50}

3) Interactions among healthcare service delivery organizations and their relationship with the rest of the political and economic system

In Afghanistan, the MoPH contracts out BPHS and EPHS service delivery to NGOs, which compete with each other for contracts.⁵¹ Private facilities compete for patients who pay FFS for all their private care.⁴⁷ In Korea, health care organizations compete for resources and revenue, since health service delivery is owned privately, and for services not covered by NHI,

people have to pay FFS. On the other hand, people are free to choose their desired health facility.⁵² In 1997, the government planned to implement a hospital performance evaluation program and publish the results so that people could make informed choices and to create incentives for hospitals to compete by improving the quality of their services.²⁴ The hospital performance evaluation program was finally implemented in 2004.³¹ In Thailand, health care organizations rely on contracts with health services purchasers for service delivery. UCS and SHI members must choose from a network of registered health facilities, while members of CSMBS can choose from any public provider.³⁰ Furthermore, CSMBS members can choose any level of public health facility,⁵³ whereas the UCS and SHI members have to pay FFS for care at secondary hospitals unless they have a referral letter from a primary care provider.³⁰

4) Internal administrative structure of healthcare service delivery organizations

In Afghanistan, the BPHS- and EPHS-providing NGOs practice autonomous decision-making patterns,²² while all the decisions of facilities managed by the MoPH are made centrally by the ministry.^{16,22} In 2011, all 14 national specialty hospitals were given autonomy and granted the authority of managing their own budgets.^{54,55} In Korea, historically all health care policy decisions were made centrally by the Ministry of Health, while administration of public health, medical aid programs, and long-term care insurance were totally or partially decentralized to local government control for decades. Nevertheless, hospital management is autonomous, and hospital owners have the freedom to manage their facilities without restrictions.¹⁸ In Thailand, the Decentralization Act (1999), was endorsed in accordance with the Thai Constitution of 1997, and mandated the transfer of health services responsibilities from the central government to local governments, which also necessitated the transfer of related budget and personnel.⁵⁶ Thereafter, a series of agencies was established to decentralize different activities from the ministry. Health promotion activities were decentralized to ThaiHealth (2001). The NHSO (2002) now manages the UCS, and the Health Accreditation Institute (2009) is in charge of quality control of health services and the certification of hospitals and health centers.¹⁹

Regulation

1) Public health and health services regulations

In Afghanistan, an increase of unregulated private for-profit organizations prompted the MoPH, in 2008, to start developing policies, regulations, and strategies aimed at the private for-profit sector. OOP contributions to THE trended down by 10% in the following year. The aim of these regulatory efforts was to improve the quality of health services, encourage private investment in the health sector, and achieve sustainability.⁵⁷ In Korea, until 2000, both physicians and pharmacists were dispensing and prescribing medicine. Overuse and misuse of medicines made pharmaceutical costs the major factor behind increased health expenditures. Reforms to separate drug dispensing from prescribing were implemented by the Korean government in 2000, and OOP contributions to THE trended down 5% the following year.⁵⁸ In Thailand, ThaiHealth was established in 2001 as an independent public agency. ThaiHealth supports state and non-state actors, in particular civil society, to promote the well-being of citizens by acting as a funding catalyst to support programs and actions that change social values, lifestyles and environments.¹⁹

2) Health insurance regulations

In Afghanistan, a civil servant SHI program was in effect during the 1970s, but it became defunct during the years of civil war and Taliban invasion.⁵⁹ Thereafter, a Community Based Health Insurance (CBHI) was piloted by the MoPH between 2005 and 2006 in selected BPHS

facilities in 5 provinces; the main goal was to assess the feasibility of CBHI in Afghanistan.³⁴ This pilot indicated that insecurity was the main barrier for implementing health insurance in Afghanistan.³⁴ Currently, there is no legally binding health insurance scheme in Afghanistan. In Korea, mandatory health insurance was implemented in 1977 after amendment of the health insurance law. The National Health Insurance Act implemented in 2000 led to the integration of health insurance agencies.⁶⁰ OOP contributions to THE trended down by 5% the following year, suggesting that these 2 major health insurance regulatory reforms were implemented successfully. In Thailand, there were 4 health insurance programs: the CSMBS for government employees and their dependents, the Social Security Scheme (SSS) for private employees, the Medical Welfare Scheme (MWS, a government subsidy for the poor), and the Voluntary Health Card Scheme (VHCS, an option for people not eligible for other insurance programs).¹³ Due to operational problems in the MWS and VHCS, 30% of the population remaining uninsured¹³ until 2002, when the National Health Security Act was approved by the parliament and UCS was introduced. OOP contributions to THE had remained almost constant until 2005, then sharply dropped by 10%.⁶¹

Behavior

An Afghan social marketing organization was launched in 2008, offering services in reproductive health, family planning, and primary care for women, and children younger than 5 years of age, in rural areas. The overall goal of the organization is to improve access to quality healthcare and enable people to make informed decisions. Different social marketing approaches are used for achieving the overall goals, such as provision of information through billboards, product branding, radio and TV commercials, and mobile cinemas.⁶² In Korea, the NHIC provides a wide range of health-related resources to the general population, patients, and ethnic minorities, including: health education, online information about health centers, distribution of leaflets containing health information, provision of health information to high-risk groups with follow-up case management, provision of medical consultation through service counters located in major hospitals, and health education activities for patients and the general public in hospitals.¹⁸ In Thailand, a 24-hour call center is a part of UCS, and the 2 main tasks of this call center are to provide information and manage complaints. Calls from anywhere in Thailand are charged at a flat rate of 3 baht (0.096 USD) per call.²⁰ Additionally, Thai citizens are provided health information through various media, such as television, newspapers, radio, magazines, village broadcasting services, leaflets, and posters.¹⁹

DISCUSSION

The results of this study can be discussed from 2 standpoints: 1) Trends in OOPs and OOP reduction experience, and 2) Lessons learned for Afghanistan from the case studies.

After answering the questions associated with each control knob (**Table 1**), by analyzing the reforms in each case and comparing reforms in the control knobs among all the cases (**Table 3**), it became evident from this study that the trends of OOP contributions to THE could be traced to reforms in different control knobs. In Afghanistan, the abolition of user fees for public health services and the adoption of new policies and regulations for the private sector (Payment and Regulation control knobs) in 2008 were the main antecedents to OOP reduction, with OOP contributions to THE trending down by 10% between 2008 and 2009. In Korea, OOP was reduced after separating drug dispensing and prescribing, and after integrating health insurance agencies (Payment and Regulation control knobs) in

2000. OOP contributions to THE trended down by 5% between 2000 and 2001. In Thailand, OOP reduction was accelerated by extending the benefits of UCS, for example, including antiretroviral therapy in 2004 and adding kidney transplantation as an option for end-stage renal disease in 2008 (Payment and Organization control knobs). OOP contributions to THE trended down by 10% between 2005 and 2006. Furthermore, increasing the number of health facilities, expanding access to health services, and extending the range of available and affordable health services (Payment and Organization control knobs) were common reforms in all cases.

Findings pertaining to the control knob of “financing” in the current study suggest that increasing government contributions and prepayment revenues to THE can reduce OOP. According to a study that reviewed health insurance patterns over a 30-year period in Korea, achieving universal health insurance coverage is not feasible in low- and middle-income countries without government subsidies for poor persons and those working in informal sectors.⁶³ It has been reported that the OOP is inversely correlated with the contributions of SSS and other government agencies to THE in 122 countries.⁶⁴ WHO has reported that earmarking taxes on harmful products can generate sustainable resources for health activities.⁶⁵ For example, health promotion activities are financed by a 2% surcharge on tobacco taxes in Thailand. Likewise, earmarking taxes for health has made the implementation or expansion of health insurance programs possible in Ghana, Ethiopia, and Philippines.⁶⁶

The findings in relation to the control knob of “payment” suggest that providers' and patients' payment methods as incentives have a very strong potential to affect the performance of the healthcare system and OOP. The line item budgeting applied for payments to non-contracted health facilities and national specialized hospitals in Afghanistan, represents supply-side financing,²² which provides little incentive for facilities to be innovative, provide more services, or pay much attention to patient satisfaction and health outcomes.¹⁶ Conversely, shifting to strategies that focus on the performance of health facilities would create positive incentives for those facilities to improve system outcomes. Strategic purchasing has contributed to equitable access and financial risk protection in Thailand.⁵³

The findings pertaining to the Organization control knob in this study suggest that increasing the number of health facilities and increasing affordable and available services reduces OOP. The inclusion of some new services in BPHS and EPHS and efforts to ensure the availability of included services can reduce OOP in Afghanistan, just as availability of comprehensive packages that were free at the point of delivery resulted in a high level of financial protection in Thailand.⁵³ Provision of services outside of the BPHS and EPHS, by public-private partnership (PPP) in public facilities, may be another way in Afghanistan. This will increase the number of available services in public facilities and create incentives for public health facilities to improve patient satisfaction, besides generating additional revenue for the health centers. PPP in the field of hospital services has improved the quality of public health services and reduced costs in 9 countries in Asia, Europe, North America, and Africa.⁶⁷

Political will and regulations from governments are key to reducing OOP; governments need to use their influence to ensure transparency, accountability, and good administration of health facilities and insurance agencies. Close coordination between insurance agencies and the Ministry of Health has helped to advance government health goals in Korea,⁶³ and regulation of the fee schedule by the government has resulted in cost containment in both

Korea⁶² and Japan.⁶⁸ Government subsidies have further played a major role in expanding health insurance coverage in other Asia-Pacific countries.⁶⁹

Changes in the health system require patients to behave differently; this could be promoted through social marketing, making reliable health information readily available, and clarifying reasons and incentives brought about by adjusting payment or regulation control knobs. In Korea, for example, to prevent patients from directly visiting hospital outpatient departments without first being seen at a clinic, co-payments are higher when patients visit hospital outpatient departments directly.⁶³ Social marketing has influenced health behaviors and health outcome in targeted areas in low- and middle-income countries.⁷⁰ Further evaluations are needed in Afghanistan to determine the influence of the current system on the peoples' healthcare-seeking behaviors.

In conclusion, in order to reduce OOP for health and accelerate Afghanistan's movement towards UHC, reforms in different health system control knobs are needed, all of which require political will and enforceable regulations. To these ends, it is essential to assume a stable, sustainable political environment and economic development. With these assumptions, suggested policy agendas to be implemented include: increasing domestic health revenue by increasing government contributions to THE, generating additional domestic revenue for health by earmarking taxes on products harmful to health, shifting from passive provider payment to more strategic methods, increasing health service availability by increasing the number of health facilities, and utilizing PPP to increase available services in public health facilities and to create positive incentives for them. These changes need to be coordinated at the community level by effectively disseminating of information and encouraging active local involvement in the reforms. We dare to imagine Afghanistan learning by example now, and becoming an example for others in the future.

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