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Strengthening district health service management and delivery through internal contracting: Lessons from pilot projects in Cambodia

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ABSTRACT

Following a decade of piloting different models of contracting, in mid-2009 the Cambodian Ministry of Health began to test a form of 'internal contracting' for health care delivery in selected health districts (including hospitals and health centers) contracted by the provincial health department as Special Operating Agencies (SOAs) and provided with greater management autonomy. This study assesses the internal contracting approach as a means for improving the management of district health services and strengthening service delivery. While the study may contribute to the emerging field now known as performance-based financing, the lessons deal more broadly with the impact of management reform and increased autonomy in contrast to traditional public sector line-management and budgeting. Carried out during 2011, the study was based on: (i) a review of the literature and of operational documents; (ii) primary data from semi-structured key informant interviews with 20 health officials in two provinces involved in four SOA pilot districts; and (iii) routine data from the 2011 SOA performance monitoring report. Five prerequisites were identified for effective contract management and improved service delivery: a clear understanding of roles and responsibilities by the contracting parties; implementation of clear rules and procedures; effective management of performance; effective monitoring of the contract; and adequate and timely provision of resources. Both the level and allocation of incentives and management bottlenecks at various levels continue to impede implementation. We conclude that, in contracted arrangements like these, the clear separation of contracting functions (purchasing, commissioning, monitoring and regulating), management autonomy where responsibilities are genuinely devolved and accepted, and the provision of resources adequate to meet contract demands are necessary conditions for success.

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Introduction

Since the late 1990s, Cambodia has piloted different methods of contracting government health services to expand provision and improve efficiency. During the first phase from 1999 to 2003 both contracting-in methods were piloted in three health districts and contracting-out in two districts with support principally from the Asian Development Bank (Bhushan, Keller, & Schwartz, 2002). Under contracting-in, the contractor (an international non-government organisation/NGO) worked within the Ministry of Health (MOH) system to strengthen the existing district administrative structure, but without the right to hire or fire health workers. Under contracting-out, the contracted NGO had complete responsibility for service delivery, including hiring and firing, setting wages, procuring supplies and organizing health facilities. During a second phase in 2004–2008, a hybrid of these two approaches was implemented in 11 of a total of 77 health districts nationally under the donor-funded Health Sector Support Project (HSSP) (MOH, 2007). Under the hybrid approach, NGOs were contracted with the MOH to provide staff supervision and manage service delivery, applying civil service regulations but with the right to hire staff independently to fill shortages.

In 2009, a new pilot using an internal contracting approach was implemented, as part of a national public sector reform program, in the 11 health districts previously contracted to NGOs in the second phase. These districts have been converted to Special Operating Agencies (SOA) with semi-autonomous status within the MOH and are contracted to deliver services by their respective Provincial Health Department (PHD). This marks a return of management to the national staff of the MOH and a major policy shift in the management of district health service delivery.

This article assesses the performance of the SOAs as a means for improving the management of district health services and

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strengthening service delivery. It addresses the question: What is the impact of, and what are the success factors for, this type of internal contracting arrangement? We investigate the experience gained from the implementation of the SOA internal contracting pilot in Cambodia to identify the lessons learned for policy making designed to improve the management and delivery of public health services in similar developing country settings.

Contracting is one component of the New Public Management approach of the 1980's and 1990's (Dunleavy and Hood, 1994; Perrot, 2012). New Public Management is a set of management concepts that introduces market approaches to the public sector with the aim of improving the efficiency of public services (Craig and Porter, 2006). Contracting is based on principal-agent theory, likened to the purchaser–provider split, where the contract is a tool binding the relationship. The principal, or purchaser, is a party to the contract and pays for services or products delivered by the agent, or provider, in accordance with the conditions stated in the contract (Hood, 1991). The theory assumes that individual parties act on self-interest and try to gain as much profit as possible from the contract delivery. However, internal contracting arrangements rely on 'relational' contracts that are commonly based on trust and cooperation and may be less detailed than for external contracting (Perrot, 2006).

To prevent unfair advantages in the transaction, extra efforts on the part of principal are needed, such as collecting relevant information before contract negotiation and strict monitoring. These activities incur additional costs, commonly called transaction costs. To enforce compliance, contracts need to be formulated in detail to include conditions of payment based on outputs produced or sanctions against lack of or delay in delivering results (Duran et al., 2005). Contract monitoring then becomes essential to enforce delivery of outputs, provide an early warning on the implementation process and guard against gaming (e.g. faking numbers, misreporting). As the nature of the services or products becomes more complex, the contract becomes more detailed and the process for contract monitoring becomes more intensive, expensive and complicated (Forder, Robinson, & Hardy, 2005).

It is argued this form of contracting provides a greater focus on the achievement of results, overcomes the constraints that prevent governments from effectively using the resources made available to them (the absorptive capacity), takes advantages of private sector flexibility and efficiency for improving public services, introduces competition (bidding) to increase effectiveness and efficiency of services (Batley & Larbi, 2004, chap. 7; Loevinsohn & Harding, 2005a) and may help increase equity in accessing services (i.e. by including conditions of equity in the contract) (England, 2004). For example, evidence from the Democratic Republic of Congo indicates that a change from input budgeting to output-based contracting resulted in increased technical efficiency and was cost-effective (Soeters, Peerenboom, Mushagalusa, & Kimanuka, 2011).

Nevertheless, contracting has a number of shortcomings. In judging efficiency, transaction costs (which are sometimes hidden and can be very expensive) must be taken in to consideration (Guinness, 2011), and contracting may not improve efficiency in settings where only a few, often inefficient, contractors enter into competition (Loevinsohn & Harding, 2005a). Where hospitals are a natural monopoly, competition may be introduced by contracting-in private management, though patronage and corruption can make it difficult to replace under-performing staff and contractors (Batley & Larbi, 2004, chap. 7). Contracting requires sufficient capacity to design, manage and monitor contracts and a robust governance and administrative system (Abramson, 2009, chap. 1; Zaidi et al., 2011). As these areas are often weak in developing countries, some researchers argue it is risky to transfer such concepts to less-developed countries (Eldridge & Palmer, 2009). Even so, researchers argue that contracting using the performance-based financing (PBF) approach is more flexible and practical and may alleviate these systemic challenges (Macqa and Chiema, 2011). Setting detailed ground rules helps avoid conflicts and assure the success of contracting (Kadai, Sall, Andriantsara, & Perrot, 2006).

Within the contracting framework, agents or providers are granted flexibility in hiring and firing the staff or implementers who deliver services (Vujicic et al., 2009). Pay-for-performance incentives that are common to contracting approaches, including PBF, seem to be effective in developing countries where typically low official salaries erode motivation. The value of PBF approaches is a matter of discussion in the literature, with a number of authors interpreting the PBF concept narrowly as a contracting methodology (Eldridge & Palmer, 2009; Fretheim et al., 2012) while others consider it a more inclusive health financing reform (Soeters, Habineza, & Peerenboom, 2006; Soeters et al., 2011). Most studies of contracting schemes have focused on the outcomes in health service delivery (Basinga et al., 2011; Eichler, Levine, & Group, 2009). In Cambodia, Loevinsohn and Harding (2005a, 2005b) and Liu, Hotchkiss, and Bose (2008) indicated that contracting was relatively more robust than routine government health services in terms of access to and delivery of basic health services. Keller et al. (2008) showed that performance-based contracting implemented by NGOs with additional resources for hiring more staff and staff incentives led to an enhanced level of service delivery compared to non-contracted health districts without the intervention. Elsewhere, the impact of pay-for-performance schemes (including PBF) on health service delivery and health outcomes was found to vary, with some indicators improving more than others (Banerjee et al., 2010; Basinga et al., 2011; Basinga et al., 2010; Miller et al., 2012; Soeters et al., 2011). Some authors argue that impact evaluation – which does not take account of contextual factors and other system-wide effects – is not suitable for assessing PBF schemes and fails to reveal their real value (Fretheim et al., 2012).

There are few studies, however, of the design and process of contracting interventions (Ssengooba et al., 2012) and little is known about why and how contracting approaches contribute to the improvement (or lack of improvement) of health system performance (Basinga et al., 2011). Using empirical evidence collected during the first author's doctoral research, and building on extensive experience in health systems research in Cambodia, this paper aims to fill the gap by examining Cambodia's internal contracting arrangement. The preliminary results of this study were first presented to the Health System Reform in Asia Conference, Hong Kong, December 2010, sponsored by *Social Science & Medicine*.

Internal contracting in Cambodia

In Cambodia, internal contracting spans the three levels of the public health system: the central level comprises the MOH, its subsidiary departments, and national disease-control centers; a second level is administered by the PHD, including provincial hospitals; and the third level is the health Operational District (OD), which includes a referral hospital and health centers.

The MOH's Health Strategic Plan 2008–2015 identifies the SOA as an institutional design and contracting as a strategy for improving the accountability, efficiency, equity and quality of government health service administration (MOH, 2008; RGC, 2008, 2009). All the 11 ODs formerly contracted to NGOs became SOAs with semi-autonomous status in mid-2009. An additional funding package, called a Service Delivery Grant (SDG), was made available to SOAs for staff incentives and other activities, funded through the HSSP.

By the end of 2010, 22 ODs had become SOAs under relational contracts between the different levels of the MOH (see Fig. 1): PHDs

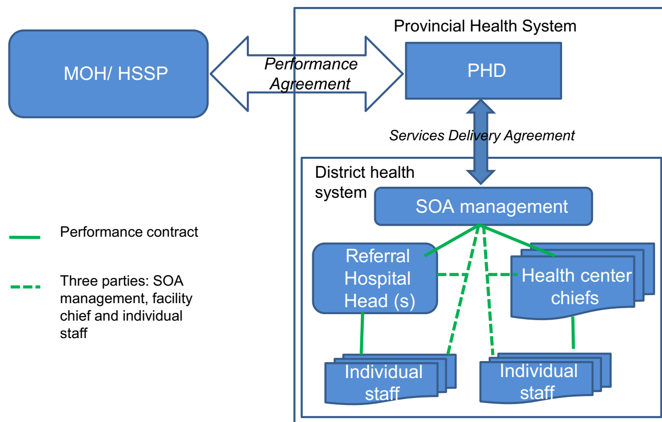

Fig. 1. Contracting mechanisms and parties.

are contracted by the central MOH through a Performance Agreement under which the PHD acts as a commissioner; the SOA districts represented by their directors are contracted by the PHD through a Service Delivery Agreement; within each SOA, health facilities (referral hospital and health centers) are contracted by the SOA with each party represented by the head of the institution; at facility level, performance contracts are made between the head of the facility and each staff member. A pre-SOA survey indicated that most of the 11 former contracting districts scored lower than 50% against assessment criteria (Chev, 2012). Former NGO contractors provided 6–12 months capacity building for these ODs, and a Performance Management and Accountability System – which requires individual staff to plan their assigned activities, accept a performance review on a regular basis, and consider how they may overcome constraints – has been recommended (see Fig. 2).

The key stipulations in the contract between the PHD and the SOA are: responsibilities of the contracting parties, service provision, resource needs, performance achievement and sanctions, financing and legal representations. The most important commitments of the PHD are to provide financial resources, drugs and medical supplies to the SOA in a timely and transparent manner and to support the SOA in enforcing a performance management system, including reshuffling of non-performing staff. The SOA is required to comply with the three golden rules: no under-the-table payments, no pilfering of clients or conduct of private services in the public facilities, and no pilfering of drugs and medical supplies from the public facilities. Incentives are paid in full when targets are achieved and are reduced when the level of achievement falls short. Facility chiefs are responsible for achieving the contracted outputs,

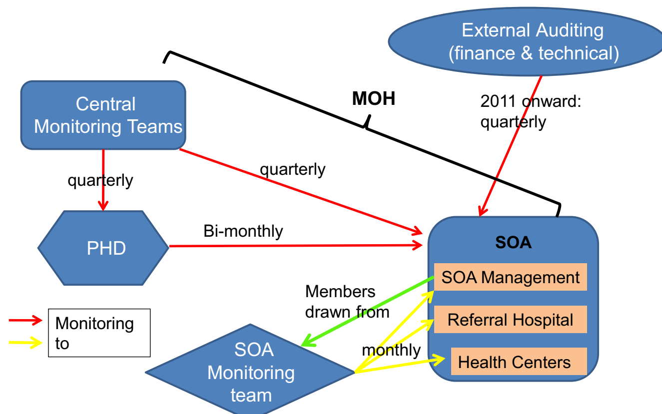

Fig. 2. Monitoring framework of SOA.

failure of which, if persistent, may lead to freezing of the incentive package.

Funding for SOA districts comes from three major sources: the government budget, the SDGs and user fees. The government line-item budget accounts for 50%–70% of the SOA budget and is provided to the SOA as a quarterly advance through routine government channels (MEF, 2011). The SDG, a direct grant from HSSP pooled donor-government funds, is transferred through private banks directly to SOA accounts quarterly following reports. User fees come both from paying clients and from fee-exemption reimbursements paid by Health Equity Funds, Community-Based Health Insurance and voucher schemes.

Monitoring groups were established in each SOA, at the PHD and at the MOH central level. The SOA monitoring groups are drawn from the SOA management team. There is a PHD monitoring team comprising senior officials holding incentive-funded posts to support SOAs. At the central level, Service Delivery Monitoring Groups were created in late-2009 to monitor the performance of PHDs, ODs and SOAs. Additionally, an independent, external consulting firm is selected to conduct auditing of financial and service delivery matters.

Methods of data collection and analysis

Selection of study sites

Primary data were collected during 2011 in four of the total 22 SOA districts purposively selected as typical examples of the contracting experience: Memot, Cheung Prey and Chamka Leu (all under Kompong Cham Provincial Health Department), and Ang Roka (under the Takeo Provincial Health Department). All four SOAs had been contracted to NGOs as part of the previous contracting arrangements. As three of these SOAs are internally contracted by the same PHD (Kampong Cham), a comparative analysis of management in the three SOAs and their relations with the PHD is possible. The characteristics of the four selected SOAs are summarized in Table 1.

Methods of data collection

The study was based on a review of the literature and of key operational documents, key informant interviews and routine monitoring data from the MOH. The operational documents (including the SOA guide, SOA financial management manual and SDG manual) were written mainly by international technical experts to establish the rules and procedure required of the MOH, PHDs and SOAs in the implementation of internal contacting.

Primary qualitative data was collected through semi-structured key informant interviews as part of the fieldwork for a doctoral study by the first author in December 2010 and January 2011. Key informants represented senior managers responsible for implementation of the SOA arrangements, including four officials from the central MOH, 12 officials from the management teams of the four selected SOAs and four officials from the presiding PHDs. A set of question guides was developed to investigate the respondents' experience and the issues they had in performing their roles and delivering contract outputs. Informants were invited to provide informed consent and asked to participate in the study on a voluntary basis. The interviews were conducted by the first author in Khmer. They were voice recorded, later transcribed in Khmer and then translated into English by the first author. Due to the small number of key informant interviews, analysis was carried out using simple spreadsheets. The study received ethical approval from the Ethics Committee for health research of the Ministry of Health, Cambodia, and from the University of Melbourne.

Table 1
Characteristics of the four SOA districts in the study.[a]

District	Memot	Ang Roka	Chamkaleu	Cheung Prey
Province	Kompong Cham	Takeo	Kompong Cham	Kompong Cham
Geography	Far east plateau bordering Vietnam	Central south plain	Central east	Central plain
Population (2011)	137,141	140,151	164,561	200,675
Administrative districts	1	1	2	2
Number of communes	10	12	12	22
Number of villages	175	191	118	154
Established as SOA	April 2009	April 2009	January 2010	January 2010
Contracting experience	1999–2002 & 2004–2008	1999–2002 & 2004–2008	2004–2008	2004–2008
Contracting parties	1-PHD-MOH 2-SOA-PHD, 3-SOA-Facility, 4-Facility-each staff	1-PHD-MOH 2-SOA-PHD, 3-SOA-Facility, 4-Facility-each staff	1-PHD-MOH 2-SOA-PHD, 3-SOA-Facility, 4-Facility-each staff	1-PHD-MOH 2-SOA-PHD, 3-SOA-Facility, 4-Facility-each staff
Health Centers	10	10	14	22
Referral Hospital	1	1	1	2
Budget Total (US$)				
of which:[b]	1,308,187	1,172,556	760,384	1,631,945
Government budget	815,942	909,759	409,913[c]	1,086,073
Service Delivery Grant	169,326	168,264	200,000	250,000
User fees[d]	67,232	65,831	73,171	86,855
HEF	73,619	165,29	77,300	90,146
CBHI	n/s	20,588	n/s	n/s
Other sources (NGO)	173,601	n/a	n/a	131,371
Per capita SDG allocation	1.24	1.24	1.24	1.24

Notes: n/a: data not available; n/s: no scheme.
[a] Source: Services Delivery Grant agreements of the four SOAs.
[b] Data from original sources do not add up.
[c] Not including cost of drugs/medical supplies.
[d] Forecast based on previous year, not including HEF and CBHI.

Routine service delivery data was collected from the MOH's annual monitoring report for 2011, which provides a year-by-year summary of OD performance over three years (2008–2010) under the HSSP (2009–2013). The six indicators extracted from the monitoring report for analysis in this paper are: childbirth by trained health staff, childbirth at health facility, use of modern contraceptive methods, measles vaccination of children under one year, outpatient consultation and antenatal care second visit. These data were taken from the MOH's Health Information System database, aggregated at district level and by type of health district (SOA versus non-SOA) by the Monitoring and Evaluation Unit of HSSP with the primary aim of tracking the service delivery performance of the different types of health districts.

The analytical approach

The analytical framework for this study is constructed in two parts (see Table 2). The first part is based on the modality of contract management, which comprises three elements: (i) the management of the contract and its stipulations about roles and responsibilities, approaches to service delivery and performance targets; (ii) the SOA status of the health districts and the extent of autonomy exercised by the SOA management; and (iii) the resources provided to SOA and issues arising during the implementation. The second part of the analytical approach is based on five areas that emerged as common themes from a preliminary analysis of the key informant interview data, where we aimed to identify the constraints and the lessons learned from the implementation of the SOA pilot. The five themes that emerged are: understanding of contract and the roles and responsibilities; performance management; provision of resources; rules and procedures; and monitoring of contract. Additionally, we analyzed routine service delivery data and the SOA monitoring reports to measure how well SOA districts performed in delivering services.

Results

In the following section we analyze contract management modalities under the five convergent themes to assess the evidence on the results of the pilot program. The achievements in service delivery are then assessed, based on the routine data extracted from monitoring reports. The constraints, the lessons learned and the policy implications are summarized in the Discussion and Conclusion sections.

Table 2
Analytical approach: criteria related to contracting arrangements.

	The contract	SOA status	Resources/Additional funding	Objective
Contract management	Contract stipulations, including roles and responsibilities, approaches to achieve targets (incentive payments); and performance targets	How much power to make decisions; on what matters	Human resources; financial resources; provision issues (timeliness and adequacy)	Improved service delivery
Convergent themes	1 Understanding the contract, roles and responsibilities; 2 Performance management 3 Provision of resources 4 Rules and procedures; 5 Contract monitoring.			

Source: The authors.

Understanding of the contract and roles and responsibilities

Officials from the MOH, PHD and SOAs all agreed that a clear definition of roles and responsibilities helped to re-orient them. The contracts were viewed as clarifying and enforcing agreed performance targets and providing ground rules for the conduct of each party. The SOA and PHD respondents generally thought there was little change to their former duties (as director of the OD or member of the management team), but took pride in the new arrangements and expressed a sense of greater ownership. According to one SOA director, "During the previous form of external contracting we had NGOs to help; now, with the experience we have, we need to demonstrate we can do without them."

However, the SOA officials reported a number of concerns with the monitoring indicators included in the contract, particularly the large number of indicators, the choice of indicators and the setting of indicator targets. The need to report in 2011 on almost double the number of indicators compared to previous NGO contracting period (20 c.f. 11) raised concerns particularly related to the existing OD capacity and the availability of services. For example, an indicator on diabetes treatment was included though providers had not been trained and necessary drugs and medical equipment not supplied. As well, the lack of complete data for some indicators and the choice of denominators (for example, number of children under one year old) made it difficult to set realistic targets, for immunization. In terms of output measurement, the officials agreed that the misreporting of service outputs had dramatically decreased thanks to regular monitoring, random verification and the availability of web-based reporting.

Despite a good understanding of the contract and their roles, SOA managers thought performance was constrained by a lack of timely support or approval from higher levels on matters related to expenses, recruitment, personnel management and resource allocation. For example, it took several months to appoint NGOs for capacity development. As well, incentives for positions within the PHD to support SOA implementation were absent as the positions were canceled in late 2009 by a higher government order. Nevertheless, the involvement of the PHD in the contracting framework – which was absent in the previous NGO contracting arrangement – was seen as advantageous to the health system.

Performance management

Performance management and incentives apply to both individual and institutional performance. Each staff member had a performance contract with explicitly stated roles, targets and expected incentives, and had to achieve the targets in order to receive 100% of the incentive. The facility chiefs and SOA management would find it difficult to enforce staff contracts without performance incentives, partly because government salaries were low and the health staff relied on the incentives payments. As a specific mechanism attached to the internal contracting arrangement, the SDG performance incentive was only one of a number of incentive payments to the staff but nonetheless provided significant motivation. However, the proposed Performance Management Accountability System had not been implemented in the four SOAs because staff were not familiar with it and needed more time to formulate a monthly or quarterly plan. According to some officials, the system requires excessive administration and paperwork, diverting staff time from actual services provision.

SOA officials explained that the performance contract encouraged facility managers to promote a team spirit and a conducive work environment and to think creatively in managing staff relations. The directors of the four SOAs generally believed that without the monitoring of performance they would not get the expected results. They reported that facility monitoring had been conducted on a monthly basis, which therefore compelled collaboration and put additional pressure on the facility chief and underperforming staff. The monitoring score given to a facility was factored into the incentive package, which helped to reduce free-riding. Measures designed to counter under-performance or shirking included the deduction of incentives or referral to the SOA management for disciplinary action, though these were rarely applied. Nevertheless, reported complaints from health staff included alleged favoritism or nepotism, a sense of unfair advantage by facility chiefs over incentive levels and a lack of information about incentive deductions.

The SOA officials indicated that the extent of private practice among primary care providers appeared to have fallen as a result of the performance management arrangements and the extra income earned from the incentives. However, many medical doctors at referral hospitals had maintained their private practice because the incomes they earned in this way still exceeded the additional incentives received from public practice.

Provision of resources

While the government budget and SDG account for up to 95% of SOA revenue, SOA districts reported common delays in the receipt of funds and their inadequacy. Though timely in 2009, in 2010 the first installment of SDGs was delayed for several months, primarily due to prolonged contract negotiation. Delays in payment and the different timing of government budget and SDG allocations made it difficult for facilities to fulfill their work plan. On many occasions, staff members were told to carry out activities with a promise of payment a couple of months later. Mission funds for outreach activities (in Khmer *luy pesakakam*) and night-duty payments (in Khmer *Luy Yeam*) paid out of the government budget were often delayed, perhaps by up to a year.

SDGs could be used at the discretion of SOA directors, according to the rules and procedures in the SDG manual. Facility managers received a total budget for incentive payments and allocated these to staff according to a formula agreed between SOA and facility managers. While this was a clear example of increased management autonomy, SOA directors reported a lack of clear instructions for the use of SDG funds as the rules were still being formulated, discussed and negotiated. This sometimes led to misallocation. In 2009, for example, one SOA used more than the 80% of the SDG allowed for staff incentives and left some program activities unfunded, a practice that was viewed as bold and risky. While SOA managers could recruit additional contracted staff paid from the SDG, recruitment met significant delays, due mainly to delay in approvals for hiring new staff, the low pay scale, and the limited number of qualified applicants. Wages for new recruits had to be balanced with those for existing staff to prevent jealousy. While the guidelines for hiring new staff were designed to promote fair competition, attract the best staff and prevent nepotism, they had been unavailable when the SOAs were launched. According to one SOA director, "New recruits tend to be from within the district … as the wages are not high enough to attract good ones or those outside the district". Midwives were especially difficult to attract, particularly due to competition from NGOs working in the area.

The need for clear rules and procedures

The detailed rules and instructions for resource utilization required to support autonomous management were inadequate, resulting in delayed implementation of contract requirements. Under MOH rules (as the principal), the autonomy of SOA managers is limited to the use of SDG funds for hiring additional staff, staff

incentives and a few program activities. The rules did not spell out precisely what activities were eligible for the 20% of SDG funds not assigned to staff incentives, how the SOAs could access the funds that were retained at the central level, and how recruitment of contract staff should proceed. Community engagement activities were deemed necessary but funding for this was approved only in late 2010. Many SOA officials would not risk using the funds fearing they would be asked to pay back.

Monitoring of contract implementation

Respondents thought that monitoring – which was required at the central, provincial and SOA levels – had helped to improve the quality of services, ensure staff availability and reduce absenteeism. All four SOAs in the study had established monitoring teams ranging from four to eight persons drawn from the SOA management teams. Monitoring tools for health centers and referral hospitals (usually modeled on the previous NGO contracting arrangements) varied by SOA. Monitoring teams commonly visited the facilities, completed checklists, calculated the facility score, met the staff to discuss the results and visited a few clients selected from the facility register for verification. Additional health-facility spot-checks at night or during non-working hours were occasionally conducted to enforce 24-hour service availability. Apparently, some health center staff complained that monitoring was stricter than previous contracting and their facility performance scores were often reduced.

The monitoring role of the PHD and of the central monitoring teams had not been carried out effectively. First, monitoring activities had not been included in routine PHD annual operational plans and the budget was therefore not available. As well, PHD monitoring staff had not received incentive payments as the posts were canceled in late 2009. Secondly, PHD officials referred to routine integrated supervision visits as taking on a dual role in monitoring as there was no dedicated tool to monitor the SOAs. Only a fraction of the planned monitoring visits by the central SDMG teams were completed in 2010 due to other work commitments, the lack of monitoring tools and the lack of vehicles and travel expenses. While it appeared independent auditing had been conducted successfully, despite coordination problems and delays in selection of the auditor, the overlap in monitoring between the SDMG, the PHD and the external auditing firm was seen by some as inefficient.

Comparative performance of contracted and non-contracted districts

Data from routine annual monitoring for 2011 includes ODs contracted previously to NGOs, those established as SOAs and those without contracting. Service delivery indicators are summarized in Table 3. Generally, the contracting districts (previously NGO and later SOA districts) began in 2008 at a level above the non-contracting districts. The rate of improvement in service delivery indicators across the three years was similar for the two groups, and the elevated level of the contracting/SOA districts was maintained in 2010. These results indicate that, despite the constraints noted above and the slow implementation of SOA arrangements, the SOA districts maintained the elevated level of service delivery established by the earlier external contracting approach. This is a significant outcome considering the transfer back to MOH responsibility and establishes internal contracting as an effective approach with additional advantages related to local ownership, sustainability and cost reduction (see Khim & Annear, 2010). Even so, it is difficult to attribute these continued improvements in service delivery to the SOA arrangements as the selected districts had many other ongoing interventions as well, such as community engagement activities, CBHI or HEFs.

Discussion

Using Cambodia as a case study, this article investigates the challenges faced in institutionalizing management autonomy and performance-based incentives as the means for strengthening health service delivery in the public sector. In this section we discuss further the lesson learned for policy makers seeking to strengthen the management and delivery of public health services in similar developing country settings. We identify the success factors for this type of internal contracting arrangement, which differs from other emerging PBF approaches by focusing more on strengthening the MOH's own management structures.

Strengthening health service management and delivery

Outcomes from the implementation of internal contracting arrangements as a means for improving the management of district health services and strengthening service delivery in Cambodia were consistent with earlier external forms of contracting. A significant difference is, however, was an increase in the sense of national ownership in health management and service delivery. This sense of local ownership and responsibility led to improved sustainability of financing and of management capacity and greater engagement by the government, despite apparent shortcomings. The government contribution to the SDGs increased from 10% in 2010 to 30% in 2012 (Ly & Sim, 2012). District management gained a sense of responsibility and benefited additionally from the capacity building program provided by NGOs (Miller, 2011). Despite the constraints, the SOAs demonstrated an ability to secure additional staff, procure additional supplies and establish rules related to staff performance. Also strengthened was the oversight role of the PHD as commissioner of services supporting the SOAs (COM, 2010).

Table 3
Service delivery indicators by type of health district.

Type of health district	2008			2009[a]			2010[b]		
	NGO contract ($n = 11$)	Non-contract ($n = 66$)	Diff.	SOA ($n = 11$)	Non-SOA ($n = 66$)	Diff.	SOA ($n = 22$)	Non-SOA ($n = 55$)	Diff.
Outpatient visit per capita	0.5	0.3	0.2	0.6	0.4	0.2	0.7	0.5	0.2
Delivery by trained staff (%)	45.3	40.2	5.1	53.3	47.4	5.9	57.9	51.4	6.5
Delivery at facilities (%)	33.5	25.1	8.4	43.6	35.6	8	48	43.3	4.7
Current use of Birth Spacing methods (%)	29.5	23.3	6.2	26.1	22.4	3.7	34.2	26.9	7.3
Antenatal care 2nd visit (%)	72.2	64.4	7.8	82.5	77.8	4.7	77.6	68.3	9.3
Measles vaccination among children under 1 (%)	82.9	80.3	2.6	98.2	99.4	−1.2	114.1	111.2	2.9

Note: Diff. = Difference between the types of districts; figures in brackets are numbers of health districts by type of intervention.
[a] SOA was implemented in the 11 districts for half year of 2009.
[b] 11 more health districts were converted to SOA in 2010. Source: MOH monitoring report 2011.

Built on a broader public sector management reform, the SOA approach in Cambodia differs from other performance-based approaches and deals more comprehensively with MOH management arrangements. Under the SOA approach, the PHD at one level and the SOA management team (through its chief) at another level represent the purchaser of health services while the health facility chiefs represent the providers. In practice, the SOA team performs three distinct roles: purchasing, fund holding and monitoring/verification (under which regulation is subsumed). Clearly, in this arrangement, there is the danger of a conflict of interest that could disadvantage health facility staff.

SOA officials met additional obstacles impeding their management performance, including delay in approvals for hiring new staff, the low pay scale and the limited number of qualified applicants for newly created positions. Nonetheless, the health facility staff responded well to the incentive payments made through the SOA. Official health worker salaries are insufficient to meet basic living needs and the SOA incentives were seen to supplement the staff income pool. When coupled with performance management, the incentives encouraged providers to exert more effort in their work, a finding consistent with many earlier PBF studies (Rusa, Schneidman, Fritsche, & Musango, 2009; Vujicic et al., 2009). However, while the incentives were welcomed, they alone were not sufficient and required as well an active approach to performance management. The finding that the current incentive levels had a greater effect on the behavior of primary care providers, and less so for medical doctors at referral hospitals, supports previous findings that differentiation in incentive levels is important (Vujicic, 2009).

Early delays in the disbursement of SDG funds, due mainly to prolonged contract negotiations, were apparently overcome in subsequent years. However, difficulties remained in the system of disbursement of the government budget, the size of the SDG allocation, and coordination between these two funding sources, though new arrangements indicate optimism (MEF, 2011).

Lessons learned

A number of important lessons flow from this analysis of the Cambodian experience. These relate broadly to the separation of functions, the challenges of autonomous management, dual practice and other inefficiencies, and the success factors for this form of internal contracting.

Public health sector reform built on the purchaser–provider split is complex. Using the PHD and/or district health management team as both contractor and monitoring agency involves an inherent risk that can best be addressed by a clear separation of contracting (commissioning, purchasing) and regulatory (monitoring) functions. This remains true within government structures. Interventions using the PBF approach have also realized the benefits of a clear separation between purchasing, fund holding, regulation, service provision and monitoring of results (Cordaid & SINA, 2012). Moreover, such reforms are more effective where management responsibilities are genuinely devolved and accepted, and the provision of resources is adequate to meet contract demands.

Assigning an autonomous role to district health managers is not sufficient in the absence of a real ability to hire staff and control budgets (within established regulations). One constraint in Cambodia was the absence of clear instructions about the use of special grants (SDGs) for staff incentives and additional supplies. The rules were still being formulated, discussed and negotiated, leading to a danger of misallocation. In 2009, for example, one SOA used more than the 80% of the SDG allowed for staff incentives and left some program activities unfunded, a practice that was viewed by the district managers as bold and risky. A similar lack of clear procedures also left the door open to nepotism in staff appointments. At stake is not a lack of autonomy in principle but the lack of clear structures needed to support autonomous management.

While the internal contracting arrangements and performance contracting were designed to retain qualified staff in the public sector, many medical doctors at the referral hospitals maintained their private practice. Consistent with other country examples, it appears that medical staff need to be guaranteed a certain level of incentive payments (representing a major proportion of what they may have earned privately) before they curtail their private practice. This reinforces the need for structures that support autonomous management and staff supervision. It also implies the need to unify various disparate incentive payment systems into a single, clear and manageable payment subject to performance.

More needs to be known about the relative efficiency of performance contracting. On the one hand, output-based contracting can lead to efficiencies in the use of resources and reduced overheads. On the other hand, contracting involves sometime hidden but often quite onerous transactions costs, particularly in the area of contract monitoring and verification.

Success factors

There are, therefore, identifiable conditions that lead to improved service delivery through internal contracting, based on the presence of a clear performance contract, performance incentives and regular monitoring. We identified five success factors:

- A clear understanding by the contracting parties of their roles and responsibilities;
- Establishment of clear rules and procedures for implementation;
- Adequate and timely provision of resources;
- Effective management of performance;
- Effective monitoring of the contract.

Recommendations and conclusions

The internal contracting approach has the potential to improve service delivery, provided that the administrative procedures identified here are implemented. From the Cambodia example it is possible to identify a number of recommendations that can improve outcomes based on the internal contracting approach.

- The clear separation of functions between actors (i.e. commissioner, purchaser, provider, monitoring agent, regulator) is necessary to enable each to carry out their role more effectively and improve overall governance; the purchasing and monitoring roles of the principal to the contract (such as a provincial health department) must be carefully delineated by different performance contracts.
- The development of clear rules and procedures to improve the objective functioning of the different parties to the contract is assisted by the creation of appropriate methods and tools and provision of adequate resources; this creates a system appropriate for transparent delivery of contract outcomes. Careful selection of an appropriate range of indicators improves the effectiveness of contract monitoring; international experience indicates that selection of indicators that are specific, measurable, achievable, relevant and time-bound (SMART) assists in tracking the performance of contracted parties to identify and resolve management bottlenecks.
- Allocating genuine responsibility to health facility managers, together with the application of a financial management instrument with appropriate indicators to monitor performance,

may help to address issues related to staff hiring and incentive payments and can address issues related to nepotism.

- To be effective, staff incentives need to be regarded as adequate by the health workers and paid in a timely manner; where staff members receive bonus payments from various sources, the challenge is to unify the incentive payment system in a single clear payment based on all health facility revenues with appropriate monitoring (c.f. Cordaid & SINA, 2012).
- If not administered carefully, performance incentives can crowd out intrinsic motivation of health care professionals and adversely affect the service quality (Eichler et al., 2009; Woolhandler et al., 2012). Careful monitoring of the role of incentives in staff performance and their impact on the quality and quantity of services delivery is warranted (c.f. Vujicic, 2009).

This study of internal contracting in Cambodia has some inherent limitations. The sample size was relatively small, comprising only four SOAs in two provinces and 20 key informants. As well, three of the four SOAs were in one province, which presents a danger of selection bias in the results. However, we believe that the conditions in these SOAs are similar to most others. While there are potential differences in contract management experiences across all SOAs, there is no reason to expect wide variation in outcomes. As well, demographic, cultural and economic conditions are relatively uniform across Cambodia's 20 provinces, where the population is predominantly rural and engaged in subsistence rice farming. We interviewed SOA managers to assess changes in their performance and their attitudes toward the new management arrangements. A broader evaluation of SOAs and their impact on health outcomes would require a broader sample of different providers, patients and community members. Even so, the results are indicative of contracting practices within SOAs and allow us to identify the most pertinent questions for further investigation. Two other limitations include the absence of a statistical control for many other changes in the health sector which may have influenced the SOA service delivery outcomes and the lack of more definitive outcome measures of SOA achievement.

The internal contracting approach adopted in Cambodia produced a sense of national ownership in health care delivery and maintained improvements in service delivery. Further investigation of the impact of internal contracting and performance-based financing on the management of health services and of their system-wide effect is warranted to understand how and why the approach works, or does not work.

Conflict of interest

The authors declare no conflict of interest.

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