Performance-Based Payment System for ASHAs in India:

What Does International Experience Tell Us?

Technical Report

Hong Wang, Rajni K. Juyal, Sara A. Miner of Abt Associates Inc. and Elizabeth Fischer of IntraHealth International Inc. for The Vistaar Project

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List of Acronyms

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
CDS	Integrated Child Development Services
CHW	Community Health Worker
DOTS	Directly Observed Treatment, Short Course
GOI	Government of India
ICDS	Integrated Child Development Services
JSY	Janani Suraksha Yojana
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NGO	Non-Governmental Organisation
NHSRC	National Health Systems Resource Centre
NRHM	National Rural Health Mission
PBP	Performance-Based Payment
TB	Tuberculosis
UNFPA	United Nations Population Fund
VHSC	Village Health and Sanitation Committee
WHO	World Health Organization

Executive Summary

A core initiative of India's National Rural Health Mission (NRHM) is to provide improved access to health care at the community level through female village-level health workers known as Accredited Social Health Activists (ASHAs). Selected from the village itself and accountable to it, the ASHAs serve as a liaison between the community and the public health system. As voluntary community health workers (CHWs), ASHAs are expected to act as health activists within their communities and are responsible for providing information, creating awareness about key public health services, and mobilising the community to access reproductive and maternal and child health services.

Financial remuneration has been found to be one of the key motivational factors impacting the performance of CHWs in low and middle-resource countries. Although ASHAs are considered volunteers, the Government of India (GOI) has introduced a performance-based payment (PBP) method to support them in achieving defined health objectives. This system links the amount of remuneration to the activities completed by the ASHAs. This PBP system for ASHAs is unique in that it is one of the largest in the world-nearly 450,000 ASHAs exist in the eight NRHM focus states alone.[1] Further, each state's PBP system for ASHAs is different. Operationalising such a large and complex PBP system at the state level has led to certain promising practices as well as challenges.

This literature review looks at the available evidence regarding PBPs for ASHAs to identify promising practices as well as specific operational challenges associated with the use of PBPs. It also briefly reviews the primary characteristics, promising practices, and challenges of CHW PBP systems in the Philippines, China, Cambodia, Rwanda, and Bangladesh to find applications to India's context. Based on experience from India and around the world, the review outlines considerations and makes recommendations for overcoming some of these challenges. This review also helps answer specific questions about PBPs: (1) How is PBP being used in the ASHA system? (2) What are the challenges and promising practices associated with implementing the PBP system? (3) What can be learned from global experiences of PBP approaches? (4) Based on the Indian and global experience, what recommendations can be made for improving the ASHA payment system?

The literature review identified several successful practices with regard to the implementation of PBPs for ASHAs. These include: developing implementation guidelines, introducing fixed payment days and electronic transfer of funds, moving payment to the community level, communicating regularly with ASHAs about programme implementation, and putting a strong management system in place. The review recommends that these features be continued and enforced in India.

Results from the literature review indicate that while the ASHA PBP scheme plays a critical role in improving health indicators in the target states, the system has certain weaknesses that could have a negative impact on the effectiveness and sustainability of the ASHA model. These include: delays in payment, lack of clarity on the payment process, lack of data on how incentives affect outcomes, neglect of services that are not covered by the PBP scheme, lack of transparency and adequate governance, competition with other providers, and lack of congruity between compensation and expectations.

[1]National Health Systems Resource Centre, New Delhi Training Division, Ministry of Health and Family Welfare, New Delhi. *Update on ASHA Programme* (2010)

The review closes with policy considerations aimed at the strategic and programme levels. Strategic-level considerations are made with the caveat that their implementation requires strong political support and commitment, structural changes, feasibility analysis and careful long-term planning. These strategic recommendations include: (1) introducing a multi-level PBP system; (2) developing a PBP system on institutional basis rather than at the individual level; and (3) promoting full-time ASHAs with appropriate payment. Programme-level policy recommendations, on the other hand, might be implemented by the current programme officer in the short term. The programme-level recommendations are: (4) introducing/ strengthening self-assessment with an auditing system; (5) introducing quality measurement, in addition to existing utilisation indicators; (6) organising regular state-level workshops to share experiences and lessons learned regarding design, implementation, and evaluation of PBP schemes; (7) combining the PBP system with non-financial incentives; (8) further enhancing the relationship between ASHA and the community; (9) continuing the monitoring, evaluation, and operational research efforts; and (10) improving ASHA training.

1 Introduction

The Government of India's flagship National Rural Health Mission (NRHM) aims to provide accessible, affordable and effective primary health care, especially to poor and vulnerable sections of the population and to address the deficit in rural health care. NRHM has created a cadre of trained female community health activists called Accredited Social Health Activists (ASHAs) to mobilise the community toward increased utilisation of existing health services. The ASHAs play an important role in the rollout of government health programmes such as the Janani Suraksha Yojana (JSY), a conditional cash transfer scheme to incentivise women to give birth in a health facility. The ASHAs work closely with other frontline workers like Auxiliary Nurse Midwives (ANMs) and Anganwadi Workers (AWWs) to conduct community-level activities.

In the global context, ASHAs can be considered community health workers (CHWs), whom the 1989 World Health Organization (WHO) study group on community health workers defined as "community health workers should be members of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organisation, and have shorter training than professional workers."[2] CHWs are often utilised to mitigate a shortage of qualified medical staff in low-and middle-resource countries and to scale up basic health or priority services in remote areas. Most CHWs are volunteers who conduct a variety of health promotion, case management, and service delivery activities at the community level.[3] Adequate and sustainable remuneration has been identified as a key factor affecting the performance of CHWs in many developing countries.[4][5][6]

Context of the Study

The mandate of the United States Agency for International Development (USAID)-funded Vistaar Project is to provide technical assistance to the Government of India (GOI), Government of Uttar Pradesh, and Government of Jharkhand to apply knowledge to the practice of improving maternal, newborn, and child health and nutritional status. The Vistaar Project works with the Government of Uttar Pradesh to optimise the role of ASHAs to achieve improved health outcomes. In working with district-level governments to enhance the performance of ASHAs through improved counselling skills, supportive supervision and motivation, the Project also identified potential areas of improvement for the performance-based payment (PBP) system to optimise ASHA performance. While it is beyond the scope of the Project to address payment systems for ASHAs, this paper highlights some of the challenges encountered in implementing the ASHA PBP system as well as promising efforts to improve its performance that are underway in India and in other developing countries.

[2]World Health Organization (WHO). (1989). *Strengthening the Performance of Community Health Workers in Primary Health Care.* Report of a WHO Study Group. WHO Technical Report Series, No. 780. Geneva.

[3]Cellettia, F., Et Al. (2010). *Can the Deployment of Community Health Workers for the Delivery of HIV Services Represent an Effective and Sustainable Response to Health Workforce Shortages? Results of a Multicountry Study.* AIDS 24 (Suppl 1):S45–S57.

[4]Bhattacharyya, K., Et Al. (2001).) *Community Health Worker Incentives and Disincentives: How they Affect Motivation, Retention, and Sustainability.* Arlington, VA: BASICS II.

[5]Kebriaei, A. and Moteghedi, M.S. (2009). *Job Satisfaction among Community Health Workers in Zahedan District, Islamic Republic of Iran*. Eastern Mediterranean Health Journal 15(5).

[6]Zaeem, H., Et Al. (2008). *Job Stress among Community Health Workers: A Multi-Method Study from Pakistan.* International Journal of Mental Health Systems 2:15.

These experiences may help address the challenges of implementing the PBP system, and in doing so, will motivate the ASHAs to improve their performance.

Organisation of the Report

Following this introduction is a brief description of the methodology for conducting the literature review. The next section describes the ASHA PBP scheme and its implementation and summarises operational challenges. The following two sections detail promising PBP practices in India and across the world. The paper concludes with both strategic as well as programmatic policy considerations for improving the PBP systems for ASHAs in India. Annex A describes the characteristics of ASHA PBP systems in Indian states and Annex B contains country case studies on PBP for CHWs.

Methodology

To identify potential sources for this literature review, the authors first contacted officials at the GOI's Ministry of Health and Family Welfare and NRHM for documents detailing the ASHA programme and were referred to a list of publicly available materials. The authors also conducted keyword searches on CHWs and PBP to identify articles and grey literature on the international experience. Only materials in English were considered. The authors reviewed the literature they had gathered and selected 49 documents to draw upon; the referenced materials are listed in the Bibliography.

The ASHA Performance-Based Payment System: Features and Challenges 2

A review of the available literature revealed that most states in India have implemented a PBP system for ASHAs. The PBP mechanism for ASHAs is one of the world's largest pilots applying PBP directly to CHWs. NRHM specified the PBP for ASHAs based on a list of core activities performed by these CHWs in support of various health interventions. Table 1 describes the suggested compensation and estimated caseload for ASHAs.

Table 1. Suggested compensation package for ASHA under NRHM[7]

Service	Suggested compensation per case (in Rs.)	Estimated case workload per ASHA per year	Estimated maximum compensation per ASHA per year (in Rs.)
Janani Suraksha Yojana institutional delivery: Rural (low-performing states)	350 for ASHA & 250 for referral transport	13	7800
Janani Suraksha Yojana institutional delivery: Urban	200	9	1800
Motivation for tubectomy/vasectomy	150/200	8/4	1200/800
Immunisation session	150	12	1800
Pulse Polio Day	75	6	150
Organisation of Village Health Nutrition Day (VHND)	150	12	1800
Directly Observed Treatment, Short Course (DOTS)	250	1	250
Promotion of household toilet	75	12	900
Detection, referral, confirmation, and registration of leprosy case/after complete treatment for Pauci-bacillary (PB) leprosy cases/ after complete treatment for Multi-bacillary (MB) leprosy cases	100/200/400	1/1/1	100/200/400

Source: http://mohfw.nic.in/NRHM/Documents/Performance_based_payment_to_ASHAs.pdf

As is evident from Table 1, the largest payment that ASHAs receive for a single service is the Janani Suraksha Yojana (JSY) payment for institutional deliveries. Launched in 2005, JSY is a safe motherhood intervention under NRHM and has been implemented in all Indian states, with a special focus on low-performing states. JSY links cash assistance for the mother and ASHA with delivery and post-delivery care through a conditional cash transfer scheme to promote institutional deliveries; JSY also makes available quality antenatal care and referral and transport assistance. Although the programme is

[7]Government of India, NRHM, ASHA. 2005

mandatory, state governments can adapt it to fit the local context. Initially, JSY was funded by the central government, but recently state governments were required to provide appropriate matching funds (the percentage varies by state) in order to receive central government funding support.[8] Under JSY, institutional delivery payments are made only if the ASHA or other community-level worker escorts the pregnant woman to the delivery facility and stays with her until the delivery is completed.

The ASHA programme gives states the flexibility to adapt ASHA guidelines in terms of the services delivered (they can change services) and the package of compensation (they can modify the payment amounts or mechanism in keeping with their local priorities). This responsiveness to local needs has resulted in the expansion of the work for which ASHAs receive compensation. Although most states adopted a PBP system based on the number of services delivered, some use a fixed payment method. For example, in West Bengal, the payments to ASHAs are not tied to the number of beneficiaries served, but rather consist of a fixed payment for the provision of various services.[9] ASHAs in West Bengal receive monthly compensation for providing the following package of services:

- Ensuring full childhood immunisation and tracking of all scheduled beneficiaries in the village - Rs. 150
- Registering all pregnant women, three antenatal care visits and two postnatal care visits - Rs. 200
- Escorting pregnant women to the place of delivery - Rs. 200
- Ensuring mothers receive referral transport for institutional delivery - Rs. 50
- Delivering other services under the ASHA programme - payment varies

In general, ASHAs receive about Rs. 800 per month.[10] ASHAs may receive variable payments based on the percentage of the targeted population they have served. The state of Rajasthan has implemented a fixed payment system by incorporating an Integrated Child Development Services (ICDS) programme along with its Health programme; hence ASHAs in the state receive a monthly payment of Rs. 950, of which Rs. 500 are from ICDS and Rs. 450 are from the Health programme.[11]

Many states have set up systems to pay ASHAs via cheque by mail or e-transfer. Six of the 11 states for which information is currently available pay ASHAs by cheque, which they receive by mail or pick up at the facility. Some states pay certain incentives (such as those of the JSY programme) by cheque and others (such as immunisation) in cash. In Rajasthan and Orissa, ANMs usually make the cash payments to the ASHAs; alternatively, Medical Officers in-charge and accountants make the payment. Orissa also makes some payments via e-transfer of funds. Few states appear to use mobile phone banking for making payments to ASHAs. The table in Annex A describes ASHA payment systems in several states that were included in the National Health Systems Resource Centre (NHSRC)/NRHM progress review.

Impact of PBP in India

Review of preliminary evidence suggests that PBPs can play a critical role in improving delivery of targeted services, and ultimately in health outcomes. For example, a 2008 United Nations Population Fund (UNFPA) assessment of the JSY programme in Bihar, Madhya Pradesh, Orissa, Rajasthan, and Uttar Pradesh revealed that institutional delivery rates had increased from about 12 percent in 1992-93 to about 55 percent in 2008.[12] While many factors likely contributed to this increase, the JSY programme certainly played a role; beneficiaries have reported that the payments received as part of the

[8]Dagur, V., Senauer, K., and Switlick-prose, K. (2009). *Paying for Performance: The Janani Suraksha Yojana Program in India.* Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

[9]Government of West Bengal, Department of Health and Family Welfare. *ASHA Implementation Guidelines.*

[10]This lump sum figure contains different tasks, some of which may have multiple numbers, such as ensuring that mothers receive referral transport for institutional delivery.

[11]Agnihotri, V. *ASHA Sahyogini Intervention in Rajasthan.* (Power Point Presentation).

[12]Development and Research Services Ltd. (2009). *Concurrent Assessment of Janani Suraksha Yojana Scheme in Selected States of India, 2008.* New Delhi: UNFPA, GFK Mode. May.

JSY programme helped motivate them to travel to a health facility to deliver their babies.[13] According to another study linking the payment of ASHAs to maternal and infant care (including the attendance of home deliveries, caring for the infant at birth, conducting home visits and supporting mothers in newborn care, monitoring the newborns, and managing newborn sicknesses), the neonatal mortality rate declined about 70 percent between 1993 and 2003 in comparison to control areas.[14]

Challenges of the PBP System in India

Findings from evaluations of the ASHA programme point to several challenges in effectively operationalising the PBP system:

1. **Delays in payment:** In most states, the primary challenge is the untimely payment of incentives. A study on the ASHA programme in Uttar Pradesh noted that delayed remittance of payment to ASHAs remains an obstacle to the effective implementation of the PBP system in that state.[15] In Gorakhpur and Maharajganj, only about 20 percent of ASHAs receive payment on time[16] due to poor implementation of a cumbersome payment process. Several studies have noted that a lack of timely payments is a disincentive for ASHAs and undermines their motivation to perform.[17] The existing literature contains only anecdotal evidence on possible reasons for the lack of timely payments.

   A review of the ASHA programmes in Rajasthan and Orissa reveals that the main reasons for payment delays are "no or less advance money at the facility, delay in the approval process, signing authority not being available [and] delay in payment by ANM."[18] An assessment of the programme in Uttar Pradesh noted that a delay in the transfer of money to the bank accounts of the entities disbursing the payment was the primary cause of late payments to ASHAs.[19] These studies estimated that only 42 percent of the ASHAs in Rajasthan and 82 percent of those in Orissa had received any payment for services they had already delivered.[20]

2. **Lack of clarity on the payment processes:** Although financial guidelines have been developed to guide the process of payment, the literature indicated that Medical Officers at the primary health centre level may still be confused about how to implement the payment system, including how to access and disburse funds and how to fulfil the reporting requirements.[21,22] The literature also indicates that many ASHAs did not know how much compensation they were supposed to receive for each service provided. The Uttar Pradesh progress report observed, "the majority of ASHAs and ANMs had incomplete knowledge about the compensation provisions made available under the

[13]Dagur, V., Senauer, K., and Switlick-Prose, K. (2009). *Paying for Performance: The Janani Suraksha Yojana Program in India.* Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

[14]Bang, A. (2010). *ASHA Training Modules 6 and 7.*
http://www.mohfw.nic.in/nrhm/presentations/bhopal_workshop/asha%20training%20%20bhopal%2004072010.ppt

[15]Nandan, D., Et Al. (2007). *Assessment of the Functioning of ASHAs under NRHM in Uttar Pradesh.*
http://nihfw.org/pdf/rahi-i%20reports/lucknow/luknow.pdf

[16]Nandan, D., Et Al. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.*
http://nihfw.org/pdf/rahi-ii%20reports/gorakhpur.pdf

[17]Nandan, D., Et Al. (2007). *Assessment of the Functioning of ASHAs under NRHM in Uttar Pradesh.*
http://nihfw.org/pdf/rahi-i%20reports/lucknow/luknow.pdf

[18]Centre for Operations Research and Training (CORT). (2007). *Assessment of ASHA and Janani Suraksha Yojana in Rajasthan.*
http://www.cortindia.com/rp/rp-2007-0302.pdf

[19]Nandan, D., Et Al. 2007. *Assessment of the Functioning of ASHAs under NRHM in Uttar Pradesh.*
http://nihfw.org/pdf/rahi-i%20reports/lucknow/luknow.pdf

[20]Centre for Operations Research and Training (CORT). (2007). *Assessment of ASHA and Janani Suraksha Yojana in Orissa.*
http://www.cortindia.com/rp%5crp-2007-0303.pdf

[21]Nandan, D., Et Al. (2007). *Assessment of the Functioning of ASHAs under NRHM in Uttar Pradesh.*
http://nihfw.org/pdf/rahi-i%20reports/lucknow/luknow.pdf

[22]National Health Systems Resource Centre, New Delhi Training Division, Ministry of Health and Family Welfare, New Delhi. *Update on ASHA Programme* (2010)

scheme."[23] Another report from Rajasthan indicated that "ASHAs have poor knowledge about JSY related concepts, components and provisions."[24] These findings highlight the inadequacy of the training of ASHAs on PBP.

3. **Lack of data on impact of varying incentives on outcomes:** There is very little information in the literature on how variation in payment structure affects outcomes. For example, although some ASHAs in Rajasthan receive a fixed payment each month and others participate in PBP systems, this literature review did not find any data comparing the health outcomes achieved by each group. An NHSRC/NRHM report states, "where such fixed payments are available (out of state funds), there is no positive effect seen." In addition, though PBP may increase the number of services delivered, the potential effect of PBP on quality is not yet known.[25]

4. **Neglect of services outside the PBP scheme:** According to an NHSRC/NRHM report on the progress of the ASHA programme, "most evaluations show that a substantial portion of ASHAs' time is spent on two major activities: promotion of institutional deliveries (including accompanying pregnant women to institutions for delivery) and immunisation."[26] The study also notes that ASHAs are less active in promoting services such as postnatal and newborn care because these are not tied to incentive payments. A survey of ASHAs in Uttar Pradesh concluded that "most of the ASHAs preferred helping in delivery and immunisation, since these activities are associated with financial incentives, [but] many other jobs like promotion of awareness on hygiene and sanitation, counselling on family planning, etc., were drawing lesser attention probably due to lack of incentives."[27] This is a common problem in many PBP schemes proposed by vertical health intervention programmes which only target a specific set of interventions due to programme objectives and resource constraints. This issue can be addressed by developing a more comprehensive package of services.

5. **Lack of transparency and adequate governance:** A study from Uttar Pradesh revealed that 25 percent of ASHAs reported having to make informal payments to the payer in order to receive their incentives.[28] Some ASHAs in Orissa reported that they did not receive JSY money from ANMs as intended by the scheme and that some ASHAs were paid even if they did not perform JSY activities.[29]

6. **Competition with other providers:** The ASHA payment system differs from those of other frontline health service providers, including the long-established AWW and ANMs who receive a fixed monthly salary payment. This divergence of payment systems has led to resentment among some workers who believe that ASHAs are receiving extra compensation for services while they are not. Competition also exists among ASHAs and other workers for some incentive payments (e.g., for institutional delivery). For example, in Madhya Pradesh, payments to community mobilisers for encouraging institutional deliveries decreased the motivation of ASHAs to perform this task.[30] Lack of understanding of the different payment systems can undermine frontline workers' sense of cooperation, which is essential because they must work closely together to coordinate activities (e.g., Village Health Nutrition Days, Immunisation Days).

[23]Nandan, D., Et Al. (2007). *Assessment of the Functioning of ASHAs under NRHM in Uttar Pradesh.* http://nihfw.org/pdf/rahi-i%20reports/lucknow/luknow.pdf

[24]Population Research Center, Mohanlal Sukhadia University. *Janani Suraksha Yojana: A Study of the Implementation Status in Selected Districts of Rajasthan,* Ramakant Sharma, 2007-2008. Udaipur-313001.

[25]Centre for Operations Research and Training (cort) (2007). *Assessment of ASHA and Janani Suraksha Yojana in Orissa.* http://www.cortindia.com/rp%5crp-2007-0303.pdf

[26]Nandan, D., Et Al. (2007). *Assessment of the Functioning of ASHAs under NRHM in Uttar Pradesh.* http://nihfw.org/pdf/rahi-i%20reports/lucknow/luknow.pdf

[27]Nandan, D., Et Al. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.* http://nihfw.org/pdf/rahi-ii%20reports/gorakhpur.pdf

[28]Nandan, D., Et Al. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.* http://nihfw.org/pdf/rahi-ii%20reports/gorakhpur.pdf

[29]Centre for Operations Research and Training (CORT). (2007). *Assessment of ASHA and Janani Suraksha Yojana in Orissa.* http://www.cortindia.com/rp%5crp-2007-0303.pdf

[30]National Health Systems Resource Centre, New Delhi Training Division, Ministry of Health and Family Welfare, New Delhi. *Update on ASHA Programme* (2010)

7. **Compensation not keeping pace with expectations:** The modest incentive amounts being paid for certain services are not sufficient to motivate ASHAs to provide the service.[31] Conceptually, ASHAs are voluntary health workers. However, if ASHA earnings are their sole source of income, it is not feasible to make ASHAs true unpaid volunteers. In addition, the amount of work that ASHAs are expected to complete, including record-keeping, seems to be expanding without a corresponding increase in compensation. Due to the amount of work required, the volunteer spirit of ASHAs is diminishing. A survey from Orissa revealed that one-third of the ASHAs were dissatisfied with their cash assistance and described it as "too much work and too little money."[32] Full or partial payment is the key to ensure continued functioning of ASHAs at the community level.

[31]Nandan, D. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.* http://nihfw.org/pdf/rahi-ii%20reports/gorakhpur.pdf

[32]Centre for Operations Research and Training (CORT) (2007). *Assessment of ASHA and Janani Suraksha Yojana in Orissa.* http://www.cortindia.com/rp%5crp-2007-0303.pdf

3 Review of International Community Health Worker PBP Systems

Increasingly, developing countries have been advocating and adopting the PBP mechanism as a means to achieve specific health targets. Several review papers have summarised the major features of PBPs in developing countries and their key achievements as well as shortcomings.[33][34][35][36] The case studies in Annex B show that the financial incentives under PBPs have great potential to increase accountability, efficiency, quality, and equity of service delivery.[37] However, many questions remain unanswered with regard to the design and feasibility of PBP implementation in less-developed health systems. Additionally, there is little evidence on the actual impact of PBPs in improving key health indicators due to a lack of rigorous evaluation of the existing schemes.[38]

To make suitable policy recommendations tailored to the PBP system in India, this literature reviewed the experience of countries implementing similar PBP systems, including Cambodia, China, the Philippines, Rwanda, and Bangladesh (case studies are included in Annex B and summarised in Table 2).

Table 2. Summary of country PBP case studies

Country	PBP Characteristics, Promising Practices, Challenges, and Results
Philippines	To increase institutional delivery, CHWs refer poor pregnant women to a health facility. After delivery, a certificate is signed by the health facility manager and submitted to the local government for CHW payment by cash or cheque. Cumulative monthly payments can be made to improve record keeping. The system was also complemented by a demand side incentive for mothers and institutional delivery increased about 7.6 percent within three months. However, the system experienced delays in payment.
China	CHWs with one year of training and a license from the local health bureau provide fee-for-service curative care to patients. They also provide public health services and are paid by the government based on their performance status, such as immunisation rate. For TB control, local governments paid case-finding, case-management, and treatment completion fees to CHWs. The programme achieved 100 percent DOTS coverage, 77 percent case detection, and a 92 percent cure for detected smear-positive patients.

[33]Beith, A., Eichler, R., Brown, E., Button, D., Hsi, N., Switlick, K., Sanjana, P., and Wang, H. (2009). *Pay for Performance to Improve Maternal and Child Health in Developing Countries: Findings from an Online Survey.* Bethesda, MD: Health Systems 20/20, Abt Associates.
[34]Eldridge, C., and N. Palmer. (2009). *Performance-Based Payment: Some Reflections on the Discourse, Evidence and Unanswered Questions.* Health Policy and Planning 24:160–166.
[35]Governance and Social Development Resource Center. (2010). *Helpdesk Research Report: Performance Related Pay.* http://www.gsdrc.org/docs/open/hd661.pdf
[36]Oxman A.D., and Fretheim, A. (2008). *An Overview of Research on the Effects of Results-Based Financing.* Report Nr 16-2008. Oslo: Nasjonalt Kunnskapssenter for Helsetjenesten. http://hera.helsebiblioteket.no/hera/bitstream/10143/33892/1/nokcrapport16_2008.pdf
[37]Editor's Note. (2001.) *Using Performance-Based Payments to Improve Health Program.* The Management 10:2.
[38]Eldridge, C., and N. Palmer. (2009). *Performance-Based Payment: Some Reflections on the Discourse, Evidence and Unanswered Questions.* Health Policy and Planning 24:160–166.

Country	PBP Characteristics, Promising Practices, Challenges, and Results
Cambodia	The national policy provides financial incentives directly to (non-CHW) health workers though NGOs contracted by the Ministry of Health. Payment is 55 percent basic salary, 15 percent attendance, and 30 percent performance against targets. Strict monitoring combined with PBP decreased family health expenditures by 40 percent.
Rwanda	To improve productivity in the public health system, health workers' base salaries were paid with government funding or user fee revenues. The old fixed-bonus system was replaced by PBP remuneration to the health centres, which paid bonuses to their staff members. The productivity of staff in public health facilities has increased. However, payment for only some services can cause over-reporting of delivery of those services; over-use of those services; their provision regardless of availability of required inputs; neglect of unpaid services; and decreased quality.
Bangladesh	Village doctors were trained to refer suspected TB cases for diagnosis and to provide directly observed treatment free of charge. No financial incentives were used; potential motivators included the recognition of the village doctor by a reputable organisation, free access to training, the confidence shown in them by giving them TB drugs, social respect and credibility within the community, and the increase in clientele. The programme achieved a remarkably high cure rate of 90 percent.

4 Promising Indian and International Community Health Worker PBP Practices

Review of the Indian and international experiences suggest that the following issues be considered and addressed to improve the existing ASHA PBP scheme:

(1) Implementation guidelines: Several Indian states have developed and disseminated guidelines on how to implement the payment system. At least four states included in the NHSRC study (Kerala, Orissa, Rajasthan, and Uttar Pradesh) have issued guidelines for payment processes. For example, the Government of Kerala issued detailed guidelines on the nature of incentives, the amount payable, the sources of funds, and authority to pay. In addition, these guidelines require that Medical Officers issue payment to ASHAs before the 25th day of the succeeding month.[39] A study of Uttar Pradesh's guidelines concluded that "non-availability of funds at district level was not found to be a problem. Funds were being transferred to sub-district levels through e-banking. Almost all the Block Nutrition Officers had complete knowledge of the provisions of compensation money for the ASHAs."[40]

(2) Fixed payment days: Several Indian states have implemented a fixed day of the month for ASHAs to receive their payments, which simplifies the process and also acts as an incentive for ASHAs to keep records current and attend monthly meetings. In Orissa, which is considered to have a highly functional payment process for ASHAs, all payments are made on the 10th day of every month.[41]

(3) Electronic funds transfer: To address the need for the rapid transfer of funds to peripheral institutions, some Indian states have successfully used electronic transfer of funds with the help of banks, for instance, the state of Orissa uses e-banking to transfer funds to the district level.[42]

(4) Communication with ASHAs about programme implementation: A few Indian states have instituted monthly or quarterly meetings with ASHAs, developed ASHA resource centres, or established ASHA mentoring groups to provide platforms for identifying and addressing problems with the programme (including payment issues). Uttar Pradesh developed an ASHA quarterly newsletter that includes information on compensation and other issues. The state also encouraged the painting of wall boards in the community to display the amount of payment ASHAs receive for providing certain services.[43] Elsewhere, Orissa has created ASHA helpdesks in 35 health facilities.

(5) Management system: The NHSRC/NRHM review noted that Orissa was particularly strong in administering payments because it had sound management practices in place. The report observed that to ensure timely payments to ASHAs,

[39]Government of Kerala. (2009). Report on ASHA. Annexures. 19 February.

[40]Nandan, D., Et Al. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.* http://nihfw.org/pdf/rahi-ii%20reports/gorakhpur.pdf

[41]Mission Directorate, NRHM, Health and Family Welfare Department, Government of Orissa. *Supportive Supervision Mechanism for the Implementation of ASHA Activity.*

[42]Mission Directorate, NRHM, Health and Family Welfare Department, Government of Orissa. *Supportive Supervision Mechanism for the Implementation of ASHA Activity.*

[43]Interview with George Philip, State Director, The Vistaar Project, Uttar Pradesh, September 24, 2010.

a system required "a clear flow of funds, allocation of responsibilities, single window arrangement for the ASHA, and a system of monitoring to identify and solve the delayed payments."[44]

(6) Governance and administrative capability: Although political support for the implementation of PBP in developing countries is growing, the governance and management capacity in the public sector in developing countries is often weak and needs special attention. For example, administrative bureaucracy often creates implementation inefficiencies, which in turn increases the administrative or transaction costs of PBP implementation. The bureaucracy may also cause delays in payments, which could interfere with providers' ability to deliver the services. In the global context, several strategies have been introduced to reduce administrative bureaucracy, such as making the documentation needed for payment explicit and using professional contract managers.[45]

PBP may also create opportunities for dishonest officials and supervisors to engage in corruption. In PBP systems, corruption may arise in the selection of contractors and the processing of payments through kickbacks required to receive payment. To combat such corruption, several governance and administrative processes can be adopted: (1) using transparent competitive selection procedures for health care providers; (2) involving multiple stakeholders in the evaluation process; (3) having large contract 'lots' that attract more competition; (4) contracting with large service delivery organisations (for example, primary health clinics, hospitals, or NGOs), rather than small organisations or individual providers; and (5) having clear and explicit conditions for payment of invoices.[46][47]

(7) Cost-effective monitoring and evaluation (M&E) system: PBPs need an adequate M&E system for service delivery. However, many countries do not have the human resources capacity to perform such tasks. In addition, the cost of conducting these M&E activities can be very high. In some countries, third parties are employed by the government as an independent agency for M&E. However, this model may be associated with high costs.[48] A self-report system can also be used in a PBP M&E system. Evidence from this literature review suggests that the self-reported approach with appropriate audits to verify accuracy is a better way to evaluate results. One report concludes that "it not just costs less, but also encourages [the providers] to strengthen information systems and use information to improve the quality of services being delivered in contracted facilities."[49][50]

(8) Economic effects: Although PBP increases the quantity of health services delivered, it may also have unintended economic effects, such as distortions (neglect of important tasks that are not rewarded with financial incentives), gaming (improving or cheating on reporting rather than improving performance), corruption, cherry-picking (serving easy-to-reach patients), widening the resource gap between the rich and poor, dependency on financial incentives, demoralisation, and bureauncratisation.[51] Implementers should be aware of potential effects when designing a PBP system and incorporate measures to mitigate negative consequences.

[44]National Health Systems Resource Centre, New Delhi Training Division, Ministry of Health and Family Welfare, New Delhi. *Update on ASHA Programme* (2010)

[45]Vian, T. (2002). *Corruption and the Health Sector.* MSI. November.

[46]Loevinsohn, B. (2008). *Performance-Based Contracting for Health Services in Developing Countries,* A Toolkit. Washington, DC: The World Bank.

[47]Editor's Note. (2001). *Using Performance-Based Payments to Improve Health Program.* The Management 10:2.

[48]Palmer N, Strong L, Wali A, and Sondorp E. (2006). *Contracting Out Health Services in Fragile States.* British Medical Journal 332: 718–21.

[49]Soeters, R., and Griffiths, F. (2003). *Improving Government Health Services through Contract Management: A Case From Cambodia.* Health Policy and Planning 18(1): 74–83.

[50]Eichler, R., Auxila, P., Antoine, U., and Desmangles, B. (2007). *Performance-Based Incentives for Health: Six Years of Results from Supply-side Programs in Haiti.* Center for Global Development Working Paper #121.

[51]Oxman A.D., and Fretheim A. (2008). *An Overview of Research on the Effects of Results-Based Financing.* Report Nr 16-2008. Oslo: Nasjonalt Kunnskapssenter for Helsetjenesten, http://hera.helsebiblioteket.no/hera/bitstream/10143/33892/1/nokcrapport16_2008.pdf

(9) Performance indicators: There are several ways to design incentives. The simplest approach is to replace input-based payment with a fee-for-service payment approach. In the latter case, the payment incentive is to increase output with more payment, in the same proportion. Although this approach is relatively easy to quantify, the potential unintended consequence is that the quality of service delivery might be neglected. Given that quality of health services needs to be captured, a more complicated incentive approach could be introduced. For example, different payment rates could be used based on whether or not the delivered service followed the service delivery protocol, creating an incentive to deliver better quality. For example, a health care worker or health care institution could be paid for enlisting pregnant women for antenatal care (before the 20th week of pregnancy) or according to the proportion of marginalised women reached or population coverage achieved.[52]

In addition to the case-based incentive, a coverage indicator could also be introduced for PBP. The denominator of this coverage is the targeted population, such as all registered pregnant women, all children under the age of five, or all HIV-positive individuals. The numerator of this indicator is the number of patients in this targeted population who actually received the desired intervention or achieved the desired outcome from the intervention. Payment based on the coverage indicators could be either linear or nonlinear. Linear coverage incentive would pay the same amount for each 1 percent of coverage, while nonlinear incentive might pay only if the coverage reaches or exceeds a specific level, such as requiring that 85 percent of two-year olds be fully immunised.[53]

Performance targets may not and cannot be defined once and for all. Repeated adjustments of indicators are needed to steer the programme toward better performance. PBP is a learning process, and timely and periodic adjustments regarding performance targets, incentive amounts, and incentive structure to obtain desired results may be required during the implementation of the scheme.[54]

[52 53 54]Musgrove, P. (2010). *Financial and Other Rewards for Good Performance or Results: A Guided Tour of Concepts and Terms and a Short Glossary.* The World Bank. http://www.rbfhealth.org/rbfhealth/system/files/rbf%20glossary%20long.pdf

5 Policy Considerations

The literature review shows that many developing countries are piloting or scaling up their PBP programme to meet Millennium Development Goals and other health indicators. Although each country's experience with PBP is different, all countries and stakeholders will benefit from sharing their experiences and lessons learned regarding PBP scheme design, implementation, evaluation, and scale-up.

The review of the ASHA PBP scheme and literature describing other developing country examples identified the following successful interventions that are transferrable to other countries: developing an implementation guideline, introducing fixed payment days, introducing electronic funds transfer, communicating regularly with ASHAs about programme implementation, and putting a strong management system in place.

Based on these promising practices, this literature review proposes several policy considerations, which are listed below. Some of these considerations are directly or indirectly related to the challenges that the current ASHA PBP schemes face, as depicted in Table 3. However, all of these considerations could be integral to improving performance of ASHA PBP scheme in India.

Table 3. Recommendations to address challenges to ASHA PBP system

Challenges	Recommendations
Payment delays	• Introduce a multi-level PBP system • Develop a PBP system on institutional basis, rather than at the individual level
Lack of clarity on the payment processes	• Introduce a multi-level PBP system • Develop a PBP system on institutional basis, rather than at the individual level • Improve ASHA training
Lack of data on how incentives affect outcomes	• Continue M&E and operational research efforts • Introduce/strengthen self-assessment with an auditing system
Lack of transparency and adequate governance	• Introduce a multi-level PBP system • Develop a PBP system on institutional basis, rather than at the individual level • Organise state-level workshops regularly to share the experiences and lessons regarding the design, implementation, and evaluation of PBP schemes
Competition with other providers	• Promote full-time ASHAs with appropriate payment • Improve ASHA training
Compensation not keeping pace with expectations	• Promote full-time ASHAs with appropriate payment • Continue M&E and operational research efforts • Combine non-financial incentives with the payment system • Further enhance the relationship between ASHAs and the community • Improve ASHA training

Strategic-level Recommendations

Strategic-level considerations would require strong political support, structural change/improvement, a careful feasibility analysis and long term preparation process before implementation.

(1) Introduce a multi-level PBP system: At present, the PBP scheme for ASHAs is only focused on one level – the ASHA level – which means that only payments for ASHAs are based on their performance. Other parties that are part of the ASHA PBP system, such as supervisors (ANM and AWW), local government payers (accountant, treasurer, or cashier), and local governments, are still paid based on the traditional method. There is no financial incentive or other means to make them accountable in terms of funding availability, timely payments, and avoidance of corrupt behaviours. PBPs can be applied between central and local government and between government and ASHA supervisors and payers at the local level in order to achieve desired objectives.

(2) Develop a PBP system on institutional basis rather than at the individual level: The current ASHA PBP system takes place at the individual level, which leads to inefficiencies in processing contracts and payments. In addition, it opens the door to corrupt practices. The GOI could consider developing the PBP system in partnership with either local NGOs or health facilities, which could be paid, based on the performances of the ASHAs they supervise and their own supervisory and institutional performance. These organisations would then pay each ASHA based on the PBP contract. Monitoring the local organisations will be easier for the government than assessing each ASHA individually. This model, which is common globally, has been piloted in India. In the ASHA Plus project, local NGOs were not only involved in ASHA Plus workers' recruitment, training, and supportive supervision, but also were responsible for the payment to ASHAs based on their performance.[55] This model could be evaluated more rigorously in order to assess its effects on ASHA's PBP performance and feasibility for scale-up.

(3) Promote full-time ASHAs with appropriate payment: Like CHWs in many other countries, ASHAs are considered to be voluntary health workers. They have a higher workload with lower payment and their job security is uncertain. All of these factors affect their performance and sustainability. Experiences in many countries suggest that full-time jobs for CHWs with both preventive and curative functions would make their payment more reasonable and make their job more sustainable.[56] It could be worthwhile to explore the feasibility of adding to ASHA functions, the services typically delivered by other local health workers (ANMs, AWWs, etc.) in order to make the ASHAs' job a full-time pursuit.

Programme-level Recommendations

Unlike the strategic-level considerations mentioned above, programme-level recommendations can be implemented by a programme officer in the short term.

(4) Introduce/strengthen self-assessment with an auditing system: An M&E system is essential for any PBP system. Self-assessment with auditing has been recommended globally as an effective and less expensive method for developing countries. Although self-assessment has been introduced in the ASHA PBP system, it is unclear how well it is functioning. A study found that only about 70 percent of ASHAs maintained information related to delivery cases, immunisation of children, antenatal care, and birth and death registration.[57] There is no information on how the self-recorded information was verified. Introducing and strengthening self-assessment with an auditing system could be one of most cost-effective approaches to improve ASHA's PBP system.

[55]USAID/India. (2008). *Innovations in the Health Sector.* 8th USAID/India, SO14 Partners' Meeting, June 20, New Delhi

[56]Prasad, B.M., and Muraleedharan, V.R. (2007). *Community Health Workers: A Review of Concepts, Practice and Policy Concerns, 2007.* International Consortium for Research on Equitable Health Systems (CREHS), Department for International Development (DFID).

[57]Centre for Operations Research and Training (CORT). (2007). *Assessment of ASHA and Janani Suraksha Yojana in Orissa.* http://www.cortindia.com/RP%5CRP-2007-0303.pdf

(5) Introduce quality and coverage measurements: Though utilisation indicators are easy to implement, a fee-for-service based payment system neglects the quality improvement opportunity that PBP might be able achieve. To increase the quality of the services that ASHAs deliver, for example, payments could be linked to women and children receiving services according to quality guidelines (e.g. four antenatal care visits, postnatal and newborn care visits) or outputs (e.g. women practicing exclusive breastfeeding, complete immunisations etc.). ASHAs' payments could be also linked with the time at which a pregnant woman is enlisted for antenatal care (before the 20th week of pregnancy) or to the proportion of marginalised women she has reached or population coverage she has achieved. Coverage indicators could be also introduced into the PBP scheme to encourage ASHAs to bring more targeted pregnant women into the programme.

(6) Organise state-level workshops regularly to share the experiences and lessons regarding the design, implementation, and evaluation of PBP schemes: Currently India is implementing the largest experiment on PBP, with different states implementing various designs. Sharing of experiences and lessons learned across states is very important and should be treated as a regular and critical activity for improving the design and implementation of PBPs.[58] Such dissemination is already included in NHSRC's mandate and the organisation is facilitating exchanges among states. However, this role needs to be reinforced to ensure more frequent knowledge-sharing among states regarding PBP schemes.

(7) Combine non-financial incentives with the payment system: While financial incentives are indeed powerful tools for increasing productivity and improving performance, non-financial incentives also need to be taken into consideration. A study from India revealed that ASHAs were interested in charity and self-esteem as well as in financial incentives.[59] [60] According to a 2011 NRHM evaluation of the ASHA programme, "the ASHA commands the respect of the community and is driven by her enthusiasm to contribute despite the odds."[61] More importantly, well-developed career paths are one of the more important motivating factors for ASHAs.[62] A desire to improve health of families in their village and social prestige associated with their job also figured in the top three reasons why women chose to become ASHAs. In addition to revamping the financial compensation structure and processes, innovations must be considered to place ASHAs on a progressive career track where the potential for upward movement and recognition in their careers will also greatly contribute to their motivation, and thus, their performance.

(8) Strengthen the relationship between ASHAs and the community: One of the key recommendations at the meeting of the National Consultation on Technical Resource Group, an ASHA Mentoring Group, is to pay ASHAs through Village Panchayat/Village Health and Sanitation Committees (VHSCs)[63] to strengthen the relationship between ASHAs and their community, improve the effectiveness of ASHAs, and make the payment done at the community level. Worldwide experience shows that enhancing the relationship between CHWs and communities is critical to CHW success. It is recommended that a community be involved in all aspects of a CHW programme, including selection, training, and supervision of the cadre, as well as in using their services and contributing in-kind payments. It has also been found that

[58]Dagur, V., Senauer, K., and Switlick-Prose, K. (2009). *Paying for Performance: The Janani Suraksha Yojana Program in India.* Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

[59]Nandan, D., Et Al. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.* http://nihfw.org/pdf/RAHI-II%20Reports/GORAKHPUR.pdf

[60]Nandan, D., Et Al. (2008). *A Study of Interface of ASHA with the Community and the Service Providers in Eastern Uttar Pradesh.* http://nihfw.org/pdf/RAHI-II%20Reports/GORAKHPUR.pdf

[61]National Health Systems Resource Centre. (2011). *ASHA: Which Way Forward? Evaluation of ASHA Programme.* New Delhi. http://nhsrcindia.org/download.php?downloadname=pdf_files/resources_thematic/Community_Participation/NHSRC_Contribution/ASHA_Which_Way_Forward_-_Evalaution_of_ASHA_Programme_Report_NHSRC_417.pdf

[62]Sinha, A. (2008). *Health System Strengthening Using Primary Health Care Approach.* Regional Conference on "Revitalizing Primary Health Care", Jakarta, Indonesia, 6-8 August. http://www.searo.who.int/LinkFiles/Conference_Panel-D3.pdf

[63]National Consultation on Technical Resource Group, National Health Systems Resource Centre (2008). Technical Resource Group Meeting Minutes. National Institute of Health & Family Welfare, New Delhi.

developing a formal relationship between CHWs and community organisations is useful in supporting and sustaining the role of CHWs.[64] However, the experience of using community organisations for the PBP scheme, especially in processing payment to the CHW, has not been documented. The success of using VHSC as a payment agent in the ASHA PBP scheme in India could provide a valuable contribution to the existing knowledge on improving the effectiveness of CHW programmes.

(9) Continue M&E and operational research efforts: Although PBPs have been in existence in developing countries for the past 15 years and PBP for ASHAs in India is more than five years old, there is limited evidence on the impact of PBP, particularly with regard to its cost-effectiveness. Given the lack of convincing evidence on the effects and cost-effectiveness of financial incentives and risk of unintended economic effects, ongoing M&E and operational research of PBP schemes is critical.[65] Possible further research could include the impact of PBP on health care utilisations and health outcomes, the impact of PBP on quality of services, the cost-effectiveness of PBP schemes, the potential functionalities of full-time ASHA system and its operational costs, a pilot on multi-level PBP for ASHAs, and the impact of non-financial incentives on ASHA's productivity.

(10) Improve ASHA training: The Vistaar Project experience indicates that educating ASHAs about their roles vis-à-vis other health workers reduces competition between them. Such training would increase cooperation between front line health workers to serve their communities' health needs, especially with regard to services that require their complementary skill sets, such as VHNDs. ASHA orientation could also include an overview of the PBP system to improve knowledge of payment amounts and processes among ASHAs.

[64]Kantengwa, K., Et Al. (2010). *PBF in Rwanda: What Happened after the BTC-experience?* Tropical Medicine and International Health 15(1): 148–149.

[65]Oxman A.D., and Fretheim A. (2008). *An Overview of Research on the Effects of Results-Based Financing.* Report Nr 16-2008. Oslo: Nasjonalt Kunnskapssenter for Helsetjenesten, http://hera.helsebiblioteket.no/hera/bitstream/10143/33892/1/NOKCrapport16_2008.pdf

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Annex A. Salient Features of ASHA Payment System in Select States[66 67 68 69 70 71]

State	Guidelines	Mode of Payments	Fixed Days for Payments	Guidelines for Supportive Supervision/ Mentoring	Facilitators	VHSC	Other Remarks
Orissa	Guidelines issued	Cheque or mail transfer	10th day of every month	• Issued • District ASHA coordinators in place • ASHA Diwas organised in districts	At state, district, and block levels	Gaon Kalyan Samitis formed with ASHA as member secretary	-
Kerala	Guidelines issued. Specific provisions for incentives	Cheque or mail transfer	Before 25th day of succeeding month	• Issued	NA	NA	-
Rajasthan (ASHA Sahyogini)	• Joint initiative of Department of Social Welfare and Department of Health and Family Welfare • Extra fixed payment and extra training from Department of Social Welfare	Cheque at facility itself		• Support structures recently operationalised at state and district levels • State resource centre also established	• District ASHA coordinators in 23 districts. • 237 block ASHA coordinators and 1,503 primary health care ASHA coordinators in place	NA	Details about the support system right from state to village level have been specified with sub-centre as focal point for incentive payments

[66] National Health Systems Resource Centre. (2009). *ASHA Support Progress Matrix. Update on Progress of ASHA Scheme. Empowered Action Group States up to June*. New Delhi.

[67] National Health Systems Resource Centre, New Delhi Training Division, Ministry of Health and Family Welfare, New Delhi. *Update on ASHA Programme* (2010)

[68] Agnihotri, V. *ASHA Sahyogini Intervention in Rajasthan.* PowerPoint Presentation.

[69] Government of Kerala, Annexures 2009

[70] Government of West Bengal, Department of Health and Family Welfare. *ASHA Implementation Guidelines*.

[71] Mission Directorate, NRHM, Health and Family Welfare Department, Government of Orissa. *Supportive Supervision Mechanism for the Implementation of ASHA Activity*.

State	Guidelines	Mode of Payments	Fixed Days for Payments	Guidelines for Supportive Supervision/ Mentoring	Facilitators	VHSC	Other Remarks
Chhattisgarh (Mitanin)		Payment system is said to be weak		Support system for Mitanins in place right from state level to sector level	Help desks in all CHCs and at district level	NA	-
Madhya Pradesh	Schedule of payments not available	Cheque payment for JSY and cash for immunis-ation		• Meetings held monthly in some districts and quarterly in others • No travel allowance/ daily allowance given to ASHA for attending meetings • State Resource Centre not operational	NA	• ASHA VHSC link weak • Little converg-ence with ANM and AWW	-
Uttar Pradesh	Guidelines for monthly meetings and ensuring payments transmitted to districts	JSY money given through account payee cheque		Guidelines for constitution of district ASHA mentoring group issued	ASHA quarterly newsletter, ASHA Sammelan, and annual awards in place	NA	-
Bihar	• Schedule of payments not available • Payment to ASHA is not clear	• JSY payme nt by cash • For others, cheque / wire paym-ent started late	NA	• Support system weak • ASHA Diwas organised • Monthly meeting are to be held on the last Thursday of the month • ASHA Resource Centre at state level not yet fully operational	• Commun-ity mobilise-rs being recruited • Mentori-ng group under process	NA	–

State	Guidelines	Mode of Payments	Fixed Days for Payments	Guidelines for Supportive Supervision/ Mentoring	Facilitators	VHSC	Other Remarks
Jharkhand (Sahiyya)	Payment available with Medical Officer In-Charge	JSY payment by cheque and others by cash	NA	• Resource centre formed at state level • Weak at district and sub-district levels • Monthly meeting at block primary health care level	District mobilisers being hired	NA	-
Uttarakhand	Payment schedule not available	Payment for JSY and immunis-ation by cheque	NA	• Good support system at all levels • State mentoring group established • Reporting and monitoring format developed	NA	NA	An experiment of ASHA Plus operational in the state
Assam	Incentive payments by cheque	NA	NA	Good support system at all levels	NA	NA	ASHA involved in newborn and sick child care
West Bengal	Fixed compensation package	NA	NA	NA	NA	NA	-

NA- Not available

Annex B. Country PBP Case Studies

Philippines[72]

In the Philippines, PBP is being implemented with the goal of increasing institutional delivery and increasing the role of skilled birth attendants in helping disadvantaged women deliver their babies in a health facility. Funded through the Department of Health and municipal local government units, the PBP became part of the Women's Health and Safe Motherhood Project 2 in Sorsogon and Surigao del Sur areas in 2006. The schemes covered about 1.2 million people, 700,000 in Sorsogon and 500,000 in Surigao. This PBP is applied to the Women's Health Team (WHT), of which there is at least one in every *barangay* (village). A midwife heads the WHT, assisted by village health workers and traditional birth attendants. With the introduction of institutional delivery, the responsibilities of the WHT shifted from providing delivery service directly to encouraging women to deliver in an appropriate health facility within the catchment area. When the WHT refers a woman to a health facility for delivery, the WHT is eligible to receive a payment. The WHT receives PhP 1,000 ($21.73) for every delivery by a poor mother it refers and assists during delivery at a health facility. The payment is not received until delivery occurs at a facility and the WHT completes a Certificate of Eligible Facility-based Childbirth signed by the health facility manager. The WHT then submits this certificate to the local government unit accountant, treasurer, or cashier, who pays the incentives. Payment may be in the form of a cheque or in cash. No information is available regarding how the payments are shared among WHT members. To facilitate record-keeping, a cumulative monthly payment is made to WHT members when possible. In addition to the supply-side incentive, mothers are given PhP 500 ($10.87) to cover birth-related expenses such as transportation to the facility, medicines, medical supplies, and food during their stay at the facility.

The results from a rapid assessment revealed that institutional delivery increased about 7.6 percent within three months (November 2008 to January 2009) in Surigao del Sur. In tracking 50 percent of the eligible pregnant women over the period, the assessment found that hospital-based deliveries had increased from 52.8 percent to 56.6 percent and home-based deliveries had decreased from 45.4 percent to 42.4 percent. The assessment also indicated that delay in payment is an important operational problem. Some local government units did not provide 2007 incentive payments for WHTs until 2008 or 2009.

China[73 74]

In China, the village doctor (a CHW) is a frontline health worker in rural areas. Most of these doctors received one year of training in a local health school. After obtaining a licence from the local (county) health bureau, they can provide curative services to local residents and receive fee-for-service cash payments from patients as their major source of income (before new community health insurance schemes were introduced in 2003). In addition, they receive certain amount of payments from the government to provide certain public health services, including maternal and child health services and infectious

[72]Gonzales, G., Eichler, R., and Beith, A. 2010. *Pay for Performance for Women's Health Teams and Pregnant Women in the Philippines.* Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

[73]Morgan, L. (2010). *Successful Tuberculosis Control Program in China Incorporates Results-Based Financing.* http://www.rbfhealth.org/rbfhealth/system/files/RBF_FEATURE_China_TB.pdf

[74]Beith, A., Eichler, R., and Weil, D. (2007). *Performance-Based Incentives for Health: A Way to Improve Tuberculosis Detection and Treatment Completion?* CGD Working Paper #122, http://www.cgdev.org/files/13544_file_TB_final.pdf

disease control services. Government payment is linked to the village doctor's performance status, such as immunisation rate, infant and mortality rate, and infectious disease report rate. One PBP example cited widely is the tuberculosis (TB) control programme. In 1990, TB was still the leading cause of death among adults in China. One year later, China initiated a 10-year Infectious and Endemic Disease Control (IEDC) project to control the TB epidemic. In partnership with the World Bank and WHO, Directly Observed Treatment, Short Course (DOTS) was implemented. The programme achieved 100 percent DOTS coverage, 77 percent case detection, and a 92 percent cure for detected smear-positive patients – all exceeding initial targets. One of the key elements to which project success was attributed was the application of performance-based incentives. During the project period, the local government paid case-finding and case-management fees to the village doctors, about US$1 for each new smear-positive case enrolled in treatment, US$2 more when the smear exam was performed following two months of treatment, and US$4 after completion of the treatment. Local government covered the case-finding fee, while payment for the case-management fee was paid in equal parts by the World Bank and local government and the Global Fund to Fight AIDS, TB and Malaria.

Cambodia[75]

Cambodia offers another well-known PBP scheme that provides financial incentives directly to the health workers, though not CHWs. This scheme has been expanded as a countrywide programme and is now part of national policy applied in all health facilities. Most government health facilities in Cambodia perform poorly, due to lack of funds, inadequate management, and inefficient use of resources, but mostly due to poor motivation of staff. The Ministry of Health (MOH) started an experiment of contracting NGOs to provide health services in eight districts covering a population of 1 million. Both contract-out and contract-in are used in this experiment. After the NGOs obtain the contract, they introduce PBP to individual health workers in the health facilities. Contracts are signed with each health worker according to the following formula: the basic monthly incentive payment accounts for 55 percent (basic salary), the punctuality incentive accounts for 15 percent (no days absent), and the performance bonus accounts for 30 percent (based on facility-based target). The NGO signs a subcontract with the MOH Operational District Director, who then becomes partially responsible for the monitoring of the health facilities. Both internal and external reviews showed that after three years of implementation, the utilisation of health services in the contracted districts improved significantly, in comparison to the control districts. Patients thought the fees, though increased, were reasonable, because they were still lower than when government health workers charged informally. Patients also thought that the services were of better quality than in the unregulated private sector. Another important result was that combining strict monitoring with performance-based incentives demonstrated a 40 percent decrease in total family health expenditures, from US$ 18 to US$ 11 per capita per year.

Rwanda[76][77]

In Rwanda, the MOH and its operational partner, the international NGO HealthNet International, introduced PBP in Kabutare district in 2002 to improve productivity in the public health system. Before the introduction of the PBP, staff members at the pilot health centres had benefited from a fixed-bonus system (in addition to salaries). Under the new scheme, the staff members still kept their base salaries paid by the government or the health facility with revenue raised through user fees, while the fixed-bonus system was replaced by PBP remuneration to the health centres. In 2003,

[75]Soeters, R., and Griffiths, F. (2003). *Improving Government Health Services through Contract Management: A Case from Cambodia.* Health Policy and Planning; 18(1): 74–83

[76]Meessen, B., Kashala, J.I., and Musango, L. (2007). *Output-Based Payment to Boost Staff Productivity in Public Health Centres: Contracting in Kabutare District, Rwanda.* Bulletin of the World Health Organization 85: 108–115.

[77]Kantengwa, K., Et Al. 2010. *PBF in Rwanda: What Happened after the BTC-Experience?* Tropical Medicine and International Health 15(1): 148–149.

payments for purchased services were as follows: RWF 40 per consultation (new case); RWF 250 per pregnant woman whoreceived between second and fifth dose of tetanus toxoid (TT); RWF 1,000 per new acceptor of family planning; RWF 500 per fully immunised child; and RWF 2,500 per assisted delivery. With the PBP remuneration, the health centres paid bonuses to their staff members. The results of this pilot showed that the productivity of staff in public health facilities has increased; however, five potential risks have been identified in terms of implementing the PBP scheme based on remuneration of a given list of key services. Under the incentives, the staff members were more likely to (1) report an inflated rate of delivery of remunerated services; (2) induce unnecessary demand for the remunerated services; (3) provide remunerated services regardless of a lack of required competence or inputs; (4) neglect services that are not remunerated; and (5) increase quantity of remunerated services, to the detriment of quality. Since 2005, the national PBP schemes have been implemented in all the health centres (about 400). The PBP scheme became an exceptional instrument for health system strengthening in Rwanda.

Bangladesh[78]

This country case is purposely selected to demonstrate potential effects of non-financial incentives on service delivery improvement. In 1998, the Damien Foundation Bangladesh invited semi-qualified, private "*gram dakter*" (village doctors) to participate in TB programmes in rural Bangladesh with a population of 26 million people. At least one village doctor was available for every 2,000 people. The organisation trained and supervised 12,525 village doctors to refer suspected TB cases for free diagnosis and to provide directly observed treatment (DOT) free of charge. Source of referral and place of DOT were recorded as part of the standardised TB recording and reporting system. Village doctors were often the first contacts for patients with symptoms of TB. The contribution of the village doctors to this large, well-performing TB project was substantial: 10 percent of all suspected referral cases, nearly half of the more than 12,000 patients put on DOT each year, and a remarkably high cure rate of about 90 percent. It is worthy to note that no financial incentives were used in this well-performing TB programme. Several factors have been identified as potential motivators of the effective participation of the village doctors, including "recognition of the village doctor by a reputable organisation, free access to training and knowledge updates, the confidence shown in them by giving them TB drugs, the subsequent social respect and credibility they gain in the community because of this, and the increase in their clientele and business as a result".

[78]Hamid Salim M.A., Uplekar, M., Daru, P., Aung, M., Declerq, E., and Lönnroth, K. (2006). *Turning Liabilities into Resources: Informal Village Doctors and Tuberculosis Control in Bangladesh.* Bulletin of the World Health Organization 84: 479–484. Doi: 10.2471/BLT.05.023929.

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