

The Gambia Maternal and Child Nutrition and Health Results Project

Impact Evaluation Concept Note

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Introduction and Background

Results-based financing

Results-based financing (RBF) in the health sector has been defined as a financing mechanism where cash or non-monetary transfers are made to a national or sub-national government, manager, provider, payer or consumer of health services after predefined service delivery or health outcomes results have been attained and verified (Brenzel 2009). RBF can be supply-side or demand-side initiatives that aim to improve efficiency, address bottlenecks, and improve health system function through strategic purchasing and increased autonomy of various actors in the health system. An increasing number of countries are implementing RBF approaches as an alternative to input-based financing, and many of these countries have been employing a performance-based financing (PBF) approach, a particular type of RBF in which health facilities are rewarded monetarily for producing predefined results in terms of quantity and quality of agreed services, subject to verification of those outputs by an independent party. PBF schemes have attained national coverage in Rwanda, Burundi, and Sierra Leone, and are being piloted in different sub-Saharan countries, among them: Central African Republic, Zimbabwe, Zambia, the Democratic Republic of Congo (DRC), Benin, Cameroon, Chad, and Burkina Faso.

Concurrently, a range of evaluations have been conducted and are ongoing to assess RBF programs and learn about their impact. Initial evidence from PBF pilots in low-income countries suggests that linking payment mechanisms to defined outcomes can lead to increased service coverage and improved service quality for maternal and child health services (Basinga et al., 2011; Meessen et al., 2007; Meessen et al., 2006). Despite these positive prospects, evidence on the impact of RBF remains limited at this time (Oxman and Fretheim 2008; Oxman and Fretheim 2009; Witter et al. 2012). More evidence from rigorous experimental or quasi-experimental evaluations is needed (Gorter & Meessen, 2013; Jahn et al., 2013). In addition, the evidence base on demand-side RBF is limited (e.g. conditional cash transfers (CCTs), vouchers, community RBF).

Several reviews of evaluations of RBF emphasize that research should also focus on *why* and *how* interventions work and determine factors of success through rigorous measurements (Eichler et al. 2009; Elridge and Palmer 2009; Ireland et al. 2011) as well as qualitative methods (Witter et al., 2012; Freitheim et al., 2012). Thus, it is becoming increasingly evident that it is not sufficient to understand whether RBF works. More information would be useful for policymakers about why some health output or outcome indicators moved, and others not. What factors affected RBF performance? What was the role of the health system and broader contextual factors? Conversely, did RBF have any effect on the health system and if so, how? Were the assumptions made when the program was designed being met in practice? Addressing these questions requires going beyond a linear causal chain approach to a broader conceptual and methodological approach.

Health and nutrition in The Gambia

The Gambia is a small country in West Africa with a population of approximately 1.9 million (2013). The population has been growing at a fairly high rate of 3.3 percent per year over the last decade. The Gambia is a low income country with average per capita Gross National Income (GNI) estimated at US\$510 (2012) which is less than half of the sub-Saharan African average of US\$1,255. In the 2013 Human Development Index, the country was ranked 165 out of 187 countries. Life expectancy at birth for the average Gambian was 59 years in 2012. Poverty in The Gambia is pervasive in spite of a noticeable decline of overall poverty rates during the last decade. The overall poverty head count index is estimated at 33.6 percent (upper poverty line: US\$1.25 a day). The Gambia has had strong economic performance in recent years with an average annual real GDP growth rate of 6-7 percent during 2005-2010. However, economic growth in The Gambia – no matter how impressive – has not been inclusive. There are large regional variations of poverty within The Gambia, with rural areas recording a substantially higher poverty head count (73.9 percent) compared with urban areas (32.7 percent).

The Gambia's performance on MDGs 1c, 4 and 5 has been mixed. While better off than the sub-Saharan African average for under-five mortality rate (U5MR) and maternal mortality ratio (MMR), The Gambia's performance is lagging behind regional peers like Ghana and Senegal. U5MR and MMR have declined since 1990, but the progress has been modest in relation with the millennium development goals (MDG) 1c, 4 and 5. Preliminary data from the 2013 Demographic Health Survey (DHS) show encouraging results for child mortality with an estimated U5MR of 54 per 1,000 live births. The preliminary data from the 2013 DHS shows no change in underweight prevalence since 2000, i.e., 16 percent. According to the 2013 State of the World's Mothers (Save the Children 2013), The Gambia ranks 170 out of 176 countries on the Mother's Index just above Mali, Niger and Central African Republic but behind countries like Chad, Guinea-Bissau and Nigeria.¹ Furthermore, nutrition and health outcomes vary strongly between the rural eastern regions and urbanized western regions of The Gambia with the eastern regions making less progress on these indicators.

Maternal health indicators continue to perform poorly. Total fertility rate (TFR) appears to have increased from 5.1 in 2005 to 5.6 children per woman while contraceptive prevalence rate (CPR) has dropped from 13 to 9 percent (Table 1). Unmet need for family planning is estimated at 22 percent. The percentage of women who had skilled attendance at delivery – 57 percent – has remained unchanged since 2005. At least one antenatal care (ANC) visit by a skilled provider, nearly universal in 2005/06, has dropped to 86 percent (2013) and does not vary by level of education. The recommended four ANC visits were completed by only 72 percent of women in

¹ Indicators of the 2013 Mother's Index include: (i) Lifetime risk of maternal death; (ii) Under-5 mortality rate; (iii) Expected years of formal education; (iv) Gross national income per capita; and (iv) Participation of women in national government

2010 (MICS 2010). Moreover, most women do not have their first ANC in the first trimester, jeopardizing healthy outcomes for both mother and child. Furthermore, teenage pregnancies are common, resulting in a high adolescent fertility rate of 118 per 1,000 and nearly 20 percent of adolescent girls age 15-19 having begun childbearing (MICS 2010). Pregnancy in adolescence raises the risk for maternal mortality, morbidity and child malnutrition. Utilization of health services by youth is low, and few facilities offer youth-friendly reproductive health services.

Table 1 Health outcome indicators, 2005/06 and 2010/13

	2005/06	2010/13	Trend *
Women's health			
Marriage before the age of 18 years	49	47	No change
Intermittent preventive treatment (IPT) for malaria	33	62	Improvement
Skilled attendance at delivery	57	57	No change
Antenatal care (at least one visit)	98	86	Deterioration
Contraceptive prevalence rate (any method)	13	9	Deterioration
Total fertility rate	5.1	5.6	Deterioration
Child Health			
Neonatal tetanus protection	76	71	Deterioration
Exclusive breastfeeding under six months	41	47	Improvement
Minimum feeding frequency	39	29	Deterioration
Vitamin A supplementation in children 6-59 months	80	73	Deterioration
Measles immunization by age 12 months	85	88	No change
Oral rehydration treatment	48	65	Improvement
Children under age 5 sleeping under insecticide-treated bed nets	49	47	No change
Antimalarial treatment of children under 5	52	12	Deterioration
Care seeking for suspected pneumonia	69	68	No change

* No change refers to any difference that is less than 5 percent difference of the 2005/06 value

Source: MICS 2005/06, 2010, DHS 2013 Preliminary Report and World Bank Development Indicator database

Improvement can be seen in some – but not all – child health indicators. Vitamin A supplementation increased considerably between 2000 and 2005 but has since dropped in 2010 (Table 1). While there is still room for further improvement, use of oral rehydration therapy with continued feeding has improved between 2005 and 2010. Similarly, exclusive breastfeeding rate has improved and is now 47 percent. The percentage of children sleeping under insecticide-treated nets has stagnated at 47 percent. Importantly, several outcome indicators are deteriorating, most notably, feeding frequency, vitamin A supplementation, and antimalarial treatment of children under five with fever.

Quantitative and qualitative assessments conducted at the household and facility levels indicate a number of barriers to better health and nutrition outcomes.² The majority of demand-side constraints occur at the household or community level (except for attitude of providers toward patients) and are related to cultural obstacles; cost/out-of-pocket expenditures; inconvenience; and inadequate understanding about risks and benefits of seeking care or adopting a particular behavior. On the supply-side, the recently conducted rapid assessments suggest that poor health and service delivery outcomes stem from the health system experiencing insufficient financing; inconsistent infrastructure, equipment and supplies; and inadequate training, supervision and motivation of health providers.

The poor performance of the health service delivery system on maternal and child nutrition and health outcomes point to an operationally weakened PHC system and inadequate linkages between communities and the health system. In recent years, financing has been diverted from primary care to tertiary care, weakening primary health care provision and resulting in part in the deterioration of health and nutrition indicators. The current health strategy is to revitalize primary health care.

The limited central government spending on health has resulted in a transfer of the financial burden onto patients in the form of out-of-pocket expenditures. Total expenditure on health per capita in 2010 was US\$26 and the total expenditure on health was six percent of GDP. General government expenditure on health as a percentage of total health expenditure is 51 percent; out-of-pocket expenditure by poor families 24 percent; and external resources 25 percent. Although the policy is to provide free basic services – in particular maternal and child health services – households pay for food, transportation and laboratory services, medicines and medical supplies where they are not available at the time of seeking care. The high poverty head count at 48.4 percent means that out-of-pocket health expenditure constitute a major financial burden for a substantial part of the population despite the theoretically free provision of health services by the government. This is particularly important in rural areas, where 73.9 percent of the population are classified as poor (GBOS 2011).

Overview of The Gambia Maternal and Child Nutrition and Health Results Project

Previous experience with RBF in The Gambia (pre-pilot in one region)

An RBF pre-pilot has been implemented in one health region of The Gambia – North Bank Region West – since November 2013, covering three primary health facilities and their catchment area population. Despite the fact that the pilot only started recently, preliminary results indicate increases in service utilization, changes in attitude of health personnel, a stronger

² A Rapid Assessment of the Gambia PHC and Community Health & Nutrition Structures: a Mixed-methods approach 2014; A Rapid Assessment of Household Health Expenditures and Health Seeking Behaviors 2014

emphasis on outreach and relations with communities, and the empowerment of communities with an increased interest in new knowledge on healthy behaviors and health service delivery. In June 2014, just before the main project is expected to become effective, a review of the pilot experience is planned with the objective of drawing lessons that can be applied to the scaling up of RBF approaches.

The Gambia Maternal and Child Nutrition and Health Results Project (pilot in three regions)

The development objective of the new World Bank operation is to increase the utilization of community nutrition and primary maternal and child health services in selected regions in the Recipient’s territory. The project will be implemented in three Regions with some of the poorest performing indicators – the Upper River, the Central River and the North Bank West Regions (Figure 1). These three Regions currently account for one third of the total population. Over the five-year period of implementation, the project is expected to reach approximately 183,000 children under five and 180,000 women aged 15-49 years, yielding a total of 363,000 direct beneficiaries of the Project. The interventions will provide support through RBF arrangements with women, Village Development Committees (VDC) and Village Support Groups (VSG), and primary health facilities.

Figure 1 Map of the Regions of The Gambia



To achieve the expected improvement in health and nutrition outcomes, interventions will focus on strengthening community structures and the PHC system to enhance the quality and quantity of services by empowering individual women, communities and health workers to improve uptake, participation, ownership, caring practices and accountability for maternal, reproductive and child health and nutrition.

The proposed project – in the amount of US\$8.68 million (IDA + HRITF) – is composed of three components as described in Table 2. Components 1 and 2 will apply RBF mechanisms to address demand- and supply-side challenges as well as social and behavioral issues for improving maternal and child health and nutrition outcomes, respectively. Component 3 will strengthen overall management capacity (including monitoring and evaluation) of communities, local government and the health system to effectively engage in results-based management. Innovative aspects of this project are the combined use of RBF approaches on the demand- and supply-sides and at the community and PHC levels to improve health and nutrition outcomes. The roll-out of supply-side and demand-side interventions will be geographically coordinated to ensure operational costs and subsidy payments are kept within reasonable limits.

Table 2 Summary of project components

Component	Activities Supported
Component 1: Community mobilization for social and behavior change (US\$2.50 million)	<ul style="list-style-type: none"> • Conditional cash transfers to communities and support groups • Conditional cash transfer to pregnant women • Social and behavior change communication (SBCC)
Component 2: Delivery of selected PHC services (US\$3.78 million)	<ul style="list-style-type: none"> • Performance-based financing for health centers • Startup support (including selected health care waste management measures)
Component 3: Capacity building for service delivery and RBF (US\$2.40 million)	<ul style="list-style-type: none"> • Capacity building • M&E, operational research and verification • Coordination and program management at all levels • Performance contracts: RHT, HMIS, RBF Committee, NaNA*

* RHT: Regional Health Team; HMIS: Health Monitoring Information System; NaNA: National Nutrition Agency

Impact evaluation

Impact evaluation objectives

In collaboration with the National Nutrition Agency (NaNA) and the Ministry of Health and Social Welfare (MOHSW), the World Bank team has developed an evaluation and rollout design which will allow us to rigorously assess the impact of the RBF interventions described above on health related outcomes. Conceptually, the key objective of the impact evaluation is to assess the effectiveness and cost-effectiveness of the package of supply and demand side interventions developed for, and implemented at facilities and communities as part of The Gambia MCNHR project.

Research questions for the RBF IE in The Gambia

The overall research question of this impact evaluation is “ Does results-based financing improve health status and the utilization and quality of maternal and child nutrition and health services in The Gambia?” The primary research questions are grouped according to two broad categories:

Effect on nutrition and health outcomes:

Do supply- and/or demand-side interventions improve:

- Maternal and child health and nutrition outcomes (e.g. child mortality, stunting, breastfeeding, low birth weight)?

Effect on services and adoption of behaviors:

- Quantity of service utilization (e.g. skilled birth attendance, ANC, PNC, referrals from community to facilities, VAS, deworming, SAM treatment, OPD visits, uptake of contraception)?
- Adoption of healthy behaviors (e.g. hygiene and sanitation practices, knowledge of IYCF)?
- Quality of service provision?

Effect on intermediate outcomes along pathways of impact:

Do supply- and/or demand-side interventions have an effect on:

- Perceptions of seeking care?
- Staff motivation and satisfaction? VSGs and communities?
- Out of pocket payments for MCH services?
- Baby Friendly Community Initiative (BFICI) implementation?³
- Health facility infrastructure and village development?
- Linkage between communities & health facilities?
- Supervision of facilities & communities by RHTs?
- Health facility staff availability?
- Three delays for delivery care?
- Awareness/knowledge at community level?
- Data reporting and management?

A mixed methods evaluation will be conducted based on a conceptual framework that details out the pathways of impact for both interventions. This will allow the evaluation team to untangle the mechanisms behind the main quantitative results found and explain the overall implementation effectiveness of the project.

³ BFICI provides an entry point to address the nutritional and developmental needs of both mother and child at the community-level and also addresses environmental sanitation, personal hygiene, and equity.

Interventions that will be introduced to answer the IE research questions

The two main interventions introduced as part of the pilot projects are described in the following:

Intervention 1: Community mobilization for social and behavior change (Community RBF). This intervention will focus on community-based promotion of key family and community practices and health care seeking behaviors for improved maternal and child nutrition and health outcomes through:

- (i) Provision of *conditional cash transfers to communities and village support groups (VSG)* to increase demand for and utilization of health and nutrition services through counseling and timely referrals for life-saving health services (e.g., hygiene, sanitation, counseling on infant and young child feeding, delayed first pregnancy and child spacing, referral of pregnant women and children with danger signs to health centers);
- (ii) Provision of *conditional cash transfers (CCT) to individual women* to increase utilization of timely antenatal care; and

Village Development Committees (VDCs) will sign an RBF contract with the Regional Health Team (RHT). Payments will be quarterly and/or six-monthly for achieved performance on predefined indicators (Table 3). NaNA will verify the achievement of results and Community-Based Organizations (CBO) will counter-verify a sample of these results through patient-tracing and client satisfaction surveys. The list of incentivized indicators defined by NaNA and the MOHSW focus primarily on maternal and child health and nutrition. Achievement of results will be verified through reliability assessment of routine monitoring reports and community surveys. VDCs can use their payments for operating costs, community mobilization and performance-based incentives to individual members of the Village Support Groups (VSG).⁴ Incentives to VSG members can be up to 30% of the payment.

CCTs will be provided to women for timely antenatal care (ANC). They will receive a payment for completing their first ANC visit during the first trimester and an additional payment for following through with at least three more ANC visits in the course of pregnancy. Use of the services will be verified by NaNA using health center records. Once the data has been verified, payments will be transferred to women by the health centers where the services were provided. Note that the CCT to women for ANC will not be assessed as a separate intervention in the impact evaluation but rather as a part of the overall demand-side intervention. The evaluation will, however, explore this qualitatively.

⁴ VSGs are male and female members of the community (including Traditional Birth Attendants) who have supported implementation of the nutrition program at the community level, particularly the BFCI.

Table 3. Indicative list of incentivized RBF indicators for Intervention 1

Intervention 1	RBF Indicators
Conditional cash transfer with communities	<ul style="list-style-type: none"> • Number of women registering for ANC in the first trimester, completing 3 other scheduled visits • Number of women completing the minimum number of PNC visits as per WHO recommendations • Number of pregnant women and mothers with children under six months who can cite at least 2 advantages of exclusive breastfeeding • Number of lactating mothers who can correctly describe minimum acceptable diet* • Number of pregnant women being referred, evacuated and escorted by the TBA/VSG member to health facilities for delivery and medical attention • Number of households with latrines (as defined in POM) • Number of communities practicing environmental hygiene criteria (as defined in operations manual) • Community Registers being correctly updated and summaries submitted to the RHT
Conditional cash transfer with women**	<ul style="list-style-type: none"> • Pregnant women coming for ANC in first trimester and following through with at least three more ANC visits in the course of pregnancy

* Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk) is calculated from the following two fractions: Breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day

** Scaling up will be decided after completion and review of the pre-pilot

Intervention 2: Delivery of selected primary health care services (Health facility PBF). This component aims to support and incentivize the delivery of selected nutrition and health care services at primary health centers, and, where needed, also referral health centers. Health centers will receive performance-based payments for the delivery of a predefined package of maternal and child health and nutrition services at primary and referral health care facilities. A fee-for-service (FFS) mechanism which includes quantity and quality payments for a defined package of maternal and child health and nutrition services will be used. The list of indicators is displayed in Table 4. Health centers will sign an RBF contract with the MOHSW RBF Committee and receive quarterly payments corresponding to their achieved performance based on both the quantity and quality of services delivered.

NaNA will verify the achievement of quantity outputs. A quality assessment tool will be used by RHTs to assess the quality of services provided by the contracted health facilities each quarter. The tool has a broad variety of indicators such as cleanliness, quality of recordkeeping, availability of staff and supplies etc. In addition to the assessment of quality by RHTs, community-based organizations (CBOs) will be contracted by NaNA to undertake client tracer

and satisfaction surveys with a view to: (i) verify the authenticity of patients and services reported by a health facility; and (ii) capture patient feedback regarding the services they received. The total payment will be based on verification by NaNA, RHTs and CBOs. The FFS scheme will also take into account the additional challenges faced by facilities in remote areas by adjusting the fees upwards for the delivery of services in these areas.⁵

Table 4. Indicative list of incentivized RBF indicators for Intervention 2

Intervention 2	RBF Indicators
Performance-based payments to service providers (quantity and quality)	<p><i>Primary care level indicators:</i></p> <ul style="list-style-type: none"> • Number of women having received ANC in the 1st trimester • Number of women having received 3 additional ANC with quality check list (focused ANC) • Number of pregnant women delivering with skilled attendance • Number of post-partum mothers being provided with a minimum of 3 PNC services within 6 weeks of delivery • Number of referrals of women with pre-, intra- and post-partum complications • Number of women and adolescent girls supplied with modern methods of family planning (method-specific pricing) – disaggregated by age • Number of children 6-59 months administered VAS according to protocol • Number of children 12-59 dewormed according to protocol • Number of children referred for neonatal complications • Number of children with SAM on treatment according to protocol • Number of OPD visits • Quality check list for service delivery administered quarterly in line with the operations manual <p><i>Secondary level indicators:</i></p> <ul style="list-style-type: none"> • Number of pregnancies with complications before and during delivery requiring interventions • Number of mothers treated for postpartum complications • Number of infants treated for neonatal complications • Number of people provided with a permanent family planning method (tubal ligations, vasectomy)

Health centers can use their RBF payments for material and equipment, training, consulting services and operating costs, and staff bonuses that will ultimately improve service delivery. Staff bonuses can comprise up to 40% of the total payment received by the facilities. As part of the RBF contracting cycle, each health provider will develop a business plan which serves as a guide for future investments and use of RBF payments. RHTs will supervise health facilities to ensure that business plans are in place at the start of each contracting cycle.

Inclusion of health facilities in the impact evaluation. All minor and major public facilities in the project regions are included for both the supply-side intervention and the evaluation – this yields 24 in total (Table 5). Three of these facilities have already been participating in the pre-pilot. Hospitals are for referrals only, and we have included Farafenni Hospital, which is not in the project regions, as the referral hospital for North Bank West as the regular referral hospital is

⁵ Objective remoteness criteria are being finalized and will be outlined in the next version of the Project Operations Manual (POM) once the pricing assessment report has been incorporated.

inaccessible due to a ferry shutdown. There will be an equal number of facilities (12) in intervention and control groups.

Table 5 **Regions and health facilities included in the project and IE ($n = 24$)**

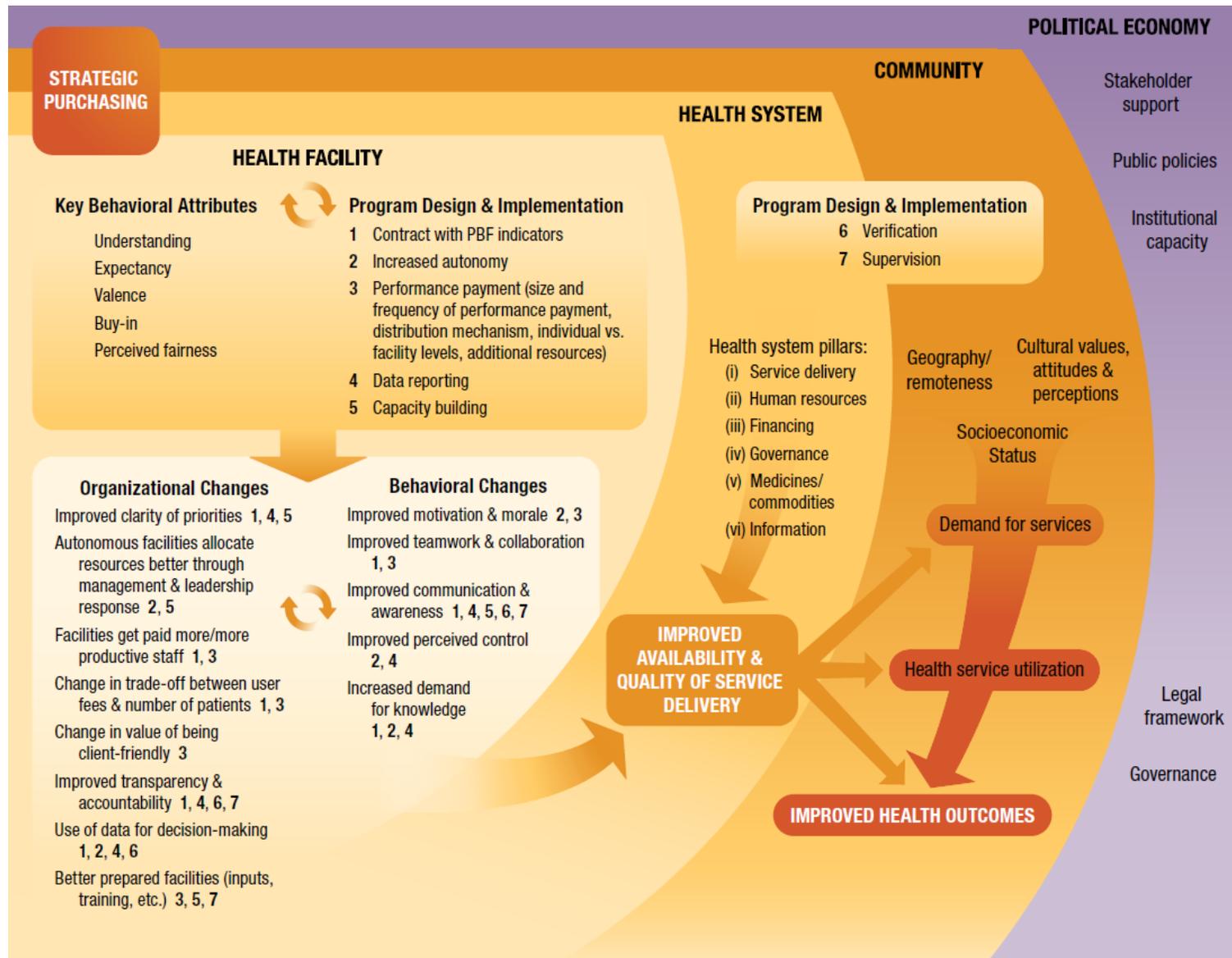
Region	Project Health Facility	Included in IE (Yes/No)	Included in pre-pilot (Yes/No)
North Bank Region West	1. Kerr Chernob	Yes	Yes
	2. Kuntair		
	3. Albreda		
	4. Essau Major Health Centre		No
	5. Nema Kunku		
	6. Farefenni Hospital (Referral hospital for Essau)		
Central River Region	7. Bansang RCH Clinic	Yes	No
	8. Bansang Hospital		
	9. Janjanbureh		
	10. Karantaba		
	11. Brikamaba		
	12. Kudang		
	13. Dankunku		
	14. Kaur		
	15. Chamen		
	16. Kuntaur Major Health Centre		
Upper River Region	17. Basse Major Health Centre	Yes	No
	18. Ganbissara		
	19. Fatoto		
	20. Bajakunda		
	21. Yerobawol		
	22. Demba Kunda Koto		
	23. Koina		
	24. Diabugu		

Conceptual framework: Theory of change and pathways of impact

RBF interventions are complex. Complexity means that in order to pinpoint how RBF programs work and ultimately impact health outcomes, there is a need for a systematic mapping of how one expects RBF to work and a need for rigorous testing of these hypotheses. We build on a conceptual framework that was developed for a supply-side PBF intervention and provides a systematic chain of interlinked elements (Hasan et al, forthcoming). The conceptual framework integrates principles from several theories about human behavior, including theory of change, expectancy/motivation theory and social ecological theory. Theory of change helps predict the likely behavioral and organizational changes that a program should bring about, expectancy theory helps identify the conditions for behaviors to change, and social ecological theory helps embed those changes in and across each level. The social ecological model also helps provide guidance for developing successful programs in social environments. We build on this framework to also include the behavioral and organization changes expected from the demand-side community-level interventions. The framework embeds the RBF interventions in four levels: health facility, health system, community and political economy. It links the four levels through the essential strategic purchasing, whereby different actors from different levels are linked through contracts and agreements. The changes occurring within one level influence and are influenced by changes occurring in other levels, represented by the nested nature of the framework. We map out the hypothesized pathways of impact, and by identifying (and measuring) both intermediate and final outcome variables, we aim to answer whether the interventions have an impact, how much of an impact, and the pathways through which impact is achieved or hindered (Rawat et al 2013). We illustrate our theory of change and pathways of impact for the supply- and demand-side interventions separately in Figure 2 and Figure 3 below, respectively. **The numbering in the figures indicates hypothesized direct causal links with program design features, and arrows indicate additional pathways of impact.**

For the facility-based PBF intervention, *within the health facility level*, the key features of the PBF design include the five numbered elements in Figure 2 (see top left corner of health facility level in Figure 2). Key characteristics of performance payments include its size, the frequency of payment, the extent to which it constitutes additional resources, the level at which the payment is made (in this project, the performance payment made to the facility can have up to 40% allocated for individual staff members with the remaining 60% for activities delineated in the business plan), and the distribution mechanisms for payments to staff (how it is distributed among staff members). Many pay-for-performance schemes have been evaluated within the scope of expectancy theory, because achieving these behavioral attributes are critical in the implementation of a program that expects systemic changes (Marsh et al. 2011). Expectancy/motivation theory suggest that for the program to be successful, it should be designed and implemented in such a way that key behavioral attributes are achieved: understanding, expectancy, valence, buy-in and perceived fairness (see top left corner of health

Figure 2 PBF conceptual framework for theory of change and pathways of impact



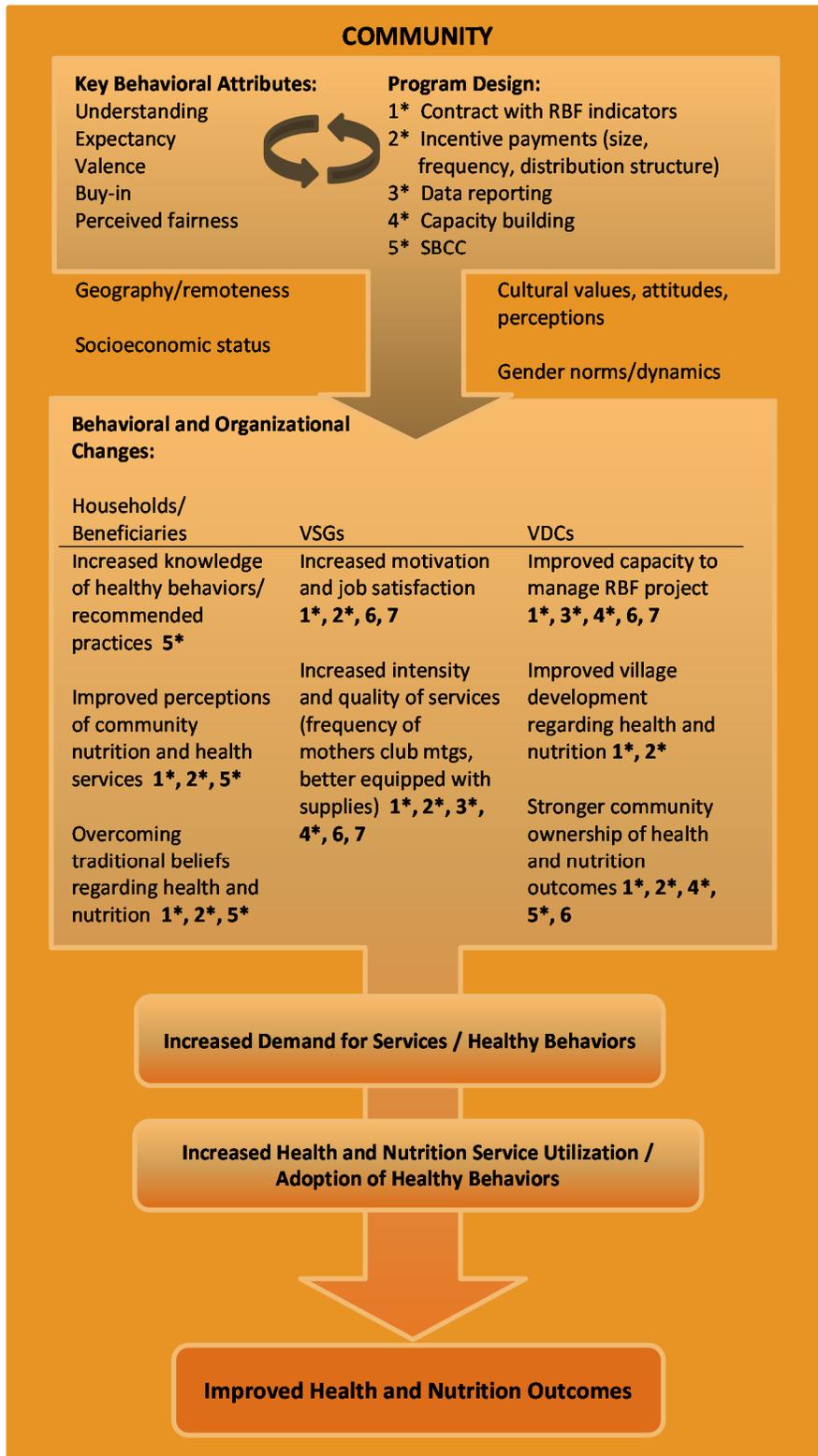
facility level in Figure 2).⁶

At the *health system level*, program design features of verification and supervision will impact how well the RBF is implemented at the health facility level (Figure 2). For example, Regional Health Teams are responsible for supervising health facilities and NaNA for verifying results. In addition, key general health system features influence both the design and future implementation of the RBF schemes as well as the overall availability and quality of services. *At the community level*, there are multiple pathways of impact. Community-level factors will influence not only the implementation of the community-level interventions but also effects of the facility-level PBF intervention (Figure 2). For example, greater distances between the community and the nearest health facility may dampen demand for services and hinder service utilization. In addition, health facility and health system factors – such as better service quality in facilities – may also induce greater demand for service utilization. *Finally, the political economy* exerts influence on the design and implementation of the scheme, and the implementation and results of the RBF program can also affect the political economy. For example, if there is strong support for the RBF from stakeholders at multiple levels, mobilizing sufficient support (financial and otherwise) is more likely, enhancing the likelihood of successful implementation. And conversely, implementation of an RBF pilot that achieves the expected results improves the political economy for expansion or scale-up of RBF.

The demand-side interventions will have additional pathways of impact directly at the community level. As illustrated separately in Figure 3, program design elements for the demand-side interventions are designated with numbers 1 – 5. All of these elements are premised on understanding, expectancy, valence, buy-in and perceived fairness of the actors involved (primarily VDCs, VSGs and household members of the communities). With the implementation of the interventions, we expect to see changes in behavior for these actors as well as changes at an organizational level. For community members, we expect increased knowledge of healthy behaviors, improved perceptions of community nutrition/health services, and overcoming of some traditional beliefs regarding health and nutrition. For VSGs, we expect increased motivation and job satisfaction, increased intensity, and improved quality of services. For VDCs, we expect improved capacity to manage the RBF program, improved village development regarding health and nutrition, and greater ownership of health and nutrition outcomes. The causal links between the program design elements and expected changes are indicated by the number of the design element. These behavioral and organizational changes are expected to result in an increased demand for services and healthy behaviors, leading to increased utilization of services and health and nutrition outcomes.

⁶ Understanding of the program is defined as having the knowledge of criteria by which incentives are awarded, the amount of money at stake, and the additional design features. Expectancy is the health facility staff's beliefs that they are capable of doing things that will enable them to achieve performance objectives. Valence is the belief that the incentives are sufficiently valuable or substantial to inspire the expected behavioral responses. Buy-in is the acceptance of the program and its criteria, and perceived fairness is the idea that staff believe the program design features and implementation are fair.

Figure 3. Demand-side RBF conceptual framework for theory of change and pathways of impact



The community-level interventions can also have an impact on the effectiveness of the supply-side PBF. For example, cultural values that favor delivering at home pose challenges that the PBF program alone may not be able to address. However, the community-level intervention may be able to adapt these such that families then value delivering with skilled personnel over delivering at home, increasing demand for services. Thus, both supply- and demand-side interventions are hypothesized to increase demand for services and healthy behaviors, which will lead to increased utilization of services and adoption of healthy behaviors, ultimately improving health and nutrition outcomes.

Study design

The overall approach for the evaluation is a randomized phased in 2 x 2 design (Figure 4). The preliminary plan for the supply-side foresees facilities in the three target regions to be enrolled in the project in two phases. In discussion with the Project Implementation Committee (PIC), it was decided that each phase for the supply-side roll-out will last 18 months which should provide a sufficiently long time window to allow the impact evaluation team to observe behavioral change. In total, 24 facilities will be enrolled: 12 selected facilities will be enrolled in Phase I (including the 3 facilities already enrolled), and 12 facilities will be enrolled in Phase II.

Figure 4. Study design

		Supply-side RBF: Health Facility	
		Comparison	Treatment
Demand-side RBF: Community	Comparison	A	C
	Treatment	B	D

Group A: control group – receives neither the supply-side health facility nor the demand-side community RBF interventions

Group B: intervention group – receives the demand-side community RBF only

Group C: intervention group – receives the supply-side health facility RBF only

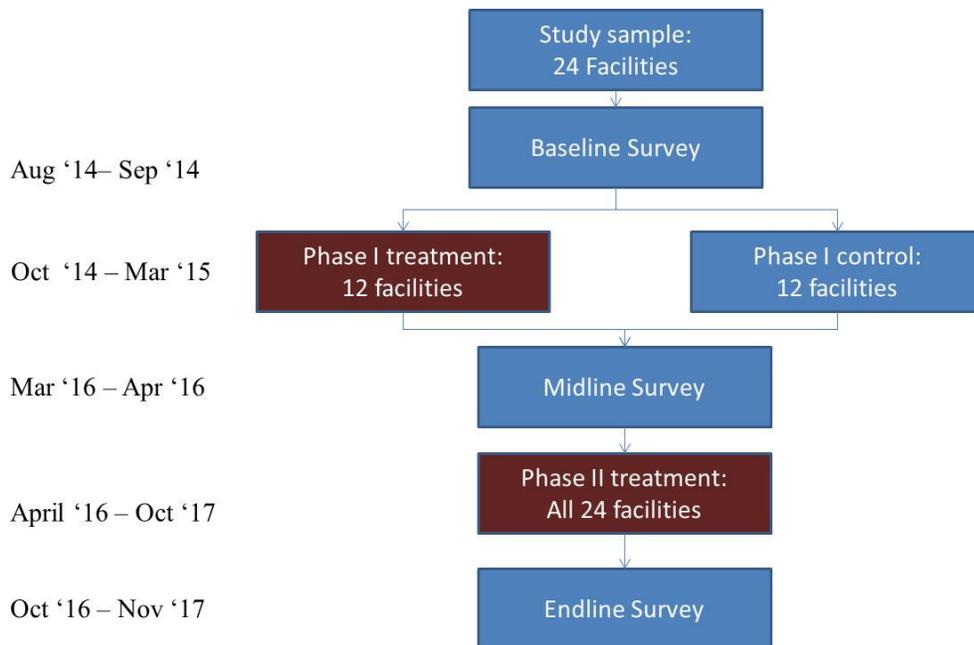
Group D: intervention group – receives both supply-side health facility and demand-side community RBF interventions

In addition to the supply-side interventions, some communities in the target regions will be enrolled in a community-based demand-side component, for which each phase will last 12 months. With an estimated target population of approximately 567,000 people we expect the demand-side RBF intervention to work only with selected communities in each health center catchment area. There are more than 800 communities in the target areas overall; at the beginning of the project, a meeting with community leaders will be held, during which two communities will be selected for the demand-side RBF in each facility catchment area (yielding a total of 48 communities). The rollout of the community incentive intervention will be spread

out over 3 years; in year 1, a total of 48 communities will be targeted (2 per facility) for the impact evaluation; in each of years 2 and 3, an additional 48 communities will be included. During the first year of the intervention, communities will work towards and receive payments against a given set of objectives. Objectives will be monitored (through LQAS) and rewarded on a quarterly basis in the first year. In the second year, communities will be asked to maintain the achieved targets; if they achieve this objective, a final payment is made at the end of the second year, when communities graduate from the intervention. It is important to note that the monitoring efforts will increase over time: in the first year of the intervention, a total of 48 communities will need to be monitored on a quarterly basis; in the second year, 48 communities will need to be monitored on a quarterly basis, while 48 additional communities (those enrolled in year I) will need to be monitored once at the end of their second year.

To measure the community-level impact of the project, three main surveys will be conducted: a baseline survey will be conducted at the beginning of the project; a midline survey approximately 18 months after project launch, and an endline survey after approximately 36 months of the project. Figure 5 summarizes the time line of the survey monitoring plan. We will have a mixed-method explanatory design with an embedded process evaluation to explore pathways of impact according to the conceptual framework outlined above.

Figure 5 **Timeline for household and facility surveys**



Empirical Strategy

The principal empirical strategy for the impact evaluation is to compare changes in communities reached early by the interventions to changes observed in communities reached in later phases of the project. As outlined above, under the guidance of the MOHSW, we aim to select 50% of facilities in all target areas for Phase I of the rollout, and 50% of facilities for Phase II. In order to ensure fairness and transparency, the selection of Phase I and Phase II facilities will be done in a formal public ceremony organized in cooperation with the MOHSW, where half of the facilities in each of target regions will be randomly selected for Phase 1, and half of the facilities in each of the regions will be selected for Phase 2. Given that the intervention will continue in the 3 facilities currently participating in the pilot, these 3 facilities will be automatically part of Phase 1.

For the demand side intervention, we aim to select 48 communities for the first year of the demand-side intervention rollout, and then to reach additional communities in each of the following two years (years 2 and 3). Similar to the rollout of the supply-side intervention, we will organize public ceremonies to select communities for the demand-side intervention. To do this, each facility will hold a meeting with representatives from all communities in their catchment areas, and organize a public lottery, through which communities will be randomly selected for the first, second and third year of the roll-out of the demand-side intervention.

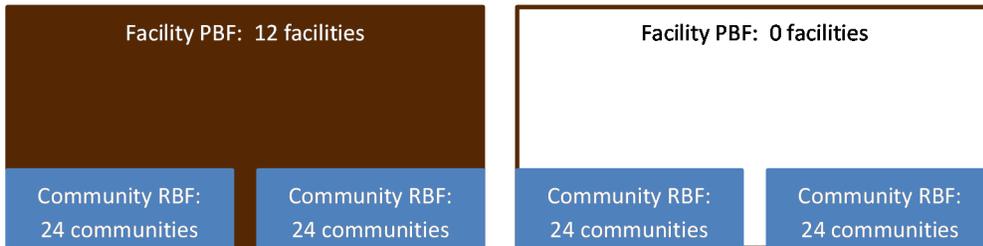
The staggered rollout of the interventions means that we will observe substantial variation in intervention exposure over the duration of the project. Figures 6a and 6b illustrate project coverage over time. The shaded areas in Figure 6b highlight critical evaluation periods: the initial survey, which will provide baseline estimates for health nutrition and health service utilization prior to the project launch (time 0). The second main period is the midline survey; the last critical time period is the time of the endline survey. The first main evaluation will happen at the time of the midline survey.

Figure 6a. Roll-out of facilities and communities for the supply-side and demand-side interventions, respectively

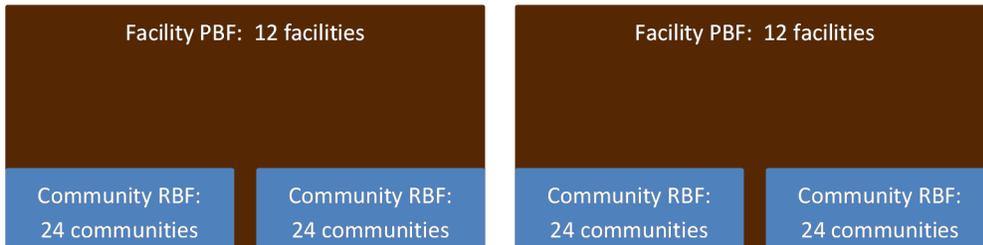
Months 1-12: 12 facilities for supply-side PBF, 48 communities for demand-side RBF



Months 13-18: Add 48 communities for demand-side RBF



Months 19-24: Add remaining 12 facilities for supply-side RBF



Months 25-36: Add 48 communities for demand-side RBF

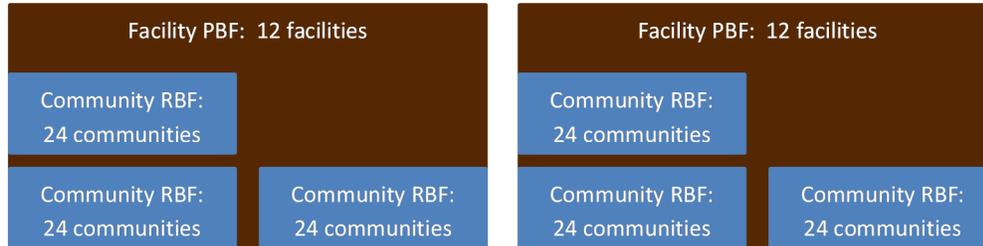


Figure 6b: Number of communities under each intervention over time

Months since project started	No Intervention	Demand side intervention only	Supply side intervention only	Supply side & active demand side intervention	Supply side & completed demand side intervention
0	96	24	96	24	0
6	96	24	96	24	0
12	72	48	72	48	0
18	0	0	144	96	0
24	0	0	144	96	0
30	0	0	96	96	48
36	0	0	96	96	48

By the time the midline survey will be rolled out, 12 health centers will have been exposed to the facility PBF for at least 18 months (Figure 7, panel B); if the facility incentives affect utilization and health outcomes, we should observe that indicators in the areas targeted earlier improve more rapidly than the indicators in areas not yet reached by the facility PBF intervention. Similarly, for the demand-side interventions, a total of 96 communities will have been reached by the community RBF by the time of the midline survey; 48 communities will be in the second year of the intervention (graduation phase), while 48 communities will be in the first year of the intervention. If demand-side incentives work, we should observe more rapid improvements in Group 2 than in Group 1. We will also be able to test whether the demand-side intervention works better in combination with supply-side intervention: if it is the case, we should observe indicators in Group 4 to improve more rapidly than indicators in Group 2.

Figure 7: Intervention exposure and group sizes over time

A. Baseline Survey	
Group 1 : No intervention : 21 facilities	Group 3 : Facility PBF only : 3 pilot facilities
Group 2 : Demand-Side RBF only 0	Group 4 : Facility PBF & Demand-Side RBF 0

B. Midline Survey	
Group 1 : No intervention : 12 facilities	Group 3 : Facility PBF only : 12 facilities
Group 2 : Demand-Side RBF only 48 communities (24 year 1, 24 year 2)	Group 4 : Facility PBF & Demand-Side RBF 48 communities (24 year 1, 24 year 2)

C. Endline Survey	
Group 1 : No intervention : Nobody	Group 3 : Facility PBF only : Nobody
Group 2 : Demand-Side RBFonly Nobody	Group 4 : Facility PBF & Demand-Side RBF All communities for Facility PBF & 144 communities for demand-side RBF

The collection of the endline data will allow us to further assess the impact of both demand- and supply-side interventions. If it is true that these intervention packages work, we should observe larger improvements in health indicators between midline and endline for Group 1 than for Group 4, where the intervention package has stayed the same between the two surveys. The endline survey will also allow us to test whether demand side effects are persistent: if it is true that behavioral change sticks, we should observe that behaviors in communities targeted early are no different from behaviors in communities targeted in Phases II or III of the demand-side RBF intervention roll-out.

Data

Methods for data collection

The quantitative part of the evaluation will rely on three main sources of data to answer the IE research questions identified as well as why or how results are achieved. The qualitative part of the evaluation will use both focus group discussions and key informant interviews with a wide range of stakeholders to elicit their perspectives on different elements of the interventions.

1. Quantitative assessments
 - a. Household surveys: 3 rounds of data collection, each targeting a sample size of 2400
 - b. Facility-based surveys: 3 rounds of surveys, each being collected in all of the 24 target facilities in the study area
 - c. Community-based surveys (VSGs, VDCs): 3 rounds of surveys, each collected in 120 communities (five for each facility)
2. Qualitative assessments (see details at the end of the data section)
 - a. Focus group discussions
 - b. Key informant interviews

The various sources of data together integrate an IE with an embedded process evaluation that aims to not only answer the IE questions but also explain how the interventions are being implemented and why (or why not) results are achieved. The conceptual framework discussed in the earlier section maps out the hypothesized pathways of impact, and by measuring both

intermediate and outcome variables, we aim to answer whether the interventions have an impact, how much of an impact, and the pathways through which impact is achieved or hindered. The embedded theory-driven process evaluation will be able to answer the pathways questions and is based on other attempts in the literature to do this (Rawat et al 2013). The linking of the impact evaluation and process evaluation will enable a stronger explanation of results, and this overall approach is relatively novel for RBF evaluations – thus we hope to add to the evidence base in a new and more comprehensive manner.

For the quantitative assessments, two types of surveys will be collected at the beginning (baseline), 18 months after initiation (midline) and at the end of the project (endline): a household survey targeting a random sample of women 15 and older in communities, and a facility survey directly targeting all 24 health facilities in the area. As further discussed in the Appendix, a total of 2400 households will be interviewed in each survey round; this sample size was chosen in order to be able to detect an improvement of 10 percentage points in the main outcome variables with power 0.9.

For the **household survey**, two stage cluster sampling will be used to identify a random sample of approximately 100 households with i) at least one woman of age 15 or older *and* ii) at least one child under the age of five from the catchment areas of each facility. To identify these women, we will first randomly select 5 enumeration areas from the catchment areas of each of the 24 facilities using probability proportional to population size (based on the latest census estimates); in all selected enumeration areas, a household listing will be conducted. From all eligible households listed, 20 households will be selected for the interview. (We will use the recent census enumeration areas as well as well-defined health facility catchment area assignment to do a mapping.). During the interview, the following information will be collected:

- Household size, assets, income and poverty level
- Household member education
- Respondent education and health knowledge
- Birth histories and child survival status
- Health care utilization for recent births, including ANC, delivery and PNC
- Health care utilization for children, including child health checkups, vitamin supplements and vaccines received
- Child morbidity: fever, diarrhea, and respiratory infection in the 2 weeks preceding the survey
- Child anthropometrics: height, weight and mid-upper arm circumference
- Health expenditure
- Satisfaction with health services, including distance, opening hours, attitudes, available services
- Satisfaction with community outreach activities
- Perceptions of community activities

- Perceived control/autonomy regarding if/when to seek health care

The **facility survey** will focus on facility services; in particular, we will assess the following variables, primarily the key behavioral attributes and intermediate outcomes:

- Key behavioral attributes (understanding, expectancy, valence, buy-in, perceived fairness)
- Staff availability and presence
- Overall conditions of facility (quality check list)
- Basic functionality: electricity, water, AC
- Staff turnover
- Staff satisfaction and motivation
- Teamwork and collaboration
- Communication
- Awareness and clarity of priorities
- Demand for knowledge
- Perceived control/autonomy
- Transparency and accountability
- Use of data for decision making
- Other outcomes as reported in qualitative interviews.

For the household and facility surveys, the standard HRITF instruments will be the foundation – however, these will be modified to reflect the above variables. Compared to the standard instruments, there will be more of an emphasis on measuring the intermediate variables (e.g. organizational changes) with a heavier focus on behavioral elements (e.g. motivation, understanding, teamwork, etc.) for actors involved in order to map the pathways of impact as per the conceptual framework for each intervention.

The **community-based survey** will be administered to members of VSGs and VDCs focusing on the key behavioral attributes and expected intermediate outcomes:

- Key behavioral attributes (understanding, expectancy, valence, buy-in, perceived fairness)
- Knowledge of healthy behaviors/recommended practices
- Perceptions of community nutrition and health services
- Traditional beliefs regarding health and nutrition
- Motivation and job satisfaction
- Intensity and quality of services
- Capacity to manage RBF project
- Village development regarding health and nutrition

- Community ownership of health and nutrition outcomes

The **qualitative assessments** will be conducted to map the pathways of impact as illustrated in the conceptual framework (Figure 2 and Figure 3) and to provide an explanation of the quantitative results. A combination of focus group discussions and in-depth interviews will be utilized. Focus group discussions will be conducted separately with health facility staff (nurses and midwives), VSG members, VDC members, women of the community, men of the community, and adolescent girls (Table 6). In addition, in-depth interviews will be conducted with RHT directors, officers-in-charge, and village chiefs.

Table 6. Qualitative data collection plan (per round)

Level	Target population	Focus group discussions		In-depth interviews	
		Per region	Total	Per region	Total
National	RBF Committee		1		
	NaNA		1		
	Steering Committee		1		
Regional	Regional Health Team Directors			1	3
Health facility: Primary level	Facility Staff	2	6		
	Officer-in-charge			2	6
Health facility: Hospital level	Facility staff	1	3		
	Officer-in-charge			1	3
Community	VDC members	2	6		
	VSG members	2	6		
	Women	2	6		
	Men	2	6		
	Adolescent girls	2	6		
	Village chiefs			2	6
Total			42		18

During the interviews and focus group discussions, the following themes will be explored at a minimum and will vary by target group:

- Fidelity of project implementation (are the interventions being implemented as designed?)
- To what extent are conditions predicted by theory/research in place? (understanding, expectancy, etc.)
- What other factors are hindering or facilitating implementation?
- How is the project contributing to changes in health behaviors/outcomes?
- Adjustments made to project design over time
- Lessons learned
- How project was communicated to participants
- Participants' overall experience of the project
- Suggestions for project improvement
- Any other simultaneous changes that could explain impact?

For the baseline assessment, quantitative and qualitative interviews will be conducted simultaneously to triangulate the data. The qualitative findings will help inform the quantitative midline survey. For the midline and endline assessments, qualitative data collection will follow the preliminary quantitative results.

Ethical review and clearance

Ethical clearance for the impact evaluation is to be obtained from an in-country Institutional Review Board. The IE team will incorporate obtaining the necessary ethical clearances in the terms of reference for the research agency that has been contracted to implement the baseline research. The clearance process will begin as soon as the research agency is contracted.

Timeline

Table 6 below sets out the timeline for the impact evaluation by fiscal year. The baseline survey will be initiated and completed before RBF implementation begins. Survey data collection will be conducted in August-October 2014, and we anticipate that the RBF implementation will begin in October 2014. The midline data collection will be implemented after 18 months in May-June 2016. Endline data collection will be implemented in February-March 2018. Prior to beginning RBF implementation, health facilities and communities will be randomized to the study groups in a public ceremony. Since all health facilities will be sampled in the baseline, random assignment to treatment or comparison groups does not need to be conducted before the baseline. Dissemination workshops are planned to disseminate baseline, midline and endline findings. In addition, impact evaluation findings will be disseminated to a wider international audience by publishing the final evaluation report. The timelines presented below will be discussed and finalized with the Government of The Gambia in June 2014.

Table 6 **Timeline for The Gambia impact evaluation by fiscal year**

Phase	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	Q1	Q2	Q3	Q4																				
Program Design	■	■	■	■																				
Impact Evaluation Design			■	■																				
Evaluation Preparation			■	■	■																			
Baseline Data Collection					■	■																		
Initiation of RBF					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Baseline Data Documentation and Storage						■	■																	
Baseline Analysis and Report						■	■																	
Baseline Dissemination Workshop									■															
Evaluation Preparation										■	■													
Midline Data Collection												■												
Midline Data Documentation and Storage													■											
Midline Analysis and Report														■	■									
Midline Dissemination Workshop																■								
Evaluation Preparation																	■	■						
Endline Data Collection																			■					
Endline Data Documentation and Storage																				■				
Endline Analysis and Report																					■	■		
Endline Dissemination Workshop																						■		

Policy implications

At the national level, the close collaboration fostered by regular information exchange between the Project Implementation Committee (PIC), the Bank operational team, and the IE research team will ensure that research findings can quickly be translated into adjustments to implementation as needed. Should the evaluation identify barriers to the successful implementation of the RBF interventions, weaknesses of the schemes, or unexpected negative effects on the coverage and quality of health and nutrition services, the PIC – through the NaNA and MOHSW – will be able to promptly intervene with adequate measures. The evaluation will also inform the Government and build the basis for the decisions on whether and how to expand the RBF approaches being piloted to other parts of the country.

At the international level, this study will produce new evidence on the effects of both supply- and demand-side RBF interventions as well as effect of community-level engagement on quality of and access to maternal and child health and nutrition services. The mixed methods approach adopted by the research team will be instrumental in this regard, allowing the research team not only to quantify the effects of the RBF interventions but also pathways through which such effects are produced. Furthermore, it can help identify potential barriers early on during implementation such that adjustments can be made for improved implementation. Understanding the pathways and identifying and explaining the intermediate outcomes are essential in designing relevant health policies and programs in the future in The Gambia and elsewhere.

Dissemination

The findings from this research project will be disseminated at the national, regional, and international level. At the national level, dissemination sessions will be conducted to ensure outreach to all collaborative parties engaged in the project, including regional, national, and international authorities (NaNA, MoHSW, World Bank, health care providers and community representatives). In collaboration with the Government, a final workshop will be held to discuss with all relevant stakeholders the implications of the study results in relation to the scaling-up potential of the initiatives. In addition, at the end of each cycle of work, interim results will be disseminated. Since this is part of a bigger HRITF multi-country IE program, international dissemination will be channeled through the World Bank's larger HRITF impact evaluation initiative. At the international level, findings will be disseminated among the scientific and policy making community by means of a series of scientific publications in peer-reviewed journals and of oral presentations at relevant international conferences.

Research team

Several institutions will constitute the research team:

- World Bank (The Gambia health team, WB HRITF impact evaluation team based in Washington, D.C)
- Survey firms for baseline, midline and endline surveys – two local firms have been identified as potential candidates
- Harvard School of Public Health, Department of Global Health and Population
- The University of The Gambia
- NaNA, MOHSW, Ministry of Finance and Economic Affairs (MOFEA), Republic of The Gambia: Project Implementation Committee and MOHSW RBF Committee

Specifically, the research team includes the following individuals:

- Günther Fink, Assistant Professor of Health Economics at Harvard School of Public Health, will be Principal Investigator for the impact evaluation.
- Rifat Hasan, Health Specialist, AFTHW. Rifat Hasan will be the co-Principal Investigator and co-TTL for the impact evaluation.
- Menno Mulder-Sibanda, Senior Nutrition Specialist, AFTHW. Menno Mulder-Sibanda is the TTL for the impact evaluation and for the larger Maternal and Child Nutrition and Health Results Project within which this evaluation is nested.
- Ronald Mutasa, Health Specialist, AFTHE. Ronald Mutasa will lead technical inputs to the RBF operation.
- Ali Subandoro, Health Economist, AFTHW. Ali Subandoro will provide inputs to the conceptualization of the embedded process evaluation.
- An IE field coordinator will be recruited to provide support to the survey firm for baseline the baseline survey.
- A consultant will be recruited to lead the qualitative components of the evaluation and ensure synergies with the quantitative components.
- A local (preferably) or international research firm will be recruited to design and implement data collection and analysis for the baseline, midline and endline surveys of the impact evaluation. More than one may be need to be recruited to ensure expertise in both quantitative and qualitative data collection. The research firms will work under the guidance of the national team and experts from the World Bank.
- Yaya Jallow, Economics Lecturer, The University of The Gambia
- Other local researchers will be involved in the evaluation
- The national project implementation committee (PIC) which consists of the NaNA, MOHSW and MOFEA will coordinate relations with other actors within the government at the central and regional levels involved in the evaluation.

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Annex 1: Power calculations

The project as structured right now will assess both demand and supply side interventions. For the supply side interventions, the unit of randomization and impact evaluation is the health facility, which means that we have a total of 24 clusters from an evaluation perspective. Each cluster will be measured three times: at baseline, at midline, and at endline, which means that we will have a total of 72 cluster-time observations for the supply-side intervention. In the first round, only 3 clusters will be treated; at midline, 12 clusters will be treated, and at endline, all 24 clusters will be treated, which means that we will have a total of 39 treatment and 33 control clusters for our analysis. We anticipate an intra-class correlation coefficient of 0.05. With a sample of 100 women per cluster and survey round (7200 women in total), the study will be powered to detect a 10 percentage increase for binary variables with a mean proportion of 0.50 in control areas with power 0.9, and an 8 percentage point increase with power 0.8.

For the community intervention, the unit of analysis will be specific communities; for each survey round, we expect to cover approximately 5 communities for each facility. In all survey rounds, communities targeted by the community incentives will be oversampled in order to be able to compare communities with and without demand side interventions for the same facilities.

The current field work design implies a total sample of 360 clusters across the three survey rounds (24 facilities times 5 clusters times 3 rounds). With an estimated number of 20 women in each cluster, and an intra-class correlation of 0.05, the study is powered to detect an increase of 6 percentage points with power 0.9, and an increase of 5 percentage points with power 0.8.

Annex 2: Budget

We will conduct three rounds of household surveys; in each round, we will randomly select 100 households from each health facility, resulting in an estimated sample size of 2400 households per survey.

	FY 2015 to FY 2019	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	HRITF	Other
Total budget	\$1,712,001	\$436,500	\$491,000	\$472,500	\$161,000	\$151,001	\$1,425,000	\$287,001
								Request to HRITF for LFRI
Data collection	\$925,000	\$295,000	\$290,000	\$290,000	\$25,000	\$25,000		
	<i>Baseline</i>	\$240,000						
	<i>Midline</i>		\$240,000					
	<i>Endline</i>			\$240,000				
	Health facility survey	\$25,000	\$25,000	\$25,000				
	Qualitative research	\$30,000	\$25,000	\$25,000	\$25,000	\$25,000		
Workshops/ Dissemination	\$110,000	\$0	\$50,000	\$30,000	\$0	\$30,000		
	IE Initiation		\$20,000					
	Baseline Dissemination		\$30,000					
	Midline Dissemination			\$30,000				
	Endline Dissemination					\$30,000		
Staff and consultants	\$519,000	\$110,000	\$121,000	\$121,000	\$106,000	\$61,000		
	Task Team Lead	\$20,000	\$20,000	\$20,000	\$20,000			
	PI	\$10,000	\$10,000	\$10,000	\$5,000	\$5,000		
	Co-PI	\$15,000	\$15,000	\$15,000	\$5,000	\$10,000		

	International STC 1 (Evaluation coordinator)	\$20,000	\$50,000	\$50,000	\$50,000	\$20,000		
	International STC 2 (Analysis support - quantitative)	\$15,000	\$10,000	\$10,000	\$10,000	\$10,000		
	International STC 3 (Analysis support - qualitative)	\$25,000	\$11,000	\$11,000	\$11,000	\$11,000		
	Local STC 1 (Field coordinator)	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000		
Travel	\$150,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000		
	TTL/Co-PI	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
	PI	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		
Miscellaneous	\$8,001	\$1,500	\$0	\$1,500		\$5,001		
	Publication Fee					5001		
	IRB Review Fee	\$1,500		\$1,500				