Health Service Integration in Senegal

A Case Study

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MEASURE Evaluation

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List of Abbreviations

ACT	artemisinin-based combination therapy
ADC	l'agent de développement communautaire (community development officer)
ASC	agent santé communautaire (community health officer)
ART	antiretroviral therapy
ANSD	Agence Nationale de la Statistique et de la Démographie (National Agency for Statistics and Demography)
AWP	annual work plan
BCC	behavior change communication
CBO	community-based organization
DHIS 2	District Health Information System 2
DSDOM	dispensateur de soins à domicile (home care provider)
DSRSE	Direction de la Santé Reproductive et de la Survie de l'Enfant (Direction of Reproductive Health and Infant Survival)
ePTA	electronic plan de travail annual (annual work plan)
FP	family planning
GHI	Global Health Initiative
GRAG	Global Research and Advocacy Group
HIV	human immunodeficiency virus
ICP	infirmier chef de poste (health post head nurse)
IEC/CC	information education communication for behavior change
MCD	médecin chef du district (head of the medical district)
MCR	médecin chef de région (head of the medical region)
MSAS	Ministère de la Santé et de l'Action Sociale (Ministry of Health and Social Action)
NGO	nongovernmental organization
ORS	oral rehydration salts
PNDS	Plan National de Développement Sanitaire (National Health Development Plan)
PECADOM	prise en charge des cas à domicile (home care for clients)
PMTCT	prevention of mother-to-child transmission of HIV
POPAEN	plan opérationnel de passage à l'echelle national des interventions à haut impact sur la mortalité infant juvenile au Sénégal (operational plan to transition high-impact interventions on child mortality to national scale)
PSSC II	Programme Santé/Santé Communautaire II
RH	reproductive health
SSSP	superviseurs des soins de santé primaires (supervisor for primary health care)
SCSPA	Senegal Continuous Service Provision Assessment Survey
USAID	U.S. Agency for International Development

Executive Summary

Integration of services has been adopted in recent years across the health sector as a strategy to improve the availability and access to quality services for populations. Case studies were launched in Senegal and Malawi to conduct in-depth assessments of the integration process. These countries were selected because they expressed a willingness to participate and were in the process of scaling up an integrated service delivery intervention. This report presents the findings from Senegal.

In Senegal, the Ministry of Health and Social Action (MSAS) and its partners have introduced a package of essential services referred to as the operational plan to transition high impact interventions on child mortality to national scale or POPAEN (plan opérationnel de passage à l'échelle national des interventions à haut impact sur la mortalité infanto juvenile au Sénégal), 2010-2014. The design of the essential package of services responds to the health priorities identified at the local level, including the reduction of maternal, newborn and child morbidity and mortality. Community health is at the heart of this strategy, and the government of Senegal has developed a national strategic Community Health Plan (2014-2018).

USAID supports the implementation of these priorities through its Programme Santé/Santé Communautaire II (Health Program/Community Health II) (PSSC II), led by the nongovernmental organization ChildFund Senegal and other members of the consortium: Africare, Plan, World Vision, Catholic Relief Services, and Enda Graf Sahel. PSSC II works with the MSAS services to implement a package of interventions that includes the renovation of health huts at the base of the health pyramid, and the provision of a minimum package of high-impact services in health huts in the community.

The purpose of this study was to document the changes required within the health system to make service integration a reality. The study also aimed to document how the monitoring and evaluation systems have been or could be strengthened to better monitor and evaluate integration, including documentation of indicators and information sources in use.

This case study used a mixed methods approach, combining quantitative and qualitative dimensions. The regions of Kaolack and Louga were chosen for the study. In both regions, four

health districts were selected randomly. The study selected 48 health posts (an average of six health posts per district) and 48 health huts (a health hut for each corresponding health post). At community sites, data collection targeted 1,060 women of childbearing age (18 to 49).

Participants were diverse and were located at the national, regional, and community levels. The study included stakeholders at the national level; the focal points for PSSC II; regional and district medical officers; regional supervisors of primary health care; head nurses at health posts; matrones, community health workers, and *relais* at the health huts; and women in the community. Data collection took place in August and September of 2014.

All interview themes and analysis, including three of the four indicators were informed by the results framework of integration in the *Global Health Principles Monitoring and Evaluation Resource Guide* (see annex 1 for the framework). Integration inputs include policy and governance; information systems and planning and management functions; human resources; and demand creation. The outputs and results integration are coherent integration of services and increased coverage, acceptability, quality, efficiency, and use.

The case study example demonstrates how Senegal has implemented a comprehensive program to increase the coverage of and access to health services. At the core of the approach is the implementation of a minimum package of services offered by community health workers at health huts and in the community. Building the technical capacity of community health agents, Bajenu gox, matrones, and *relais* was an important step. Provider performance is monitored through periodic meetings and documented integrated supervision. The data suggest changes related to integration; for example, the positive response from the community, adherence to advice, acquisition and transmission of knowledge by community workers, more timely use of health services, increased availability of care and medicines, and increased commitment by men to support their families' use the services.

The response has clarified the roles and responsibilities of stakeholders at all levels; increased responsibility of community actors and local groups in financing, budgeting and planning; and created a platform in which the donor can invest. Interventions to strengthen the health system, particularly the plan de travail annual (annual work plan) (PTA) process, are designed to improve

resource management service implementation. Furthermore, the study showed an increased commitment on the part of men to direct their families to use the services.

The results highlight challenges related to the transfer of the management of health units to districts and communities. The geographical and financial access to services remains a major concern, especially in the case of referrals. Resources face competing demands, including the need to continue to improve service coverage and to ensure effective coordination of community actors, while improving supervision in a context of limited human resources.

This study used the case study methodology and did not seek to be representative, so these results, particularly in terms of clients and providers, can not necessarily be generalized to the rest of the country. However, the diversity of the types of respondents and study sites should inspire some confidence that the results reflect the typical experience in Senegal, especially at the national level. These findings should be relevant to planners and donors in other contexts who would plan and implement integrated interventions and systems that monitor and evaluate the interventions.

Context

Integration

Integration of services has been adopted in recent years across the health sector as a strategy to improve the availability and access to quality services for populations. Studies suggest integrated health services improve quality of care, increase service uptake, and improve outcomes.[1,2,3] The objective and design of integrated services is specific to each country's epidemiology and context; and country health sector stakeholders want guidance to ensure better planning, implementation, monitoring, and evaluation of integrated services. In this context, a working group of the Global Health Initiative (GHI) published a document that provides an overview of what is known about integration in the health sector, definitions, examples of service delivery packages and integrated approaches, and a tool that can be used to understand the scope and nature of integration in a specific country.[4]

Building on those efforts, the U.S. government in 2014 produced a document providing guidance on how to assess the implementation of the GHI principles. This takes into account the integration principle of "increasing impact through strategic coordination and integration".[5] The document includes a framework for integration (see appendix 1), which represents the relationship between input, outputs, and outcomes that work together through coherent service integration to improve health. The framework organizes the inputs by key health system building blocks. In addition, it presents three "global" integration indicators related to increasing access and coverage of interventions. The report also has 19 other "illustrative" integration indicators to help program managers monitor and evaluate the use of the integration principle within their programs.

[1] Spaulding, A.B., Brickley, D.B., Kennedy, C., Almers, L., Packel, L., Mirjahangir, J., et al. Linking family planning with HIV/AIDS interventions: a systematic review of the evidence. *AIDS,* 2009, 23 Suppl 1, S79-S88.
[2] Wilcher, R., Hoke, T., Adamchak, S.E., Cates, W. Integration of family planning into HIV services: a synthesis of recent evidence. *AIDS*, 2013, 27 Suppl 1, S65-S75.
[3] Lindegren, M.L., Kennedy, C.E., Bain-Brickley, D., Axman, H., Creanga, A.A., Butler, L.M., et al. Integration of HIV/AIDS services with Maternal, Neonatal and Child Health, Nutrition, and Family Planning Services. *Cochrane Database of Systematic Reviews,* 2012, Issue 9. Art. No.: CD010119. Doi: 10.1002/14651858.CD010119.
[4] United States government. *GHI Principal Paper on Integration in the Health Sector*. Washington, DC: Global Health Initiative; 2012. Available at: http://www.ghi.gov/principles/docs/principlePaperIntegration.pdf.
[5] United States government. *Global Health Principles Monitoring and Evaluation Resource Guide*. Chapel Hill, NC: MEASURE Evaluation; 2014. http://www.cpc.unc.edu/measure/publications/ms-14-85.

To better understand why integration approaches are being adopted and the various changes to services, policies, and systems, MEASURE Evaluation in 2014, with the support of the U.S. Agency for International Development (USAID), conducted an assessment involving 10 countries.[6] The summary report describes how these countries decided which services to integrate and the specific integration model, as well as the constraints faced. From that work, case studies were initiated in Senegal and Malawi to conduct more in-depth assessments of the integration process and to synthesize learning that will help USAID missions and host countries in the planning, implementation, and monitoring and evaluation of integrated health services, and help the U.S. government in general to further define and articulate learning questions relating to integrated service delivery.

Definition of Integration

For this case study, definitions come from the two documents cited above. The term *integrated health services* takes into account at least two different service types.[7] The different types of services considered are child health, maternal and newborn health, reproductive health/family planning (RH/FP), HIV, malaria, tuberculosis, and non-communicable diseases such as diabetes, cardiovascular disease, and chronic respiratory diseases. *Integration* is the set of interdependent activities that contribute to improving the social and health conditions of the population and environment through the provision of quality interventions and based on the skills and capabilities of human resources and the availability of equipment, materials, medicines, and financial resources.[8]

Case Selection

Senegal and Malawi

In 2011, USAID Senegal initiated a five component integrated program to support Senegal's National Health Development Plan (le Plan National de Développement Sanitaire [PNDS]) (2009-2018). Community health is one component and was designed to contribute to increasing

[6] MEASURE Evaluation. *Findings from a Multi-country Assessment on Integrated Health Services*. Chapel Hill, NC: MEASURE Evaluation; 2014. Available at: http://www.cpc.unc.edu/measure/publications/tr-14-115.
[7] United States government, 2014.
[8] United States government, 2012.

availability of an integrated package of quality health services in addition to other results and while working with the other components to improve the health status of the people of Senegal.[9]

Senegal and Malawi were chosen as countries in which to carry out case studies on integrated service delivery. Case study countries were selected based on the following criteria:

- successful implementation at scale (or near scale) of an integrated service delivery intervention;
- participation in the 10 country assessment;[10]
- willingness to participate as a case study model; and
- implementing integration in a low-resource setting.

The Case of Senegal

Senegal, like many other countries in sub-Saharan Africa, faces significant challenges that affect the health-care system. These challenges consist in part of gaps and weaknesses in human resource supply and capacity, equipment, quality services, information systems, and in the management of infectious and chronic diseases. These gaps result in unmet maternal and child health needs particularly in rural areas, as shown in table 1.

Table 1. Select Maternal and Child Health Statistics in Senegal, 2014, Urban vs. Rural

	Urban (percent)	**Rural** (percent)
Contraception prevalence rate (modern methods only)	29	13
Birth assisted by a trained provider	80	44
Prevalence of malaria parasitaemia (children < 5 years)	0.3	2
Height for age (-2 Z-score) (children < 5 years)	12	23

Source: Agence Nationale de la Statistique et de la Démographie (ANSD) [Sénégal], et ICF International. *Sénégal : Enquête Démographique et de Santé Continue (EDS-Continue 2014)*. Rockville, MD : ANSD et ICF International; 2015.

Faced with this situation, Senegal's National Health Development Plan (PNDS) (2009-2018) aims to improve the health of mothers and children; their health is considered a major national priority. In response, the Senegal Ministry of Health and Social Action (le Ministère de la Santé et de l'Action Sociale [MSAS]) and its partners have developed a package of essential services

[9] Ernst & Young LLP. *Final Mid-Term Evaluation Report*. 2015. Available at: http://pdf.usaid.gov/pdf_docs/PA00KD87.pdf
[10] MEASURE Evaluation, 2014.

referred to as the operational plan to transition high impact interventions on child mortality to national scale or POPAEN (plan opérationnel de passage à l'échelle national des interventions à haut impact sur la mortalité infanto juvenile au Sénégal), 2010-2014. The design of the essential package of services under POPAEN responds to the health priorities identified at the local level, including the reduction of maternal, newborn, and child morbidity and mortality.

Community health is at the heart of this strategy, and to this end the government of Senegal has developed a National Strategic Community Health Plan (Plan National Stratégique de Santé Communautaire) (2014-2018). USAID supports these priorities through its Programme Santé/Santé Communautaire (PSSC II), implemented by ChildFund Senegal and other members of the consortium that include Africare, Plan, World Vision, Catholic Relief Services, Enda Graf Sahel, and Enda Santé. PSSC II works with MSAS to develop a package of interventions that include the renovation of health huts (cases de santé) and the provision of a minimum package of high-impact health services in the health huts and in the community.

Within Senegal's health-care system, the health hut is located at the community level and is run by a community health worker or a matrone.[11] Its operation depends on nominal fees paid by the clients, as well as resources generated by a community health committee. The health hut is directly linked to the health post (poste de santé) and, following the Senegal system, the head nurse (infirmier chef de poste [ICP]) is the reference person for the health worker at the health hut. The health hut sends monitoring data to the ICP, who compiles that information before sending it to the district level. In turn, the district level transfers it to the regional and national levels.

The cost of health care is a current key concern, as the cost of care often serves as a barrier to accessing health services. Universal health care as outlined in the Strategic Development Plan for Universal Health Coverage in Senegal (le Plan Stratégique de Développement de la Couverture Maladie Universelle) (2013-2017) is intended to provide care while minimizing financial risk to clients seeking care.[12] The promotion of mutual health insurance and other forms of community

[11] In the Senegal health system, a matrone is a traditional midwife who can assist in deliveries and provide family planning.

[12] Ministère de la Santé et de l'Action Sociale. Plan stratégique de développement de la Couverture Maladie Universelle au Sénégal 2013-2017. Available at: http://p4h-network.net/wp-content/uploads/2013/03/2013_03_Ministere_Sante_Senegal-Plan_strategique_dvpt_CMU_2013-2017.pdf.

mobilization to finance care are an important aspect of the National Strategic Community Health Plan.

Community health workers affiliated with health posts and health huts also work in community sites. A *community site* is a physical place in a community that is not close to a health facility. It is a place where members of the community (especially women) meet to receive health information and education. The community health workers organize sessions at the sites. The services provided by community health workers[13] at the sites form part of the minimum package of services, which integrates at the same time community health monitoring, information and communication campaigns, nutritional counseling, etc.

This case study was undertaken to gather more information about the current situation related to integration in Senegal and to synthesize the lessons learned.

Objectives of the Study

This study aimed to document the health system changes necessary in order to make health service integration a reality. The study also documented how the monitoring and evaluation systems have been or could be strengthened in order to monitor and evaluate integration, including documenting indicators and sources of information in use.

Methodology

Study Design

The case study employed mixed-methods combining quantitative and qualitative dimensions, in addition to a review of documentation relating to the integration of health services in Senegal. Two regions were selected for the study: the region of Kaolack, located in the center zone of the country; and Louga, located in the northern zone of Senegal. The choice of these two regions takes into

[13] Such workers include *relais* and *Bajenu Gox*, which are types of volunteer community workers in Senegal. A *Bajenu Gox* is a respected older woman from the neighborhood responsible for sensitizing people about maternal and child health and making referrals to health facilities.

account a number of factors, including logistical and budgetary constraints that precluded other regions.

Role of the GHI Integration Results Framework

The GHI Integration Results Framework (see appendix 1) guided the design of the interview guides and generated themes for the analysis of the interview transcripts. The framework was used to understand what inputs, processes, outputs, and outcomes were being applied and examined in the Senegal integration example.

Study Sites

The regions of Kaolack, in the center zone, and Louga, in the northern zone were selected for the study. In both regions, four health districts were randomly selected for implementation (table 2).

Table 2. Selected Study Regions and Health Districts

	Central Zone	Northern Zone
Regions	Kaolack	Louga
Health districts	Guinguinéo Kaolack Ndoffane Nioro	Coki Kébémer Louga Sakal

Data Collection Procedures

Preparatory Phase, Target Populations, Sampling, and Sources of Data

In both regions, preparatory work was done prior to data collection, led by the Global Research and Advocacy Group (GRAG). An emphasis was placed on obtaining the support of local authorities for the study in order to ensure their support throughout implementation and increase the likelihood that the findings are used. A variety of participants at the national, regional, and community levels were targeted for participation in the study. See appendix 2 for a summary of the number of participants by type of service and level.

Central level (Dakar): The criteria for selecting participants at this level included having a high degree of involvement in the design, implementation, and monitoring and evaluation of community-level integrated health services.

Regional level: In Kaolack and Louga, the heads of the medical regions (médecins chef de région [MCR]) participated in the study. They provided an overview of issues related to program management and the monitoring and evaluation of integrated services. The discussions at the regional level also included the regional focal people for PSSC II and regional level primary health care supervisors (superviseurs des soins de santé primaires [SSSP]). These interviews addressed similar issues to those posed at the central level, but also included questions about the feasibility and relevance of key integration indicators. One indicator came from the PSSC II project and the other three are proposed global indicators (table 3).[14]

The purpose of asking about indicators was to gain a better understanding of what information is already being collected, what is needed, and whether the proposed indicators were feasible given existing data sources.

District level: In each of the eight districts of the study, the head district medical officer (médecin chef du district [MCD]) was interviewed because of his or her strategic position in relation to program management and to monitoring and evaluation of integrated health services. In addition, data collection also included the SSSPs at this level, zonal supervisors, implementing program partners, and others whose roles are crucial to service integration.

Table 3. Indicators of Interest for the Study

PSSC II indicator	Total number and percentage of health huts offering a minimum package of services
Proposed indicators	Number of HIV service delivery points that have integrated at least one non-HIV service (coverage and access)
	Number of maternal, newborn, and child health service delivery points that have integrated at least one other type of service (coverage and access)
	Number of clients who have received two or more services during a single visit to a service delivery point (uptake)

[14] U.S. government, 2014.

At health posts and health huts: Health posts and health huts were selected from each of the eight study districts. An average of six health posts were selected in each district, resulting in a total of 48 health posts. Since health huts are linked to health posts, 48 health huts were selected based on their connection to the selected health posts. Interviews at health posts and health huts targeted the respective service providers, including the ICP or similar personnel (midwives, nurse assistant) at the health post; and the matrone, the community health agent (agent santé communautaire [ASC]), and relais at the health hut.

At the community level: The choice of the community sites was based on their attachment to the health posts or health huts included in the study. At the community sites, data collection targeted women of childbearing age (ages 18 to 49) to take part in the study. Women of reproductive age were selected because they and their children are the main targets of the national community health strategy.

Sampling: Sample size calculations were conducted to estimate the number of women needed to include in the survey at the community sites. The size was calculated to obtain an estimate with a predetermined level of accuracy and based on a two-tailed test with a confidence level of 95%.

Interview and data analysis themes: All of the topics covered in the interviews, including three of the four indicators, were informed by the document *Global Health Principles Monitoring and Evaluation Resource Guide*[15] discussed above (see appendix 1 for the framework). For more information on data collection tools and topics, see appendix 3.

Data Collection

Study teams and training: Three survey teams managed data collection. One team was assigned to the central level (in Dakar), one for Kaolack, and one for Louga. Data collection took place according to a schedule, and supervisors controlled the quality of work in the field.

Data collector training took place from July 14 to July 26, 2014. All members of the collection teams took part, with sessions devoted to in-depth study of the various tools. During the training, the questionnaire for women at community sites was translated from French into Wolof, including

[15] U.S. government, 2014.

the consent form. Emphasis was placed on the voluntary nature of participation and the eligibility criteria for participation in the study. The training also focused on the fundamentals of research ethics. Questionnaires for providers (ICP, ASC, relais, and matrones) and women (ages 18-49 years) were pre-tested on July 25, 2014 in three health facilities in a health district not included in the study. Lessons learned and issues identified during the pre-test led to revisions in the collection tools.

Data collection: Data collection took place in August and September, 2014. The first step was to hold meetings with the MCRs and MCDs and key PSSC II implementing partners at the regional and district levels. This step allowed for any adjustments to be made in the data collection plan, particularly at the community site level, to ensure the availability of respondents. After interviews, the supervisors reviewed the completed questionnaires and communicated any additional guidelines or details to the rest of the data collection team. Appendix 2 presents the results of data collection in Kaolack and Louga, and also includes the topics of health talks that took place during the visits to the community sites.

Secondary Analysis of the Continuous Service Provision Assessment Survey in Senegal, 2012-2013

The Continuous Service Provision Assessment Survey (SCSPA) in Senegal, 2012-2013, was also a data source for this study.[16] The SCSPA includes all types of health facilities but, for this case study, only data from health huts (n=74) and the corresponding health posts (n=265) were included. The data come from the health facility inventory that includes information about medical items; components of the system including logistics, management, and maintenance; infrastructure; and standards and protocols. All data were analyzed using a descriptive approach. This information was used to complement other data in the case study.

[16] Agence Nationale de la Statistique et de la Démographie (ANSD) [Senegal], ICF International. *Continuous Service Provision Assessment Survey in Senegal 2012–2013 (SCSPA 2012–2013)*. Rockville, MD: ANSD and ICF International; 2014. Available at: http://dhsprogram.com/publications/publication-spa18-spa-final-reports.cfm.

Data Analysis

The analysis and presentation of results were guided by the main elements of the Integration Principle TWG Results Framework that is presented in appendix 1. Analysis is descriptive and includes summary tables and the presentations of major themes with illustrative quotes. All qualitative data were recorded and transcribed. Analysis was conducted according to predefined themes from the results framework. Some open-ended responses were coded and transformed into quantitative data. Quantitative data were double entered in to a password-protected database (CSPro) and cleaned. Data analysis was conducted in IBM SPSS Statistics and in Stata. Data analysis included the presentation of summary statistics and descriptive analysis. Analysis was univariate and bivariate due to the descriptive nature of the study. Presentation of data includes frequencies, proportions, means, medians, and data ranges.

Ethical Review

The protocol for this case study was reviewed and approved by two ethics committees: the Institutional Review Board at the University of North Carolina in the United States and the National Ethics Committee for Health Research in Senegal.

Results

Document and Analytical Review

An analysis of the documentation is an important step in this case study in order to understand and describe the guiding strategies and implementation processes of integrated health services in Senegal. This section draws on several key sources, including the National Strategic Plan for Child Survival (Plan National Stratégique Survie de l'Enfant), 2007-2015; the National Strategic Plan for Community Health, POPAEN, and program documents from PSSC II (e.g., PSSC II monitoring and evaluation plan, PSSC I Final Evaluation 2006-2011, PSSC II Action Plan; see the bibliography section for a complete list). The next sections summarize the main lessons learned from the documentation.

Integration Objectives, Challenges, Priorities, and Processes in Senegal

Equitable access to health care for all people in Senegal is a priority, but achievement of this objective faces challenges including the deficit in quality human resources, poor distribution of staff, low quality of health services and staff competence, weak systems for referral and follow up are weak, recurring commodities stock outs, negative health behaviors, and difficulty accessing services, particularly specialized services, due to the associated costs.

To respond to these challenges, services integration in Senegal is intended to promote improvement and availability of quality RH/FP services, services for sexually transmitted infections, and HIV services, among other services. The objectives of integration are to:

- Improve the health status of the population by encouraging more self-care and greater community participation;
- Improve accessibility, continuity, and effectiveness of appropriate services in real time and at the right place;
- Improve client satisfaction with services and that of providers with regards to their work;
- Make governance and management more effective through a better definition of accountability and roles;
- Improve the distribution of service delivery and related tasks across implementing partners; and
- Improve resource efficiency through improved time management and reduction of service duplication by all stakeholders.

To support these priorities, PSSC I was a USAID project implemented from 2006 to 2011. The project worked to extend access to a basic package of primary health care in rural communities through the revitalization and equipping of an existing network of health huts. Despite the fact that health huts are considered to be the foundation of the health-care system they are not financially supported by MSAS. Program support for each health hut consists of recruiting and training a volunteer team including a community health worker (ASC), a matrone, and a relais, whose roles and responsibilities are described in table 4. This helped to make primary health care accessible to rural populations, where access to health centers and health posts was limited.

Table 4. Roles and Responsibilities of Health Hut and Community Site Team Members

Position	Roles and Responsibilities
ASC	Responsible for the treatment of patients on site and referral of cases requiring treatment with a clinical provider to the nearest health post, and provides preventative care and promotional messages in the community.
Bajenu Gox	Older women in the community (marraines) who accompany and support the mother-child pair in their reproductive health care seeking at health structures, make home visits to counsel women and gaining support from their husbands, mothers-in-laws, and grand-mothers.
DSDOM	A home care provider (dispensateur de soins à domicile [DSDOM]) who provides home care for malaria (prise en charge des cas à domicile [PECADOM]), raises awareness for the need to seek timely care, provides timely referral of severe malaria cases to health posts and health centers, promotes the use of long-lasting insecticidal nets among pregnant women and children < 5 years old, and prepares the community for home spraying.
Matrone	Monitors pregnancy, assists with childbirth, promotes FP, and provides preventive care and promotional messages in the community (like the ASC).
Relais	Meets with communities to organize talks and group discussions and to raise awareness about health issues. Promotes positive behavior change and encourages the use of preventive and curative services available in health huts.

From the review, it appears that PSSC I brought concrete results via the initiation and/or expansion of community health services. These services responded to an expressed need by the MSAS, were appreciated by communities, and significantly expanded coverage.[17] With support from USAID, under the leadership of the nongovernmental organization ChildFund Senegal, and members of the consortium, PSSC II has the goals to capitalize on the accomplishments and achievements of PSSC I, to complete the expansion and coverage of services, and to promote the sustainability of the community health interventions through ownership by the community and building relationships with all health stakeholders from the national to local levels. To this end, three priority areas have been identified:

1. Improve the quality and availability of information, products and quality services by ensuring the implementation of health huts and community sites at a national scale.
2. Promote community ownership and improve relationships and collaboration between the regional and district health teams, development partners, and community actors.

[17] Barry S, Putnam E, Touré CT. *Expérience Acquise de Programme de Santé Communautaire ChildFund/USAID-Sénégal. Évaluation Finale-Programme de Santé Communautaire du Sénégal/ChildFund 2006-2011*. Boston, MA: Initiatives, Inc. ; 2011. Available at http://pdf.usaid.gov/pdf_docs/pdacr889.pdf.

3. Promote ownership of community health by MSAS and other sectors and harmonize linkages with the national polices.

Interventions implemented under PSSC I and PSSC II are consistent with POPAEN 2010-2014, which is the operationalization of the National Strategic Plan for Infant Survival 2007-2015. The principles of this package include interventions that are offered in an integrated way and along the continuum of care for mothers and their children. The minimum package of care takes into account the essential interventions that are relatively simple to implement at the national level, for example prevention and treatment of malaria. The POPAEN minimum package includes counseling and services for mothers and newborns, such as iron or folic acid or vitamin A supplementation, prenatal care, use of long-lasting insecticidal nets, prevention of mother-to-child transmission of HIV (PMTCT), voluntary testing, psychosocial support for HIV-infected pregnant women, vaccinations, birth spacing counseling, hygiene, handwashing, environmental health and food, water filtration advising, early initiation of breastfeeding and exclusive breastfeeding, new born care practices (e.g., skin to skin, cord care), deworming, growth monitoring, screening for and treatment of malnutrition, treatment of uncomplicated malaria with ACT, treatment of diarrhea with oral rehydration salts (ORS)/zinc, and treatment of acute respiratory infections with co-trimoxazole.

The "paquet complet" (or full package) includes the minimum package plus more complex interventions that take longer to reach scale. The additional interventions in this package include postpartum malaria treatment by ACT, indoor residual spraying in high transmission areas, monitoring of adherence to antiretroviral therapy (ART) and co-trimoxazole prophylaxis, support activities for women with HIV infection, manual resuscitation (infant), home HIV care (including palliative care), and management of severe malnutrition without complications with foods. It also includes any new interventions that are shown to be feasible and acceptable following pilot testing.

Pilot testing of interventions is also an important component of the community health strategy and PSSC II. For example, a favorable pilot test of the initial offer of contraceptive pills at the community level has led to the integration of this intervention within the minimum package. Other examples of pilot interventions include community-based provision of injectables and management of postpartum hemorrhage with misoprostol.

Ultimately, PSSC II helps to meet the need and ensure an equitable distribution of integrated services at the community level. The program emphasizes quality care management, a key element of the national health care strategy in Senegal. Recent program achievements recorded in the documentation are summarized in table 5. These achievements illustrate some of the necessary activities (i.e., integration processes) to operationalize an integrated program.

PSSC II is also engaged in activities that are intended to result in the sustainability of activities and the transfer of the integrated community health program to the government of Senegal. Seventy-four health centers have already been transferred to the communities and districts during the second year of PSSC II (2012-2013). USAID has set a target of transferring 30% of financial resources through a direct funding mechanism in its cooperative agreement with the government of Senegal, which should take effect in 2015.

It is important to highlight the actions needed to ensure sustainability and transfer of responsibilities; these actions would be relevant for non-integrated approaches as well. PSSC II has finalized a transfer guide and implementation tools. The project works to strengthen accountability and participation of community-based organizations (CBOs) and local authorities, including local actors in community health (nongovernmental organizations [NGOs], local private sector, etc.). PSSC II works within existing structures for coordination and management of community interventions; specifically, the project works within existing coordination meetings at the regional, district and health post levels. The project is working to implement standardized procedures and job aids for supervision and documentation.

In addition to the national policies, intervention packages, and sustainability plans, improvements in human resources, cost of services, and community mobilization and sensitization have also been realized. Implementation of integrated services was made possible by the promotion and availability of quality human resources, materials, equipment and commodities, infrastructure, and financial resources. Actions to reduce and harmonize fees for services and commodities and the development of alternative financing (e.g., mutual health insurance, solidarity funds, subsidized/free delivery and caesarean sections services, etc.) have occurred at all health levels.

Table 5. PSSC II 2012-2013 Project Achievements (a Demonstration of Integration Processes)

Strategy/Service	Activity Coverage/Results
Initial offer of contraceptive pills	▪ Available in 1,250 health huts
Initial offer of injectables (Uniject device) in health huts	▪ Under study for acceptability (2014)
Community monitoring of pregnancy, delivery, and postpartum	▪ Performed on a regular basis in 2,143 health huts and 1,647 health sites
Maternal/newborn home care	▪ Available in 176 health huts ▪ Training 57 ICP/midwives, 37 project officers, 242 matrones and ASCs
Support for the treatment of diarrhea with oral rehydration salts (ORS)/zinc	▪ Training of 250 PSSC II agents, 11,534 relais, ASCs, matrones, and DSDOMs ▪ Initial endowment of 242,660 ORS packets and 121,330 zinc tablets at community sites
Management of pneumonia with co-trimoxazole	▪ 80% of child cases of acute respiratory infection received co-trimoxazole (2011-2012)
Nutrition services	▪ 1,042,210 children < 5 years old received services ▪ 1,561 health huts and health sites have received materials for cooking demonstrations ▪ 805 health huts and health sites received equipment for nutritional monitoring (scales, tapes for body measurement [arm circumference], etc.)
The management of malaria with artemisinin-based combination therapy (ACT)	▪ Available in all health huts (2,185) ▪ A total of 20,052 cases of fever with a positive rapid diagnostic test were treated with ACTs in health huts (6,410 were in children < 5 years)
Management (diagnosis and treatment of malaria) cases at home (PECADOM)	▪ Developing integrated training tools ▪ Training for 87 DSDOMs, DSDOM equipment, and post-training follow up
Distribution of long-lasting insecticidal treated bed-nets	▪ Several mosquito net distribution activities within the framework of universal coverage
Information, education, and communication for behavior change (IEC/CC) on malaria	▪ A total of 1,659,660 people were reached by IEC activities (69.2% women and 30.8% men)
Fight against neglected tropical diseases	▪ Mass distribution of medicine, IEC/CC ▪ Organization of prevalence surveys ▪ Joint Action Plan 2012-2013
Hygiene and sanitation activities	▪ Outreach activities in all health huts and health sites
Behavior change communication (BCC)	▪ Talks, home visits, and individual interviews have been conducted regularly at the health huts and health sites
Results-based financing	▪ Management of community activities in all districts of Kolda, Louga, and Kaffrine. ▪ Training of 56 ASCs and 57 midwives
Bajenu Gox program	▪ Mapping of functional Bajenu Gox ▪ Review and finalization of the PBG tools ▪ Selection, training, and supervision of 813 new Bajenu Gox
Compliance with the requirements of USAID for FP (voluntary and informed choice)	▪ Orientation of 321 program officers ▪ Orientation of 14,142 community actors

Another aspect of the national strategy, and hence implementing partners on the ground, is to strengthen the capacity of individuals, families, communities, and civil society organizations in

promoting maternal and child health. In the documentation appears the development and implementation of a national communication plan for health, which integrates gender and human rights with a view to promoting best practices. There is also social and community mobilization around maternal and child health (e.g., organizing community transport, communication systems to notify higher levels of emergencies, community funds, mobilization of key players including men, and community systems of monitoring of mother and newborn health).

Promotion of community-based initiatives is another aspect. In this regard, the emphasis has been on strengthening the Bajenu Gox program and the development of IEC/CC activities, advocacy and partnership with CBOs, local authorities, private sector, civil society, and development partners. This strategy includes strengthening the referral to health structures and advocacy with opinion leaders to support maternal and child health.

The following sections present the main lessons resulting from the primary data collection. The analysis focuses on two main dimensions: health system changes, limitations, and outcomes; and monitoring and evaluation systems of service integration.

Key Findings: Changes in the Health System

Essential Inputs to Ensure a Functioning Integration Process

Policies and support for integration: Respondents in the study described a number of inputs critical to ensuring a functioning integration process. Although the process to integrate health services started long ago in Senegal, there was no frame of reference or resources to guide or ensure effective implementation. Subsequently, the National Community Health Policy was designed to fill that gap and served as a framework from which a national community health strategic plan was developed. Integration is composed of several interventions, thus it is important to have integration strategies defined at a higher level. Strong leadership helps to regulate the distribution of resources (including budgets) to recruit and invest in doctors and pharmaceutical technicians, and to enhance the quantity and quality of staff at health posts and health huts.

The Direction of Reproductive Health and Child Survival (DSRSE) leads NGOs to work within the priorities of the MSAS. The consortium of NGOs and MSAS, with donor support, has resulted in the provision of integrated health services at the community level. There is even a unit

in MSAS dedicated to community health. Intervention packages are recognized and authorized at the health huts and sites, and the development of tools and provision of materials and equipment enabled providers to act.

Decentralized functions: The central level determines the approaches and organizes support programs, training, evaluation, and supervision. The central level is responsible for the formalization of policies and strategies related to the management of different health issues. These strategies are shared at the regional level, which in turn shares with the district. The district, in conjunction with resources at the community level, works to operationalize the guidance from the central level. At the local level, partners have strengthened the supply of services at the health huts, and community sites are another of the strategies adopted to meet population health needs.

The regions play an important role in the process of implementing the integration strategies. At the regional level are planning personnel with the training to manage the annual work plan (AWP). MSAS introduced the annual work planning process in 2008. Each center of responsibility develops an AWP as part of operational planning. The local authorities feed their AWPs to the districts, which in turn feed their AWPs to the regional levels, and the regional to central level. Management of an AWP requires capacity by the actors in health, planning, monitoring, and evaluation. According to a respondent at the national level, "The AWP helps to make clear and visible the actions consistent with the national indicators, to draw the map of actors in relation to each health problem to see how their activities and approaches intersect to take charge of health problems at the community level."

Human resources, training, and task shifting: Strengthening the technical capabilities of ASCs, Bajenu Gox, matrones, and relais was an important step in providing integrated services, as well as expanding the service package based on POPAEN. Moreover, a home visiting intervention was initiated to maximize service availability.

Training guides were developed by the National Coordination Unit of PSSC II in conjunction with the MSAS and other partners. Job supports and communication tools include training guides, a trainer's manual, participant manual, pictures, and FP registers. At the operational level, management teams are given an orientation; they train nurses and midwives, and in turn nurses

and midwives train community agents. Integrated Management of Childhood Illness (IMCI) training serves as the foundation of training sessions on integration at the community level. Some providers received the basic training and, with policy developments, there has been a strengthening of capacity (refresher training, workshops) on new approaches and technologies.

Several topics are covered during the training sessions. For matrones, it is maternal development, the immunization schedule, antenatal care, etc. For the ASC, themes relate to the primary and tertiary prevention, interpersonal and group communication, sanitation, collective and personal hygiene, environment, management of health huts and community sites, etc.

After basic training, refresher training is provided periodically. On the ground, the reproductive health coordinator can support training if the training is related to activities in their areas of expertise. For the ASC and dispensateur de soins à domicile (DSCOM or home care provider), this can take the support of SSSP. In the case of the ICP, the supervisor of health education can be solicited to support the ICPs.

Integration is a battery of interventions, thus it is important to assess providers' competencies. Table 6 is an overview of training, equipment, and other materials that providers reported using.

Table 6. Provider Training and Available Equipment Based on Interviews with 144 Providers

Type of training or equipment	**Percent** *(n=144)*
Percentage of providers who…	
have already received training to enable them to provide integrated services	99
have received training in specific areas of health that would allow them to expand their services	43
have BCC materials (brochures, posters, etc.) that deliver messages about integrated health	94
have supporting materials or checklists that are specific to integrated services	80

Supervision: Performance of providers engaged in the provision of integrated services is monitored though regular meetings and supervision that is reinforced and documented. Regions and districts work with implementing NGOs to monitor program implementation and assess the quality of services provided. Each NGO has its own system of monitoring and reporting. The data highlight the need for MSAS to harmonize the requirements of provider performance. This applies to the areas of supervision, planning, and procurement. In this perspective, it would be appropriate to

establish a performance contract based on the Right to Health in the Declaration of the Health Policy in Senegal (1998). Respondents urged the strengthening of integrated services coupled with programmatic monitoring. This is the opinion of one of the officials interviewed at the national level, who believed that "the skills of staff must be evaluated." For him, "We must find the time and the means to supervise. This allows the community working to attend training and gain confidence. It is necessary to supervise, verify the quality of care services and correct if necessary since it is a delegation of tasks." Moreover, he noted that the "monitoring and evaluation system is well structured in terms of protocols and standards, but not in terms of skills."

The results of the 2012-2013 SCSPA show relatively high levels of external supervision reports and monitoring of data and its use (table 7). However, it is still necessary to ensure that the supervision, when it is carried out, also works to improve provider capacity.

Table 7. Report of External Supervision of Health Posts and Health Huts according to SCSPA 2012-2013.

	Health Post *(percent)*	**Health Hut** *(percent)*
Percent of structures that received a supervisory visit (external) in the last six months (n=265 health posts, 74 health huts)	85	81
Among those visited (n=224 health posts, 60 health huts), the percent of supervisors during the most recent visit who did the following:		
Used a checklist to assess the quality of available health data	88	77
Discussed the performance of the structure based on available health data	84	88
Helped the structure make a decision based on available health data	74	70

Basic commodities: To strengthen the health system, expanding a strategy called the "push model" was noted. Under the strategy, service providers no longer have to keep track of their inventory and go to the district level to obtain such commodities as family planning methods. Instead, commodities are regularly sent to health posts. This strategy could be extended to other products related to child health and chronic diseases to improve product availability. In some cases, supplies arrive at the health post but are not of sufficient quantity to provide supplies to other health structures attached to the health post (e.g., recurring commodity stock outs involving ACT). One informant pointed out that "some supplies have for years experienced ruptures, blockages at the community level, due to credit problems of the districts" with the National Pharmacy Supply.

Financing and resource allocation: The main sources of funding are the government, technical partners (such as USAID, United Nations Population Fund, United Nations Children's Fund, and The World Bank), and the people who pay for services. With integration, local leaders are more involved in budgeting and planning, and there is more direct financing that allows the local level to receive funding, implement activities, and report on accomplishments. The empowerment of some women's groups and the local groups involved in management and good governance helped facilitate the local governments to become more involved in implementation alongside the PSSC II partners.

Other changes included that at the operational level the government has implemented the ePTA software (electronic plan de travail annual or annual work plan) that will facilitate focus on using the budget and guiding strategies for greater impact. The AWP allows for development of action plans and to make budget estimates by taking into account the functional program targets. The ePTA is a results-based management tool. According to a national level respondent, the tool brings "transparency, efficiency with the application of this reform [the results-based management] in the way of using resources, to distribute and report on those resources."

However, there appeared to be a shortfall in funding between what was needed for programs and what was being received. In this regard "the state has not changed in its handling of resources, it pays after services are provided," said a key informant in the health system interviewed as part of the study. The informant added that "all activities will normally be conducted because the state pays, which is a problem unlike the partner who puts resources in place, people perform and are held accountable. It is often difficult to carry out an activity without resources." This strategy applies to both integrated and non-integrated interventions.

Study data suggest that each program has funding that is used directly in the community. Districts receive funding for a vertical program. An observation from one informant is that "every financial partner comes with its priorities that dictate budgeting." In the process, the government ensures the provision of personnel and supervision, and receives donor funding, which is shifted according to the priorities of those donors. If the MSAS managed the funding, then the work plans would be more coordinated and they could pool the money to expand the package of services.

Cost structure: There are several mechanisms to help reduce costs as a barrier to access services. A credit system allows clients who cannot pay to access services in real time, with opportunities for them to reimburse the fees at a later time. Integration is also favored by the development of the mutual health organizations. Mutual health organizations signed agreements with the health facilities and offer the possibilities for members to pay reduced costs. In addition, a package of services for children under five is available free of charge at the health post, health centers, and hospitals (news of the free services is available at http://www.unicef.org/media/media_70562.html).

Respondents recommended that the system of free services needs to be reviewed as part of universal coverage because "health posts are suffering," as one of the key stakeholders at the national level expressed concern. "It takes them a long time before they break even [financially]," he added. At the community level, health huts are not yet recognized in the free system. This situation requires solutions, as indicated by an informant who believed that "the ministry should consult the base to harmonize before making a decision." The respondent also raised the question of free ORS/zinc and noted confusion in that "the central level speaks of free services where the district emphasizes the contrary," adding "information is not shared or is not accepted, and it is the community level that suffers the most."

In the field, challenges remain despite the strategies to make care affordable. Table 8 shows, according to 2012-2013 SCSPA data, what the costs are to clients by type of facility and what happens if a client cannot pay. The data show that while there are fewer fees at health huts than health posts, 22% of health huts do not provide services to those who cannot pay.

Table 8. Medical Expenses for Access to Services in the Posts and Health Centers, According to SCSPA 2012-2013

	Health Post *(n=265)*	Health Hut *(n=74)*
Percent of patients who usually pay fees to access medical services	97	66
Percent of structures that have established a separate price for the different elements of the services provided	85	78
Percent of structures that have established medical expenses for the following:		
Health card	68	10
Registration/registration list	8	10
Consultation	85	73
Medicines	82	74
Vaccines	29	18
Contraceptives	76	31
Normal deliveries	50	45
Syringes and needles	81	55
Percent of procedures applied if a patient cannot pay for medical expenses		
Non-coded	3	11
Exemption/reduction, Free (A)	27	12
Exemption/reduction, free and exemption/reduction, payment differs (AB)	14	19
Exemption/reduction, payment differs (B)	4	14
Service not provided, return when able to pay (C)	6	22
Other (X)	30	16
Combination of answers A, B, C, and/or X	17	7

Demand creation and heathy behaviors: Increasing the demand for integrated services in the community necessitated the establishment of various strategies by the PSSC II consortium, in cooperation with the MSAS. At the district level, a partner of PSSC II has been working with existing community structures such as health committees, site committees, and community actors (relais, Bajenu Gox, etc.) through periodic meetings. The organization has helped to unite these actors and bring them closer to the district level. The strategies at the district level have an impact on demand. All the activities to identify, select, and install community actors are made with the district. The goal is to empower communities enough to sustain activities.

According to the data, integrated advanced strategies have achieved a greater reach of health services. In particular, the home visiting (prise en charge des cas à domicile [PECADOM]) allows

the visiting home care provider (DSDOM) to handle cases of uncomplicated malaria, diarrhea, and acute respiratory infections with a mobile workforce, according to logistics designed for areas not covered by health facilities. The teams at the health posts (nurse and midwife) also periodically visit the community to enhance care provided.

Communication remains another key strategy to increase demand for integrated services. Innovative strategies are implemented to reach well-defined target groups, including pregnant women, grandmothers, heads of families, etc. in order to identify barriers to services, including those due to social norms. Promotional activities, information, communication through mass media, social mobilization, and outreach activities are carried out to promote use of services, especially when a new service is introduced. One innovation is *wouré,* which is a traditional game that has been adapted into a tool approved by the MSAS to promote pregnancy care and to teach women the signs and symptoms of danger.

Coherent Service Integration

With POPAEN, health huts offer many services that make up the minimum package of services to different types of clients, resulting in an increase in demand. Interview data suggest that some providers offer services tailored to the specific client's case, and they view this as a way of also promoting services. Most providers interviewed during the study also reported having communication materials about integration and job aids/checklists to support the offer of integrated services (table 9).

Table 9. Number and Percent of Providers Reporting Job Materials Related to Integration

	Matrone *(n=39)*	**ASC** *(n=9)*	**Relais** *(n=48)*	**ICP** *(n=47)*
Number that have communication material (brochures, posters, etc.) about service integration (percent)	38 (97)	9 (100)	44 (92)	44 (94)
Number that have job aids/checklists specifically for integrated service delivery (percent)	32 (82)	8 (89)	32 (67)	42 (89)

When the relais, ASC, or matrone cannot care for a client, referrals are available from the community to the health hut and from the health hut to the health post. One relais reported that the health post will even send an ambulance if necessary. Providers reported that if a woman needs services from the health post, she will get a referral form that will facilitate her visit at the health post. Several providers reported that, as a result of the sensitization activities in the community, many women "self-refer" for services now. As one provider said, "Thanks to the awareness raising activities, people come to me for advice. I send them to the health hut for the needed services. … There is always feedback to let me know that they went and were referred sometimes to the health post."

Although they can offer a referral to higher level services, providers reported many clients still could not afford to seek care due to the cost of transportation, lack of money for other services, or lack of time. Some respondents also pointed to the need for more capacity building to improve the referral system and to deal with the increasing demand for services.

Integration Outcomes

The data collected emphasize that the efforts are "bringing services closer to the communities and reducing barriers to access to care." In general, the data show evidence of the following changes due to integration:

- Increased registration of newborns at birth.
- Observed responsiveness of the community with adherence to advice.
- Acquisition and transmission of knowledge by community workers, particularly for behavior change (e.g., in hygiene and sanitation, expanded program on immunization, antenatal care).
- More timely access to health services.
- Increased accessibility of essential care and medications.

Other observed results reported by respondents included increases in women seeking care during pregnancy; increased assistance during childbirth by qualified personnel; matrones trained to better control hemorrhages due to delivery; more care for newborns, infants, and children under five, including increased use of immunization, weighing, and screening for malnutrition among

newborns and infants, and curative care among children under five; increased contraceptive use; more awareness of the importance of hand washing; and the availability of qualified personnel to provide those services. The "advanced strategy," which refers to providers going to where the needs are located (community, household) to provide health services, has led to changes in many indicators, as noted in the data.

Despite the challenges and needs, one respondent reported that with integration "health personnel more adequately meet the needs of clients, through better structuring of the availability of services, standardization and strengthening collaboration between the different actors." The personnel in the community take satisfaction in their ability to help clients benefit from services. For the permanent medical personnel (ICP, midwife, community health worker, etc.), client satisfaction with the accessibility to more services in the community is a reported source of motivation.

At the community level, the home visits, which are reinforced by talks with pictures and counseling cards, have contributed to a sense of ownership of services. According to the data, men attend the health huts to satisfy a number of needs, including access to condoms from the relais and referral to the ASC for curative care. On the ground, the ICP can be assisted by a midwife or matrone in order to increase the use of services among women who are reluctant to consult a male provider.

The communication strategy is having an effect on behavior change in the communities. "This led to the drastic reduction of pandemics such as malaria with net use, the management of diarrhea with ORS/zinc is popular, and nutrition for children under five years," said one respondent. A change in behavior is noted among women, who are more likely to use the health huts to address their health needs. This is evident through the data, and "women no longer are hiding their pregnancy as was the case before," said one of the respondents, adding that "with the overall management, the woman is ready to stay three days after birth in the structure, which was not the case."

The data also show a direct appeal to the district, linked to a number of reasons. Women's adherence to services is more evident for FP, ANC, and assisted deliveries. The data indicate that women generally benefit from one visit to access other services. This is more marked when they bring their children in for consultation. However, for some types of services (e.g., PMTCT), use

is relatively low. Despite this, there are still problems, according to one of the informants in this study, "with delays in deciding to go to the health facilities, delays in access when they get to the health facilities, and in getting care at the health facility level."

Interviews with women at the community sites provide insights into how current strategies are affecting them. Almost all women interviewed indicated they had attended sessions at the community site on a previous occasion, that their main reason for visiting was addressed, and that they were very satisfied with the services and quality they received (table 10). However, reported receipt of two or more services (an indicator of integration) was low. The reason why different types of services were not reported may be due to the fact that the activities at the community sites usually focus on a single topic (see appendix 2 for a list of activities at the community site level). Also low were reports of visits to a health hut and referrals in the last month. There were some unmet service needs in the last month that affected one in 10 women.

Table 10. Reports of Services Received, Satisfaction with Services, Use of Health Huts, and Unmet Needs among Women Ages 18-49 Attending Community Site Activities

	Percent of Women *(n=1,050)*
On a previous occasion, received services at this community site	94
Top three reported services received at the community site:	
Growth monitoring	49
Diagnosis or treatment for malaria	26
Family planning	9
Received two or more services at the community site on day of interview	9
Main reason for visit to community site was addressed	99
Very satisfied with services	89
Very satisfied with services relative to quality received	85
Visited a health hut in the last month	14
Very satisfied with services at the health hut (of those who visited health hut)	77
Received two or more services at the health hut (of those who visited health hut)	15
Received a referral in the last month	5
Unmet service needs in the last month	11

Regarding the availability of services in the posts and health centers, data collected from providers showed good coverage (table 11). All posts and health centers, with one exception, had at least two services available.

Table 11. Percentage of Providers Who Responded that Services Are Available at Health Posts, Health Centers, or Community Sites

Services Available	Percent of Health Posts *(n = 48)*	Percent of Health Huts *(n = 96)*	Percent of Community Sites *(n = 144)*
Vaccination for infants	100	93	66
Growth monitoring of children	100	98	71
Curative services for children under 5 years	100	97	51
Family planning	98	94	63
Prenatal care	98	59	31
Prevention of mother-to-child transmission of HIV (PMTCT)	100	58	46
Delivery or care of a newborn	100	89	7
Diagnosis or treatment of malaria	98	96	50
Diagnosis or treatment of sexually transmitted infections other than HIV	98	10	n/a
TB diagnosis or treatment (prescription)	92	32	n/a
Help/support for HIV testing	94	22	20

Challenges

There are challenges that remain at the community level to operationalizing integrated services. At the client level, there is still a need to continue to educate and sensitize people in the community and overcome barriers to access to health services grounded in culture and customs. Further, providers are frustrated by the fact that their clients have some health needs that they are not able to address, despite the possibility of referral to the health hut or health posts. The health concerns mentioned are the following:

- diagnosis/treatment of sexually transmitted infections;
- accompaniment and support after HIV testing;
- prescribing antiretrovirals;
- the care and treatment of diseases related to HIV;
- diagnosis or care for non-communicable diseases in adults;
- laboratory for analyses;
- treatment (surgery) of appendicitis, peritonitis, or other diseases; and
- oral health.

Providers working in the health huts and in the community are experiencing increases in the volume of work due to the demand for and the provision of multiple services. Providers are largely volunteers, and thus there is a lack of recognition about their status on the overall health sector hierarchy, and a lack of attention to career planning. In general, the perception of community health is a limitation, according to one respondent, and despite its having been "designed to be a part of the whole health system," that is not always the reality.

There were concerns about the quality of supervision, the lack of a structured framework for monitoring and information sharing, and the review and oversight of institutional interventions. One respondent noted that the expectations for provider performance, particularly at the health hut and community sites, are not defined, or at least they are not consistent across implementing partners. Respondents recommended that the MSAS define standards and establish performance contracts. These would help in the areas of supervision, planning, and procurement.

Other concerns relate to the sustainability of community health efforts because resources are inadequate due to the current financing structure. Services could be at risk, especially if donor funding goes away.

Taking Gender into Account

Participants in the study noted that the community activities resulted in a number of changes in men. A program called "calebasse du mari" was created to educate men about the activities taking place in the health huts and community sites. During the study, providers reported changes, specifically in men's support for their wives and children to use services. This is reflected by the fact that women increasingly accept testing during pregnancy, among other services. In contrast, the data indicate that men themselves do not necessarily attend, despite the lack of reported gender barriers to seeking services. The lack of qualified personnel correlates with difficult access to services for young women, especially those who are not married.

The data collected from providers show that gender issues are not yet integrated in some ways. "The gender dimension is taken into account only with the advent of Bajenu Gox and matrones, but this is not considered in the selection of relais," said an informant. Table 12 provides

information on training providers, in particular the ICP (21%) report more training on gender issues compared with other providers.

Table 12. Providers Trained on Gender Issues, Including Violence

	Matrone *(n=40)*	**ASC** *(n= 9)*	**Relais** *(n=48)*	**ICP** *(n=47)*	**All** *(n=144)*
Percent of providers trained …					
on issues related to gender	13	11	4	21	13
to detect signs and symptoms of gender-based violence among clients	8	0	4	6	6
to accompany clients in the event of suspicion of gender-based violence	10	0	2	9	6

The data collected at the national level highlight the importance of gender in the development of training modules focused on health programs. Through interviews, it appears that USAID puts particular emphasis on training partners on the Tiahrt amendment, which seeks to ensure voluntarism and informed choice especially in the area of RH/FP. Informed choice is included in the gender unit of MSAS, which ensures equity in the provision of services and determines the capabilities to respond adequately to the needs of the community.

The study showed that men are more likely to occupy paid positions of responsibility in the provision and management of health services, and women are more likely to engage in volunteer related activities. In order to break down barriers to access to services, some ICP (who are often male) are supported by midwives. This strategy encourages use of services, as described by one of the informants: "There was a health post where there were not many clients; when a midwife was deployed there, there has been an increased use of services by women of reproductive age."

Key Findings: Monitoring and Evaluation Systems for Integration

Data Collection Tools Available to Gather Information on Integration

Data for monitoring and evaluation come from multiple sources at the health hut and health post levels. Providers interviewed for the study reported that there are more than 18 registers that could be filled out on a daily, weekly, monthly, or other basis. The registers most likely to be filled out by providers on a daily basis at the health hut were:

- curative consultation register;
- family planning register;
- delivery register; and
- medical stock register.

At the health post, providers cited over 28 registers that could be filled out on a daily, weekly, monthly or other basis. The registers most likely to be filled out by providers on a daily basis at the health post were:

- curative consultation register;
- prenatal care register;
- postnatal care register;
- vaccination register;
- children 0-5 register;
- healthy infant register; and
- malnutrition screening register.

At the community level, the different volunteers have their tools, which gather data on tasks that are specific to their roles. For example, the Bajenu Gox follows pregnant women and makes sure they attend prenatal care. The DSDOM collect data on the number of cases received and treated.

Information obtained in the community and health huts is compiled into a report on a monthly basis by the community development agent (l'agent de développement communautaire [ADC]) and submitted first to the ICP then to the zonal supervisor. The zonal supervisor synthesizes the data and transmits it to the regional focal point. Regional focal points then develop a report that

is submitted to the National Coordination Unit of PSSC II on a regular quarterly basis. In a parallel system, the ICP submit their reports to the district, then the district to the regional level. In the context of transferring the supervision of the health hut and community activities, the ICP is supposed to also monitor the activities in the community. However, the work load of the ICP and lack of logistics (e.g., motorcycles for reaching the health hut) is cited as a constraint.

Regular supervision of the health huts and community sites is performed by the personnel from PSSC II. The supervision form covers several domains (such as availability of the minimum package of services, service quality, availability of medicine, etc.), which are verified during supervision visits. It is this data collection tool that facilitates an understanding about the package of services being offered in the health huts.

Every three months there is a coordination meeting between the technical partners, DSRSE, and MSAS to find strategies to improve and strengthen community health. Every partner presents indicators, trends, strengths/weaknesses, and challenges for each region. These meetings help to correct and formulate recommendations to guide interventions toward priorities.

Modifications to the M&E System to Measure the Performance of Integration in the Community Sites and Health Huts

The main modification to the M&E system is the use of the supervision grid used by the ICP and ADC to understand the package of services offered at the community level. Then because of the service delivery package and the roles of the community workers, some forms and indicators can be considered integrated. For example, the home visit form contains many aspects, such as cases of children with diarrhea and malaria. Some indicators have an integration dimension (e.g., is a pregnant woman sleeping under a mosquito net).

The AWP process was also cited by respondents as an important modification. It improves the communication between the operational level and central level, which "would make the system more efficient," according to a respondent. When supervision visits are carried out, the assessments are based on the prepared action plans and budgets.

Limitations with Data Collection

Issues related to logistical constraints, regular data collection, training and capacity building, as well as target setting and identification of performance indicators, are all challenges. In this context, one respondent believes that all staff "must go to indicators school." According to the respondent, such an investment "would help the beneficiaries of the training to avoid mixing outcome indicators with other indicators." Furthermore, the data highlight the challenges with the lack of skills of some providers and the multitude of indicators and management tools. Difficulties are noted on the calculations that some actors in the field have trouble mastering, hence the need to reinforce capacity at this level or employ specialists who are more suited to the work. More frequent supervision visits and standardized supervision is recommended by participants. To further improve management of data, respondents recommended including medical regions, planners, and implementers in the results based management approach, which provides financial incentives to providers and health facilities based on reaching performance targets. Respondents report other challenges including delays in compiling data and problems with retention of providers at the community level.

Analysis and Use of Data

The collected data are analyzed in monthly self-assessment meetings. These data are compiled and analyzed to identify trends and make recommendations. In the analysis, the data are compared against the targets and indicators and are shared with relevant parties. Each partner has its indicators and trends, strengths and weaknesses in different regions. The analysis is conducted first at the level of the zone, in order to locate the difficulties, support districts, document the specifics, and make the necessary adjustments. In the process, the identification of a problem/success or a certain performance induce an appeal to the terrain. During data collection, this situation was illustrated in the district of Ndoffane. A home visit identified a case of severe malnutrition. This case was managed successfully. Home visits help to verify if people are applying the knowledge acquired during IEC activities.

During provider interviews, the most common reports of data use were: 57% reported using the data to prepare a report, 49% for organizing awareness and communication activities, 62% to follow clients, and 12% for sharing information at the district level.

Feasibility and Relevance of Integration Indicators

Indicator: *Number and percent of health huts offering a minimum package of services.*

This indicator is used to understand the number of health huts that are functional and offering the minimum service package. This information is used to meet planning needs, evaluate performance and functionality of the health hut, and understand and identify constraints and gaps that need to be addressed.

On the ground, the health posts determine the number of functional health huts in the area, in collaboration with the ADC. At the operational level, the different partners of program implementation produce reports on this indicator. The National Coordination Unit of PSSC II consolidates the data and develops a summary of the indicator. The information is also shared and centralized at the district level, which is tasked with ensuring transfer to the medical region.

MSAS has a manual to calculate all of its indicators. The indicator (number and percent of health centers offering a minimum package of services) is characterized by its clarity and its calculation refers to the report: number of health huts offering a minimum package of services over the number of functional health huts. The information for this indicator is analyzed to check the number of functional health huts and to understand the progress of scaling up of the minimum package. The data are compared to the previous quarter to better understand the developments. Gaps are taken into account in order to find solutions to improve the indicator. "The management and analysis at the Direction of Reproductive Health and Child Survival are [usually] done on an annual basis by the monitoring unit," reported a respondent.

Some respondents reported that the calculation of this "indicator is problematic because it includes many parameters that make it imprecise." Many services are included in the package. Moreover, when there is a lack of communication from the community about the indicator, it can make it difficult to understand if a health hut is working or not, or whether they are just late in reporting. One respondent at the regional level said that a challenge is that "the indicator does not identify a problem or take immediate action."

Information on this indicator is collected during supervision. This is done monthly, and data collected in the health huts are used to study the differences. In the study data, it appears that the

information is collected on paper. In the health huts and health posts, there are no computers. The District Health Information System 2 (DHIS 2) facilitates the capture and management of data, but it is available starting at the district level. This allows planners and managers to have access to real-time information and to consult the data in real time. Controlled access to the database check ensures information security.

An audit of the information on this indicator (number and percent of health centers offering a minimum package of services) is performed at all levels of the system. At the MSAS, the verification of the quality and accuracy of the data is done by the Division of Health and Social Information System (la Division du Système d'Information Sanitaire et Sociale). However, problems are often encountered to carry out the audit. The workload of the collection agent may be the cause of failures. Therefore, the validation passes through the regional level to ensure the correction data and the management of consistency.

Inconsistencies were noted in places. Incidentally, the Department of Planning, Research and Statistics (Direction de la Planification, de la Recherche et de la Statistique) attempts to establish the performance of the information system for quality data that contributes to decision making. These inconsistencies seem to result from the fact that the actors do not always have the same definition of concepts.

Moreover, as one respondent said, "The system is not able to disaggregate this indicator, hence the importance of improving the support for the reports for sites disaggregating by age, sex, like for the EIP [expanded immunization program]." The informant added, "Decision making by the MSAS will be biased if the information is incomplete." According to the data, it appears that before only some partners were gathering information on the indicator "which also was not subject to sharing," according to the informant.

Despite the challenges mentioned above, some informants noted the adequacy of the service integration tracking device. In this regard, one respondent argued that such a device "allows the reporting and data sharing" and believed that the use of "new technologies of information and communication would help to improve the data management."

Indicator: *Number of clients who have received two or more services during one visit at the point of service delivery.*

Analysis of the data on this indicator, intended to provide an indication of uptake of integrated services, reveals that some partners (governmental and NGOs) would not be able to use their routine systems to collect, report, and manage the information on this indicator. In this regard, one interviewee at the national level estimates that "this indicator is not within their management tools; to integrate it would be a problem because it would be necessary to revise the tools developed by the DHIS." Moreover, this informant stressed that "the system of MSAS does not capture this indicator, which would therefore not be monitored."

When asked about this, one respondent at the national level stated that "the indicator is not suitable at community level, but rather at the health post level." In Kaolack, "the use is possible, but partially because it must first be able to determine the package," according to a key informant in the field. The indicator emphasizes "an overlap between some packages and confusion regarding their content." An example of overlap is condom counseling and distribution, and whether the condoms are intended for HIV prevention, family planning, or both. In general, it appears from the analysis that there would be difficulties associated with the collection and management of the information on this indicator, as well as reporting.

At the community level, obtaining data on this indicator would be generally facilitated through surveys. According to the study data, the indicator is of relevance. However, "there is not a specific data collection tool for this analysis," said a respondent.

In the Kaolack region, one of the project leaders thinks the goals, limitations, and challenges for this indicator are well defined. However, when asked the same question, a respondent at the national level responded that "this indicator is not useful, neither for strategic planning nor for management and decision making, to the extent that the service delivery is done in response to demand….to make it useful, one will have to take the number of clients reached by a service" at the community level.

The above indicates some confusion in the management of the information on the proposed indicators. While some respondents felt that the indicator is not useful, other respondents

disagreed. As one respondent expressed it, the indicator shows "whether the client's needs were taken care of in order to measure their satisfaction."

> ***Indicator:*** *Number of delivery points of maternal, newborn, and child health services that integrated at least one other type of service.*

The collection tools that would inform this indicator are already available at the national, regional, and implementing partners' levels. Basically, these tools are designed to take into account the need to disaggregate the specific data.

Registers for FP, documenting child weight, and those devoted to general consultation, among others, could be used to collect information on this indicator. The indicator is clearly described, and the focus is on the definition, disaggregation, purpose, and methods for collecting and measuring data. However, the analysis shows that, with respect to the limitations and challenges, this indicator could only be clearly described at the central level.

Some informants consider that, as one expressed it, "the indicator provides an overview on the completeness of the management and integration of services."

> ***Indicator:*** *Number of delivery points of HIV services that integrated at least one other type of non-HIV service.*

This indicator would be "inappropriate for the community level," said one respondent at the national level, emphasizing that the current system at the community level could not be used to collect, report, and manage the information on this indicator. People at the community level would be informed and sensitized to HIV. However, there are no clinical care services for HIV at the community. One respondent at the regional level drew attention to the fact that "the definition, description and purpose are not clearly described." For the definition, he noted that "the problem would lie in relation to the treatment of HIV." As regards the aim, he believed that "for clinical and non-clinical aspects, we must simplify and adapt the package" in relation to the specific needs at the community level. In this context, one respondent saw some "inadequate data collection materials" and highlighted the specific nature of the indicator that "is not defined." Added to this is the need to audit data quality which remains "a problem which is necessary to anticipate."

At the regional level, some respondents mentioned the possibility of using their systems to collect and report information relating to this indicator. The lines of reporting data across the health pyramid would serve this purpose. From the respondents, it appears that "there would be no difficulty in collecting and managing this information to the extent that it started from the integrated package of services and continues each quarter regularly" as one respondent said, adding that "the collection is used to evaluate and plan each time in order to improve the package with the technical reinforcement and equipment."

Existing systems coordinated by the National Coordination Unit of PSSC II and the MSAS could be modified to disaggregate and analyze data by age, sex, etc. This disaggregation would be possible from the results of interviews at the regional level.

Basically, the information relating to this indicator is available. However, a limit remains over the lack of HIV services in addition to the need to reconsider some items in the management tools.

Discussion

This analysis demonstrates a number of lessons on the process of integration of health services in Senegal. This case study highlights a country that has implemented an integrated program to help increase coverage and access to health services. The approach has been to implement a minimum package of services at the community level, but where meeting the demand remains a challenge.

Responding to the identified health needs with an integrated package of effective interventions has led to strengthened and new policies; clarified roles and responsibilities from the community to national level; increased responsibility of community leaders and local groups in financing, budgeting, and planning; and created a platform into which donors can invest. Health system strengthening interventions, in particular the AWP process, will result in better management of resources and improved implementation of services.

The analysis allowed for retaining a number of changes that are noticeable through several determinants. They highlight the availability of data, made possible by the establishment of a collection mechanism, processing, reporting and clear sharing, and monitoring by the partners of the implementation of the program.

The review of the documentation shows concrete achievements related to implementation of program inputs over time. These are summarized in terms of collective ownership of implemented initiatives, revitalization of collaboration between health teams at regional and district levels and community stakeholders, resulting in improved planning and enhanced the quality of products and services at health huts and community sites. In addition, the study identified a successful gender component to the intervention in increased men's support for their families to use the services.

Through the study, challenges emerged related to the transfer of the management of health units to districts and communities. Geographical and financial access to services remains a major concern, particularly when a client needs a referral to higher level services. The distribution of available resources faces competing demands including the need to continue to improve the coverage of services, and to ensure effective coordination of community actors, while improving supervision and human resource retention in a context of constrained human resources. Other limitations included the status of the health huts within the health system, the lack of standardized policies for fees paid by clients at the health hut level and the procedures for payment, including the capacity of health committees, and the problems of supply of essential drugs and supplies and the need to prevent stock outs through training health personnel in inventory management and implementation of a system of direct allocation for a safety stock.

Beyond these findings, the analysis highlighted the need to continue to build the capacity of CBOs and local communities in the management of community health, including in the management and use of data. To this end, intervention strategies that have been defined through the PSSC II project serve as a framework and contribute to guiding actions to address these challenges, hence the priorities set about improving services and increasing their level of use, offering quality care, and strengthening the leadership and management of maternal and child health and reproductive health programs. At the policy level, efforts to harmonize intervention implementation and indicator definitions among partners will facilitate more efficient monitoring and documentation of the implementation of the different components of the Community Health Strategic Plan.

Conclusion

The Government of Senegal with support from USAID and other partners has implemented a comprehensive approach to improving coverage and access to primary health care services. Despite a number of challenges that remain, the study documents a number of successes to this approach. This study used a case study methodology to gain deeper insight into the processes of planning, implementing, and monitoring and evaluating an integrated health intervention at (near) scale. The study was not intended to be representative, thus these results, notably at the client and provider levels, can not necessarily be generalized to the rest of the country. However, the variation in types of respondents and study sites should provide some reassurance that the findings reflect the typical experience in Senegal, particularly at the national level. The intention of the study was to provide a clearer picture of the process of planning an integrated services delivery intervention and integrating that intervention into the health system at scale in a low-resource setting. As such, the findings should be relevant to planners and donors in other settings interested in planning and implementing integrated interventions and appropriate systems for monitoring and evaluating those interventions.

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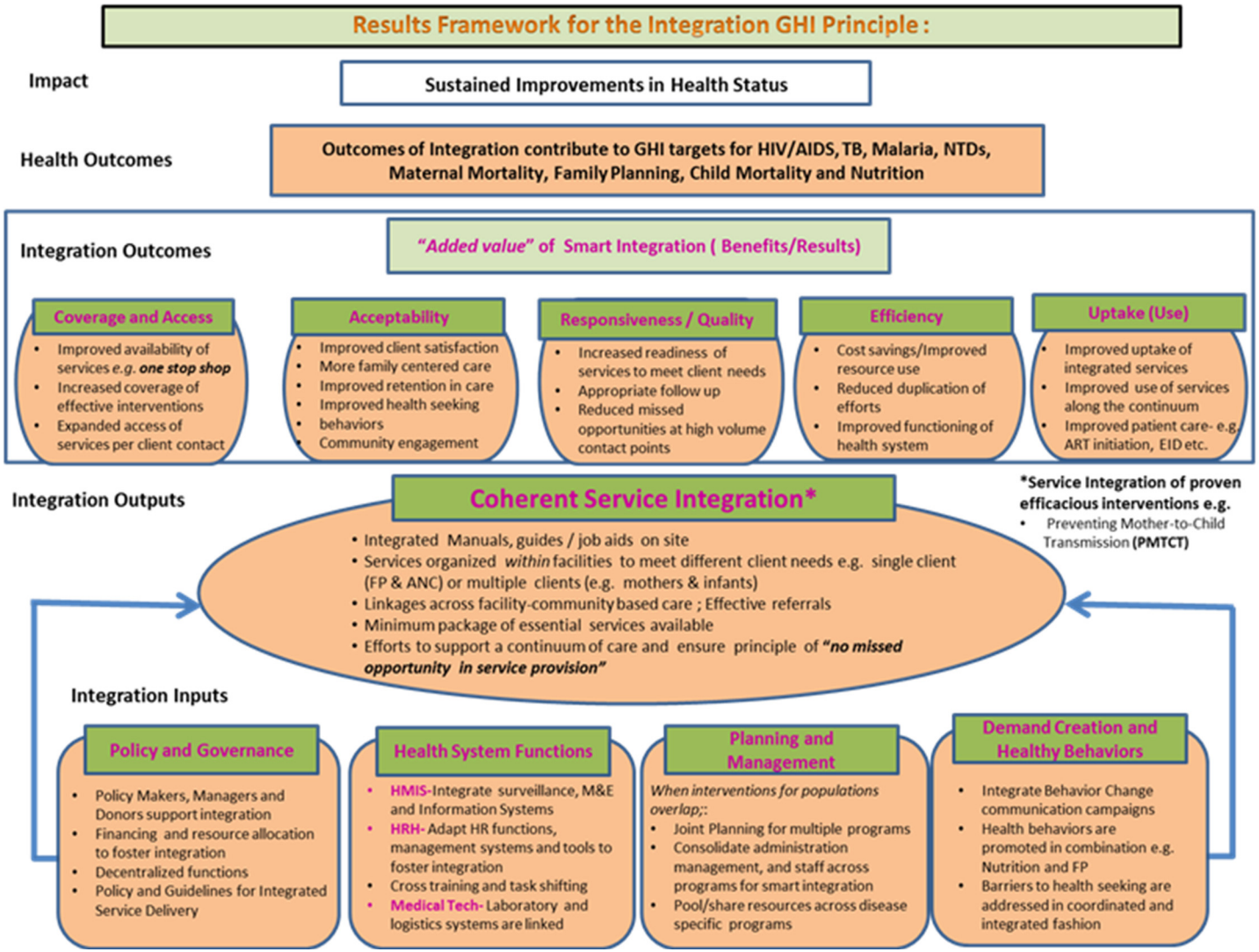
Appendix 1. Integration Results Framework



Appendix 2. Data Collection Summary at the National, Regional and District, and Site Levels

Type of national-level respondents (15 total):

- USAID
- Community Health Unit of the Ministry of Health and Social Action (MSAS)
- Direction of Reproductive Health and Child Survival (DSRSE)
- Direction for Planning, Research and Statistics (DPRS)
- Division of Health and Social Information System (DSISS)
- Consortium members implementing PSSC II (ChildFund Senegal, Africare, Catholic Relief Services, Enda Santé, PLAN, Enda Graf Sahel, World Vision)

Appendix Table 1. Number of Respondents at Regional and District Levels by Data Collection Tool

		Interview Guide *(regional and district)*		**Indicator Testing Tool** *(regional and district)*	
Region	**District**	MCR	MCD	SSSP	Focal Point for PSSC II
Kaolack	Guinguinéo	1	1	1	-
	Kaolack		1	2	1
	Ndoffane		1	1	-
	Nioro		1	1	1
Total		1	4	5	2
Luga	Kébémer	1	1	1	-
	Coki		-	1	-
	Luga		1	2	1
	Sakal		-	1	-
Total		1	2	5	1

MCR = medical region head; MCD = district medical officer; SSSP = supervisor primary health care

Appendix Table 2. Number of Provider Interviews in Kaolack, by District and Type of Provider

District	**ICP**	**Relais**	**ASC**	**Matrones**
Kaolack	5*	5	-	5
Guinguinéo	7	7	1	6
Ndoffane	6	6	2	4
Nioro	7	7	2	5
Total	25	25	5	20

* At one health post, the acting midwife was interviewed instead of ICP.
ICP=head nurse at health post; ASC=community health agent.

Appendix Table 3. Provider Interviews in Louga, by District and Type of Provider

District	ICP	Relais	ASC	Matrones
Luga	4	4	2	2
Sakal	5	5	1	4
Kebemer	7*	7	1	6
Koki	7	7	-	7
Total	23	23	4	19

* At a health post, the nurse assistant was interviewed instead of the ICP who on leave during data collection.
ICP=Head nurse at health post; ASC=community health agent

Appendix Table 4. Number of Women Ages 18-49 Interviewed in Kaolack Region, by community Site and Activity and Themes

Activities/Themes	Districts	Health Posts	Site/ Health Hut	Site Participants	Interviews Conducted
FP talk	Kaolack	Thiomby	Bouthie	23	18
MM/MS screening	Kaolack	Gandiaye	Diamaguéne	40	38
Malaria talk	Nioro	Nioro (CS)	Diamaguéne	25	5
FP, malaria, prenatal consultation, post abortion care talks	Ndoffane	Ndoffane (CS)	Diamaguéne	24	23
Malaria talk	Nioro	Paoskoto	Dinguiraye	26	26
Malaria talk	Nioro	Wakh Gouna	Djisa Aliou	27	25
FP talk	Guinguin eo	Gagnik	Gagnick Mack	52	19
FP skit/Calabash	Kaolack	Mbadakhoune	Gnolanéme	60	25
Community outreach, Vaccination talk	Kaolack	Ndi Ebel	Ker Ndiéne	20	20
TB talk	Nioro	Maba	Keur Maba	16	16
Weighing	Ndoffane	Ndoffane (CS)	Keur Serigne Bakary	31	30
Malaria talk	Nioro	Wack Ngouna	Matam	19	10
MM/MS screening	Kaolack	Thiomby	Mbelbouck	21	17
MM/MS screening	Guinguinéo	Mboss	Mboss	123	57
MM/MS screening	Guinguinéo	Panel	Mboulougne	91	83
FP talk	Guinguinéo	Ndellé	Ngar Guéye	39	33
PMTCT talk	Nioro	CS Nioro	Nouroulaye	11	9
Tuberculosis talk	Nioro	Keur Madiabel	Sathie Abdou Bigué	15	15
Malaria talk	Nioro	Nioro	Thiérére	18	17
MM/MS screening	Guinginéo	Dara Mboss	Yogouré	55	44
Total					530

Moderate malnutrition (MM); Severe malnutrition (SM); family planning (FP); Prevention of mother-to-child transmission (PMTCT).

Appendix Table 5. Number of Women Ages 18-49 Interviewed in Louga Region, by Community Site and Activity and Themes

Activities/Themes	Districts	Health post	Site/Health Hut	Site Participants	Interviews Conducted
Hand washing talk	Coki	Coki	Boudy	27	21
Weighing 0-24 months	Coki	Guet-Ardo	Diamoye Gaye	30	26
Cleanliness, hygiene, and safety talk	Sakal	Diéye Satouré	Diéye Satouré	30	29
Weighing 0-24 months	Sakal	Sakal/Gade	Gade	22	22
HIV screening	Sakal	Ngueune Sarr	Gouyar	80	37
Weighing 0-24 months	Coki	Coki	Grand City	27	13
Chronic malaria talk	Coki	Guet Ardo	Guet Ardo	23	18
Malaria talk	Luga	Kelle Guéye	Kelle Ndiaye	29	29
Malnutrition screening	Kébémer	Khalboune Sall	Khalmbane Sall	26	16
TB symptoms talk	Coki	Coki	Louméne	45	30
Weighing 0-24 months	Kébémer	Diokoul	Maka Ndiaye	25	23
Diarrhea talk	Luga	Guidillé	Mbarom Diop	47	39
Malaria talk	Luga	Kelle Guéye	Ndame Keur Guerry	27	27
Malnutrition screening	Luga	Kelle Guéye	Ndiari Diop	35	25
Malaria talk	Coki	Coki	Ndieug	37	30
Weighing 0-24 months	Coki	Ouarack	Ouarack 1	37	35
Weighing 0-24 months	Coki	Ouarack	Ouarack 2	67	51
Malnutrition screening	Sakal	Léona/Potou1	Potou1	16	16
Malaria, acute respiratory infections, diarrhea, FP talk	Sakal	Gueune Sarr	Yeurmendé Dieng	52	33
Total					520

Appendix 3. Data Collection Tools and Interview Topics

Five collection tools were developed as part of the study to generate answers to questions about the integration process. Interview themes were drawn from the integration framework (appendix 1).

1. *National level interview guide*: The use of this tool facilitated collecting information main actors implicated in the integration of services at the national level in Dakar. The data collected provides insights about: support for integration; procedures in place to adapt existing policies; monitoring and evaluation plans and operational procedures; the allocation of financial resources; the capacities of resource people; the use of logistics and laboratory procedures; mechanisms of planning and supervision; health promotion and behavior change messages. In addition, an emphasis was made on documenting the monitoring and evaluation system, including the management and reporting and practices, integration indicators, changes taken to document integrated services, issues arising from these services, and existing sources of data.
2. *Regional and district-level guides*: Use of the data collection instrument with the regional and district representations facilitated obtaining information related to the context of integrated services, monitoring and evaluation supports, and results of integration, among others.
3. *Provider questionnaire*: This tool focused on available services offered and the referral mechanism, the process of integration in connection with the monitoring and evaluation systems, data use, etc.
4. *Indicators tool*: This tool was administered to those in charge of monitoring and evaluation (SSSPs, program focal points, and regional managers). The tool elicits data on the information system and on four indicators (see table 3 above).
5. *Questionnaire for women of reproductive age at community sites*: Women aged 18 to 49 years participating in health activities at community sites answered questions related to the services they received, the quality of those services, their perspectives on access and availability to services, their perspectives on integrated services, and unmet needs.

MEASURE Evaluation

University of North Carolina at Chapel Hill
Carolina Population Center
400 Meadowmont Village Circle, 3rd Floor
Chapel Hill, NC 27517

http://www.measureevaluation.org