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INTEGRATED COMMUNITY CASE MANAGEMENT OF CHILDHOOD ILLNESS:

Documentation of Best Practices and Bottlenecks to Program Implementation in Senegal

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Photo by: USAID/PSSC Project

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The Maternal and Child Health Integrated Program (MCHIP) is the USAID Bureau for Global Health flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening. Visit www.mchip.net to learn more.

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ACRONYMS AND ABBREVIATIONS

ACT	Artemisinin-based Combination Therapy
AQ/SP	Amodiaquine and Sulfadoxine Pyrimethamine
ARI	Acute Respiratory Infections
ARPV	*Association des Relais Polyvalents* (Association of Multipurpose Relays)
ASC	*Agent de santé communautaire* (community-level agent providing community case management)
BASICS	Basic Support for Institutionalizing Child Survival
BCC	Behavior Change Communication
CAMAT	Community Action against Malaria and Tuberculosis
CCM	Community Case Management
CDA	Community Development Agent
CHW	Community Health Worker
DANSE	*Division de l'Alimentation, de la Nutrition et de la Santé de l'Enfant* (Division of Food, Nutrition, and Child Health)
DHS	Demographic and Health Survey
DPHC	Division of Primary Care and Health
DSDOM	*Dispensateurs de Soins à Domicile* (providers of home-based care for malaria)
FCFA	Franc Communauté Financière Africaine (Unit of currency)
FGD	Focus Group Discussion
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
iCCM	Integrated Community Case Management
IEC	Information, Education, and Communication
IMCI	Integrated Management of Childhood Illness
ITN	Insecticide-Treated Net
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goal
M&E	Monitoring and Evaluation
MICS	Multiple Indicator Cluster Survey
MoHP	Ministry of Health and Prevention
MSH	Management Sciences for Health
NGO	Nongovernmental Organization
NHMIS	National Health Management Information System
NMCP	National Malaria Control Program
ORS	Oral Rehydration Salts

PECADOM	*Prise en Charge à Domicile des Cas de Paludisme* (home-based treatment of malaria)
PMI	President's Malaria Initiative
PNLP	*Programme National de Lutte contre le Paludisme* (National Malaria Control Program)
PRN	*Programme de Renforcement de la Nutrition* (Program for Strengthening Nutrition)
RDT	Rapid Diagnostic Test
RHDS	Rural Health Delivery Services Project
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	US dollar
VHC	Village Health Committee
WHO	World Health Organization

EXECUTIVE SUMMARY

BACKGROUND

Why iCCM

Although infant and child mortality rates have declined appreciably in most developing countries, children under five continue to die at unacceptably high rates, often of preventable causes such as malaria, diarrhea, and pneumonia. According to a recent analysis, it is estimated that pneumonia is responsible for 18% of under-five deaths, diarrhea for 15%, and malaria for 8%.[1] Although simple, cost-effective interventions are available for these diseases, a major challenge remains: in most countries where morbidity and mortality among children is high, access to health facilities and/or the quality of services offered still represent major challenges.

Integrated Community Case Management (iCCM) of childhood illness is one strategy to reduce morbidity and mortality in the under-five population by providing the delivery of high-quality services through paid or volunteer community health workers (CHWs) to hard-to-reach populations.

In Africa, many countries are still in the early stages of their iCCM programs—focusing on advocacy activities, or in the preliminary stages of introducing the approach for a single disease at a time. However, a few countries, including Senegal, the Democratic Republic of the Congo, Rwanda, Madagascar, and Niger, have begun to implement the approach on a national scale.

As these countries expand their programs and move towards scale-up, there are important lessons and promising practices to share on the process of adoption, introduction, and implementation on a larger scale. The lessons and practices are based on the experience of these specific national programs and should be adapted to the contextual needs of other countries.

Overview of iCCM in Senegal

In Senegal, malaria causes 19% of under-five deaths, diarrhea 14%, and pneumonia 13%.[2] To prevent child mortality, Senegal has implemented iCCM for child health, which extends health services to populations that are hard to reach.

The public sector health system in Senegal includes referral hospitals, health centers at the district level, and health posts at the periphery. Health post personnel, usually the head nurse, supervise the volunteer CHWs, who work in health huts located at the community level. Also working at the community level are traditional birth attendants and community relays for behavior change communication (BCC) and social mobilization.

Under the leadership of the Ministry of Health and Prevention (MoHP), Senegal has been successfully implementing iCCM (including for acute respiratory illness [ARI], diarrhea, and malaria) since 2003. As of mid-2010, the program covered more than 1,600 community sites in 58 of 69 districts. In addition, expansion of iCCM includes adding ARI and strengthening diarrhea management in sites where, initially, only malaria and diarrheal disease were treated. Using the funds for malaria, Senegal is expanding the full package of iCCM and increase coverage of services.

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[1] Black, Robert E. et al. "Global, regional, and national causes of child mortality in 2008: a systematic analysis," *The Lancet*, Volume 375, Issue 9730, 5 June 2010.

[2] MDG countdown country profile, 2010. Accessed at: http://www.countdown2015mnch.org/documents/2010report/Profile-Senegal.pdf

Over the seven years of implementation, the MoHP's key technical and financial partners in the iCCM program have included the World Health Organization (WHO), United Nations Children's Fund (UNICEF), Pfizer, Cheikh Anta Diop University, and the U.S. Agency for International Development (USAID). USAID's implementing partners over the years include: the Basic Support for Institutionalizing Child Survival (BASICS) Project, Management Sciences for Health (MSH), the Community Action against Malaria and Tuberculosis (CAMAT) Project, IntraHealth, and the Nongovernmental Organization (NGO) Consortium managed by ChildFund.

Senegal made key and strategic policy decisions to implement a full package of iCCM (including the treatment of pneumonia with antibiotics), updated the drugs used for diarrhea and malaria, and is now taking the package to national scale. Despite challenges of policy change, Senegal has demonstrated leadership and broad consensus among partners at every step related to introduction of antibiotics and changes of malaria and diarrhea regimens, often considered too complicated for lay health workers.

With seven years of experience and well-documented lessons learned, the Senegal program has a number of important lessons to offer other countries interested in either implementing iCCM for the first time or expanding their current programs.

The Documentation Exercise

Methodology and Goal

In 2010, the MoHP and its partners (USAID, the Maternal and Child Health Integrated Program [MCHIP], the NGO Consortium, and UNICEF) undertook a documentation exercise to share their iCCM experience with other countries and to propose recommendations to strengthen the Senegal program.

The methodology of this exercise included a review of documents, in addition to quantitative and qualitative methods for data collection from a sampling of national, regional, district, and community-level sources. The qualitative data focused on opinions and perceptions, while quantitative methods were used to gather data on stock status and CHW performance scores. The team included three persons from MCHIP and UNICEF Regional, two national consultants, and eight local facilitators (to conduct focus group discussions).

By identifying the successes and best practices of the Senegal program, by recognizing its weaknesses to correct and prevent them, and by having a clear vision of the future of the program, this report has a two-fold aim: 1) to serve as a global learning tool that helps other countries that are looking for ideas to accelerate and expand their own iCCM efforts, and 2) to continue to inform program implementation in Senegal.

An Analysis of the Data Findings Led to the Following Key Lessons:

Establishing a Favorable Policy Environment and Effective Institutional Support

- *Effective evidence-base for policy change in Senegal included*: Scientific evidence used during advocacy sessions; individuals who have the courage to challenge the status quo; evidence demonstrating that trained community workers can correctly dispense antibiotics, oral rehydration salts (ORS)/zinc and anti-malarial drugs.
- *Need for policy based on experience*: To date, the iCCM program has been implemented without a national policy on community health. As the program has expanded, involving different government programs providing diverse health services, the need for a national policy on community health for consistent standards and synergy has become evident.

- *Ownership and empowerment of decentralized government levels:* Although NGOs support program implementation in the field, the MoHP continues to provide the technical and strategic leadership and has the overall responsibility to coordinate activities. It is very important to address ownership issues through a community health policy and implementation strategy that defines roles and responsibilities, including MoHP roles at regional and district levels.
- *Adaptation to local context and culture*: Adapting the approach to the local context and culture is of vital importance to ensure acceptance and ownership by the beneficiaries through local health committees.

Reinforcing Links between the Health System and the Communities

- *Implementation sequence can vary*: The Senegal experience demonstrates that training of facility staff in clinical IMCI to supervise CHWs is not a precondition for a successful community-based case management initiative.
- *Importance of head nurses in supporting CHWs*: Head nurses are the first line of contact between the CHWs and the health system and the importance of their role in supporting the CHWs cannot be underestimated. Head nurses can monitor quality (through direct observation of service delivery), coach for improved performance, and analyze data from CHW reports for problem-solving.
- *Harmonized tools, procedures from community to national levels*: It is important to have a "dashboard" or a set of tools and procedures for implementing and monitoring activities at all levels of program management, from the peripheral village level to the national level, both from Ministry and implementing partners.
- *Data needs differ in startup and expansion*: It is important to distinguish between data to determine feasibility of intervention during the initial phase, and data for program monitoring and decision-making during expansion phase. Routine data collected at the community level in the expansion phase should be integrated into the overall health information system. The indicators, which need to be reviewed periodically, should clearly measure the contribution of the community-level program to the overall health system.

Rapidly Scaling Up the Delivery of Quality Services by CHWs to Households

- *Program design*: Good program design should include both an initial and an expansion phase with allocation of resources.
- *Clear policy directives and commitment for rapid expansion*: The initial program phase should include clear policy directives and commitment for rapid expansion if the results prove conclusive.
- *Ministry of Health leadership*: While NGOs provide important technical, human, and operational support, during the rapid scaling-up of the program, it is important for the MoHP to coordinate and lead the process.
- *Well-functioning supply chain management*: Without drugs, visits to facilities lose value.
- *Quality assurance in expansion phase*: Quality assurance should not decline during the expansion phase even if the objective is to rapidly expand coverage of the target population. Certain standards and procedures need to be respected, especially where post-training monitoring and supervision are concerned. Direct observation of case management to monitor the quality of service delivery is an essential requirement to be included in monitoring.
- *Financing for sustainability*: Securing financing is important to long-term program sustainability. Allocating funds for supervision of community activities in the budgets of the Ministry's departments, divisions, and decentralized levels demonstrates ownership.

Designing and Implementing BCC activities for iCCM

At this stage of the program, the lessons are limited in this area. However, based on the gaps identified, the issues to be addressed include:

- *BCC Strategy Review*: It is time for an in-depth review of the technical content of the IEC/BCC strategy. The review should include an assessment of targets, messages, and means of communication for different actors. The BCC strategy has to be adjusted to cultural values of the community. Program managers should continue to actively seek out opportunities to ensure that behavior change activities are both effective and acceptable. In addition, resource mobilization should cover both case management and BCC activities. The challenge is to maintain a balance between clinical aspects and BCC.
- *Social mobilization*: Integrating health messages into mass media needs to be done very systematically. The iCCM program should develop a comprehensive plan taking into account appropriate media channels to reach the rural communities who are the target for iCCM.
- *Optimizing resources*: The involvement of the Ministry of Communication should be more tangible, and can help optimize resources. The decentralized levels of the MoHP should also mobilize local resources, e.g., develop partnerships with local media or leading advocacy campaigns directed toward influential people in the area.

CONCLUSION

Although the purpose of this exercise was not to quantitatively measure increased access and improved outcomes, there are a number of positive findings indicating program effectiveness, including:

- After CHWs were trained in the use of rapid diagnostic tests, the number of cases of fever diagnosed as malaria declined significantly. This has resulted in a more rational, cost-effective use of relatively expensive antimalarial drugs.
- The number of cases of diarrhea treated with ORS and the number of cases of pneumonia treated with antibiotics appear to increase in parallel with the number of health huts involved in the program.

INTRODUCTION

Globally, there has been tangible progress in reducing infant and child mortality, but a large number of children under five continue to die of preventable causes of disease. In most developing countries, malaria, diarrhea, and pneumonia are still responsible for a large majority of illnesses and deaths of children under five. According to Lancet analysis, it is estimated that pneumonia is responsible for 18% of under-five deaths, diarrhea for 15%, and malaria for 8%.[3] In Senegal, malaria causes 19% of under-five deaths, diarrhea 14% and pneumonia 13%.[4]

Simple and cost-effective interventions are known: the administration of antibiotics for pneumonia, the combined use of oral rehydration salts (ORS) and zinc tablets to treat diarrhea, and artemisinin-based combination therapy (ACT) to fight malaria. If these interventions are implemented on a large scale, they can significantly contribute to reducing child mortality and achieving the Millennium Development Goals (MDGs).

These interventions are already being implemented through the Integrated Management of Childhood Illness (IMCI) program at health facilities. However, in most countries where morbidity and mortality among children is high, access to health facilities and/or the quality of services offered still represent major challenges and children continue to die at home. Integrated Community Case Management (iCCM) by paid or volunteer community health workers (CHWs) is an option that supports the delivery of services to hard-to-reach populations. Treatment, particularly of childhood illnesses, has been around for a long time. Conditions commonly treated were malaria with chloroquine, diarrhea with homemade fluids and ORS, and acute respiratory infection (ARI) with traditional medicines. A meeting held in Stockholm in 2002 on the Evidence Base for Community Management of Pneumonia, marked an important milestone in the global effort to expand treatment of pneumonia by CHWs.

Global advocacy has been underway during the past 9 years for iCCM covering diarrhea, pneumonia, and malaria. This approach is gaining ground for two reasons: it is an appropriate response to the health needs of hard-to-reach populations and results show that community case management (CCM) contributes significantly to reducing mortality among children under five. In Africa, many countries are still in the early stages of their iCCM programs—focusing at present on advocacy activities or in the preliminary stages of introducing the approach for a single disease at a time. However, several countries, including Senegal, the Democratic Republic of the Congo, Rwanda, Madagascar, and Niger, have begun to implement iCCM on a national scale.

Senegal has a long history of curative services at community level, through the community-owned health huts, dating back to the late 1970s. At a time most countries were reluctant to do so, Senegal adopted and expanded CCM of ARIs, malaria, and diarrhea for children under five years of age at the health hut.

This document provides lessons for the global community to help countries scale up their programs. The first section introduces the methodology used to document successes and bottlenecks in the Senegal program and provides an overview of the history and current status of the program. Using an internationally-recognized framework of iCCM benchmarks shown in Annex 1, the next section presents the key findings for eight programmatic components of the

[3] The Lancet Series on Child Survival, 2003.

[4] MDG countdown country profile, 2010. Accessed at: http://www.countdown2015mnch.org/documents/2010report/Profile-Senegal.pdf

iCCM benchmarks, namely: 1) coordination and policy setting, 2) financing, 3) human resources, 4) supply chain management, 5) service delivery and referral, 6) communication and social mobilization, 7) supervision and performance quality assurance, and 8) monitoring and evaluation (M&E) and the health information system. The final section on lessons learned is organized around four critical themes:

- Establishing a favorable policy environment and effective institutional support
- Reinforcing sustainable links between the health system and the communities
- Making quality services available to households
- Designing and implementing behavior change communication (BCC) activities for iCCM

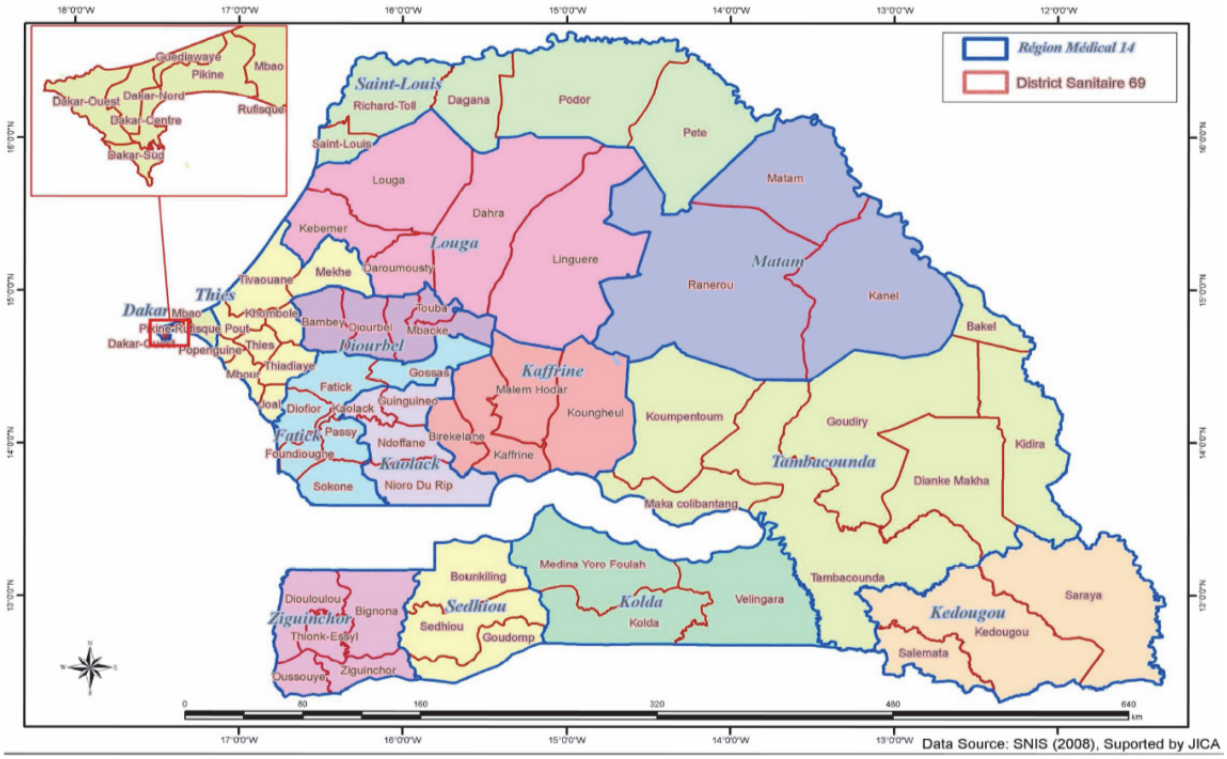
By appreciating the successes and best practices of the Senegal program, by recognizing its weaknesses in order to correct and prevent them, and by having a clear vision of the future of the program, this report has a two-fold aim: 1) to help other countries that are looking for ideas to accelerate and expand their own iCCM efforts, and 2) to continue to inform program implementation in Senegal.

1. CONTEXT

1.1 THE SENEGALESE HEALTH SYSTEM

Government delivery of health services takes place in 971 health posts (the first contact with professional, salaried health workers), 77 health centers at the district level, and 20 referral hospitals. This averages out to one health post per 10,559 inhabitants, one health center per 152,836 inhabitants, and one referral hospital per 464,623 inhabitants.[5] It should be noted that while the private sector also provides health services in Senegal, this document will focus exclusively on government health service delivery.

Figure 1. Map of health districts in Senegal[6]



In addition to these facilities, the Ministry of Health and Prevention (MoHP) provides technical support to a network of approximately 2,300 community-owned health huts staffed by community volunteers, with division of labor for case management and health education/social mobilization respectively. Definitions of basic terminology and the respective roles and responsibilities of the different types of community-level volunteers are described in *Box 1* below. It should be noted that the health huts are not officially part of the health pyramid.

[5] MoHP, Note à la très haute attention de Monsieur le Premier Ministre sur l'évolution du secteur de la santé de 2000 à 2010, Mars 2010.

[6] MoHP, Carte Sanitaire 2008.

Text Box 1: Basic Terminology Used in Senegal:

- ***Centre de santé (Health center):*** Hospital situated at the district level; provides in-patient and out-patient services and normally serves a population of 150,000. (*)
- ***Poste de santé (Health post)***: Health facility usually situated at a large village; usually staffed by nurses who provide out-patient services and delivery services. Normally serves a population of 10,000 in urban areas and 5,000 in rural areas. (*)
- ***Case de santé (Health huts)***: Structures built by communities, situated at the community level and staffed by volunteers, primarily Agents de Santé Communautaire (ASCs), *matrones*, and community relays (*relais communautaires*).

There are various types of Community Health Workers (CHWs) in Senegal:

- ***Agent de Santé Communautaire***: A man or a woman chosen by community members, who receive structured training allowing him or her to offer basic health care in a health hut (**). ASCs are mandated to provide antibiotics for pneumonia, ACT for malaria and ORS and zinc for diarrhea.
- ***Matrone***: A woman chosen by community members who is in charge of assisting mothers during pregnancy, delivery, and postpartum. She also offers preventive care to her community. (**) The literate *matrones* who can read and write were also trained on treating childhood illnesses.
- ***Relais communautaire*** (community relay, referred to as *relais* in this document): A man or a woman chosen by community members who agrees to offer part of his or her time to community-related activities, to contribute to the development of his or her community. *Relais* ensure the link between the community and the health facility, (**) and conduct BCC and community mobilization activities in the community, even when there is no health hut.
- ***Dispensateur de Soins à Domicile*** (DSDOM): A man or a woman specifically trained to provide malaria treatment according to the new protocol using rapid diagnostic tests (RDTs) to confirm the parasite infection. The DSDOM does not necessarily work in health huts.
- ***Community Health Worker*** (CHWs): Term used collectively to encompass ASCs, *matrones*, *relais*, and DSDOMs or to refer to those who staffed health huts prior to the advent of iCCM activities.

SOURCES:
*Ministère de la Santé et de la Prévention, Service National de l'Information Sanitaire (2008), CARTE SANITAIRE DU SENEGAL, 2008
** Dr. Ndèye Codou LAKH (2010), RELAIS COMMUNAUTAIRES: HISTORIQUE, FONCTIONNEMENT, Présentation de la Division des Soins de Santé Primaires, MSP

1.2 COMMUNITY PARTICIPATION

In Senegal, communities play an important role in the delivery of health service as exemplified by their role in health huts. Communities can apply directly to their MoHP district office for the creation of a health hut. Once the district reviews and approves the application, the communities must raise funds to construct and equip the health hut and ensure its maintenance. Sometimes, when communities are deeply poor, the local rural council will build a health hut and purchase basic equipment for them. Each health hut has a village health committee which manages the health hut activities, including finances and preventive activities. For example, they mobilize communities to respond to health events and maintain the health hut infrastructure.

Communities participate in the management of health facilities through the management committee made up of their representatives. They make decisions over fees for service, raise

funds through user fees and in-kind donations (logistics, drugs) and build partnerships with foreign communities and donors to support viability and sustainability of the health huts. Community health huts operate with a full cost recovery for drugs. Communities purchase drugs from their district warehouse and sell them at cost to their clients. When clients cannot pay due to lack of personal funds, communities will occasionally subsidize access to drugs. In turn, this subsidy creates gaps in the health hut's budget. The village health committee can raise funds for a variety of purposes, including drug supplies to fill budgetary gaps. While the health hut does not receive money from the national system, occasional drug donations from the national system and other charity sources are common.

Another factor that accounts for the longevity of health huts served by volunteers is the well-established community structure. The structure is relatively homogenous with strong social norms and a strong sense of solidarity. Health huts are owned by the community with a sense of commitment that makes the experience unique.

1.3 INDICATORS

The population of Senegal—estimated at 12.4 million in 2008—is growing at a rate of 2.3% per year. The following give an indication of the context:

- Around 50% of the Senegalese population may be regarded as poor.[7]
- Under-five mortality rate has declined from 121 per 1,000 live births in 2005 to 72 in 2011.[8]
- The infant mortality rate (children under one) went from 61 per 1,000 live births in 2005 to 47 in 2011.[9]

Prevention programs in Senegal have shown consistently successful results:

- Coverage of Diphtheria-Pertussis-Tetanus 3 (DPT3 as pentavalent) increased from 78% to 83% between 2005 and 2011.[10]
- As illustrated in three tables of Figure 2 below, the percentage of children sleeping under insecticide-treated mosquito nets (ITNs) has increased steadily, going from 2% to 29% between 2000 and 2009.[11]

1.4 INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS

An IMCI 2006 Health Facility Survey, referred to in the 2009–2018 Senegalese National Health Development Plan,[12] confirms that the most common diseases managed through IMCI are malaria (72%), ARI (47%), and diarrhea (23%). The results of the study showed that:

- Health worker performance for the management of malaria was satisfactory, with 95% managing it correctly.
- The performance indicators were much lower for ARI (35%) and diarrhea (56%).

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[7] Jurrien Toonen, Royal Tropical Institute Amsterdam. Towards pro-poor health planning in the context of macroeconomics and health: Country case study Senegal. October 2004.

[8] DHS 2010–2011 Preliminary report.

[9] DHS 2010–2011 Preliminary report.

[10] DHS 2010-2011 Preliminary report.

[11] UNICEF, WHO, Countdown to 2015 Initiative. Tracking Progress in Maternal, Newborn and Child Health. Accessed at: http://www.countdown2015mnch.org/reports-publications/2010-country-profiles/62

[12] MoHP, Plan national de développement sanitaire (PNDS) 2009–2018, Janvier 2009.

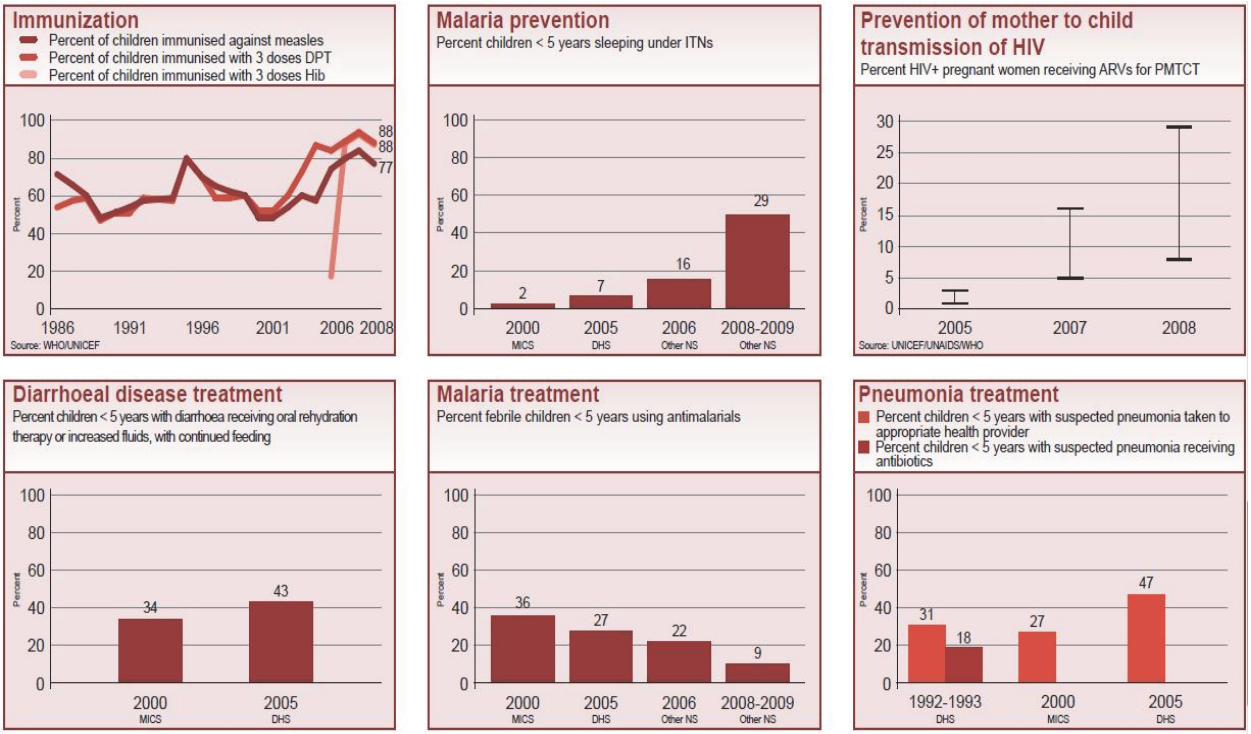
- Using the same 2006 data source, an index measuring the availability of recommended first line eight oral medications was 0.63 on a scale of 1.

Indicators of the treatment over the past decade of diarrhea, malaria, and ARIs are as follows:

- **Diarrhea**: Although there has been a slight improvement in the management of diarrhea, 43% of children with diarrhea receive ORS or supplemental fluids with continued feeding (Demographic and Health Survey [DHS] 2005), an improvement over the 34% noted in the 2000 Multiple Indicator Cluster Survey (MICS). This evolution is represented in Figure 2(d) below. DHS 2010 preliminary results suggest a decrease in use of homemade fluids to treat diarrhea during the five last years (from 53% to 27%) and an increase in ORS use (15% to 22%).
- **Malaria**: The proportion of fever cases treated with antimalarial drugs declined significantly after the introduction of RDTs in iCCM sites in 2009.13 Figure 2(e) shows a steady decline in the percentage of febrile children who received antimalarial treatment, going from 36% in 2000 to 22% in 2006 and 9% in 2009. In fact, the introduction of RDT means that only confirmed malaria cases were treated with antimalarial drugs, and the decline in malarial treatment is noted as a positive development as the improvement in diagnostic capacity reduces the use of malarial treatment for non-malarial fever.
- **ARI**: Care-seeking from appropriate health care providers for pneumonia increased from 31% to 47% between 1992 and 2006 (see Figure 2(f)). Update from the DHS 2010 preliminary report suggests that the current percentage is 50%. However, further investigation into the DHS data shows that the increase in care-seeking behavior does not take into account the appropriateness of treatment received.

[13] PNLP 2009, La prise en charge des cas de paludisme à domicile au Sénégal : Leçons Apprises.

Figure 2 a-f. Coverage of some preventive and curative interventions in child health in Senegal from Countdown to 2015.[14]



[14] UNICEF, WHO, Countdown to 2015 Initiative. Tracking Progress in Maternal, Newborn and Child Health. Accessed at: http://www.countdown2015mnch.org/reports-publications/2010-country-profiles/62

2. GOAL AND OBJECTIVES OF THE DOCUMENTATION

2.1 GOAL

The overall goal of this documentation exercise is to inform the design and implementation of iCCM programs.

2.2 SPECIFIC OBJECTIVES

- Document promising practices implemented by the MoHP and its partners which contributed to the success of community case management (CCM) in Senegal.
- Document past and current bottlenecks and difficulties in iCCM program implementation and the approaches that were used to overcome them.
- Draw lessons learned from the Senegal experience to build a basic model for developing future programs and for reorienting existing programs.
- Document evidence that demonstrates the effectiveness of the CCM program in Senegal.

3. METHODOLOGY

This documentation exercise combines a review of documents, in addition to quantitative and qualitative methods for data collection from a sampling of national, regional, district, and community levels. The qualitative data focused on opinions and perceptions, while quantitative methods were used to gather data on stock status and ASC performance scores. A team composed of three persons from the Maternal and Child Health Integrated Program (MCHIP) and UNICEF Regional, two National Consultants, and eight focus group facilitators conducted the fieldwork. See Annex 2 for more details.

3.1 DOCUMENT AND SECONDARY DATA REVIEW

Document and secondary data review were used to analyze trends over time related to performance, coverage, and quality of the program. For the document review, all available documents related to iCCM in Senegal were analyzed, including: specific studies, evaluations, online resources, and publications on iCCM, and relevant workshops, training, supervision, and regular project reports. Data from project archives and records were also consulted to better understand successes and gaps. Data sources included: DHS, MICS, health system data, monthly reports from ASCs, monthly reports from health posts, data on supplies, supervision reports, and monitoring tools from district, regional, and central levels.

Facilitators reviewing the data from FGDo

Drug supply: To gain a historical perspective on drug supply and the current situation, the team reviewed the tools used for managing the drug supply and documenting stock-outs, if any, over the preceding six months (January–June 2010). Only the data from two districts (Khombole and Kolda) were complete enough to be processed and interpreted as part of this document. The list of items assessed included major inputs for iCCM, including antibiotics to treat pneumonia, RDTs to diagnose malaria, ACTs to treat malaria, and ORS and zinc tablets to manage diarrhea.

3.2 SEMI-STRUCTURED INTERVIEWS

Semi-structured interviews were conducted by the external team with the following:

- **Key informants**, including MoHP officials, UN agencies, and organizations implementing iCCM, to cover the history of the program, opinions on program success, and challenges related to policy, advocacy, ownership, and sustainability. A total of 16 persons were interviewed.
- **Program managers and implementation officials**, including regional and district MoHP key staff members, and seven NGO leaders, trainers, and supervisors, to better understand specific technical issues about training, resource management, supervision, service delivery, the referral system, procurement, communication, social mobilization, the M&E system, and the health information system. A total of 18 persons were interviewed.

3.3 FOCUS GROUP DISCUSSIONS

Locally trained facilitators conducted focus group discussions (FGDs) with the following groups:

- **Head nurses of health posts**, who are the direct supervisors of ASCs, *matrones*, and DSDOMs, to understand the evolution of iCCM over time, including their views and roles, success factors and obstacles, opinions on the effectiveness of the current program, and suggestions for the future. A total of 38 head nurses participated in six FGD sessions.
- **iCCM community providers,** on training and supervision, their level of self-confidence to perform their job, current and past challenges, opinions on success factors and potential obstacles, and suggestions for the future. A total of 63 ASCs, *matrones*, and DSDOMs participated in six FGD sessions.
- **Beneficiaries**, including mothers or caretakers of children already treated by ASCs, *matrones*, and DSDOMs, on their interest in and opinion of the service provided, program contributions to their family's health, and care-seeking behaviors in families. A total of 168 mothers participated in 19 villages.
- **Village Health Committee (VHC) members**, who provide institutional support of the local community for iCCM, on their opinions on ASCs and *matrones*, roles of committee members in supporting the program, success factors and potential problems, current support they provide and plan to provide, and the effectiveness of the support system in general. A total of 61 committee members participated in 12 villages; the village chiefs were individually interviewed in four other villages.

3.4 DIRECT OBSERVATION

Since reviewing technical skills is not part of the health system for routine monitoring of ASCs in Senegal, the team conducted a series of simplified observations of 104 instances of ASCs performing case management, either through an actual interaction between an ASC and a mother with a sick child or a simulated interaction. After obtaining the consent of the ASC or *matrone* and the mother (if applicable), the observers were clinicians with extensive experience on IMCI and iCCM training. They used a checklist (presented in Annex 3) to observe case management by the ASC or *matrone*.

3.5 SITE SELECTION

Site selection was strategically designed to capture some districts where the Community-ARI program was piloted, the districts where it was expanded and areas where the National Malaria Control Program (NMCP) implements a home-based management of malaria approach, an

intervention with great potential for the expansion of iCCM. Other technical criteria for districts selection were the:

- **Nature of the programmatic support**, particularly the intensity of external support from partners (UNICEF directs funds to the MOHP for districts visits, and USAID support the program through its implementing partners);
- **Length of time involved in iCCM**, including districts participating in the pilot phase of community-ARI as well as districts part of expansion phases; and
- **Logistical and financial feasibility** of collecting data.

Based on these criteria, six districts in four regions were selected: Thiadaye and Khombole in the region of Thies, Fatick and Dioffior in the region of Fatick, Nioro in Kaolack, and Kolda district in Kolda region.

In each of the six districts visited, four health huts were selected based on performance (two huts with weak performance and two huts with strong performance), for a total of 24 huts. Performance criteria included consistency and regularity of reporting, technical skills of the ASCs, and the number of cases managed at the health hut. The research team visited 19 of the 24 huts initially selected.

The data collected was intended to provide information on factors leading to successes as well as factors accounting for potential obstacles. The documentation team also collected essential information on program management and on the health services offered by the ASCs in order to document lessons learned throughout the whole process, from the pilot phase to scale-up.

3.6 SCOPE AND LIMITATIONS OF THE DOCUMENTATION

This documentation exercise intended to give a comprehensive overview of the experience of iCCM at national scale in Senegal. While the method covers a review of documentation, complemented by semi-structured interviews, FGDs, and direct observation of actual or simulated services, the study does not claim to be all-encompassing. It is a multi-methodological review of evidence so that key lessons can be learned to share with other countries and improve the program in Senegal. Further, the methodology of direct observations used during this exercise presented obvious limitations:

- The ASCs and *matrones* observed were not randomly selected to be representative of all CHWs providing case management services.
- The simplified observation method did not conform to a standard tool. In some cases, simulations were used due to time and logistical constraints.
- The observation procedure was greatly simplified from a standard observation exercise.

3.7 ANALYTICAL FRAMEWORK

For the analysis, the documentation team used the standard iCCM benchmarks presented in Annex 1, in order to capture key components of iCCM programs as defined by the global community. Within each benchmark, the team used the objectives to analyze the data.

4. HISTORICAL OVERVIEW

Community participation in health care services in Senegal started well before the Alma Ata Conference on Primary Health Care in 1978. A long history of community initiatives and buy-in, and community solidarity and development partners' support to community health programs, are the building blocks to the success of iCCM today. For a complete listing of key events, please see Annex 4.

4.1 PHASE I: INTRODUCTION OF COMMUNITY CASE MANAGEMENT IN SENEGAL (1967–2001)

Key events:

- Community case management dates as far back as 1967 in Senegal when Pikine, a suburb of Dakar, began organizing a mobile health team of mothers to provide basic preventive care to the population.[15] Nearly 10 years later, a Belgian-Senegalese project supported the opening of a fixed health facility staffed by non-professional health workers in 1975.[16]
- In 1982, four years after the Alma Ata Conference on primary health care, USAID supported the first community-based health program in Senegal through the Rural Health Delivery Projects (RHDS I) and a second phase RHDS II/Child Survival in the Sine-Saloum. In implementing this program, USAID brought the population to build health huts for which USAID supported training of CHWs, gave equipment, and provided mobile means for supervision. The program provided community health care services and ensured communications in and around health huts within all health districts of the Kaolack Region which has since been split into three regions (Kaolack, Fatick, and Kaffrine). Through financial support from this project and local taxes, the first-ever 380 health huts were constructed, each staffed by a first aid worker and a *matrone*. Service provision included immunization, malaria control, ORT, and growth monitoring. The interventions were successfully integrated at health hut and health post levels.[17],[18] Year after year, noticing that this approach is producing results and is contributing to maternal and child mortality reduction, many other donors came on board to join USAID in community-based health programs.
- Legal framework: In 1992, Decree 92-118 was issued, providing a legal framework for existence of health committees.[19] The decree, (presented in Annex 5), prescribed the establishment of health committees at all levels of the public health structures, from the health posts to the regional hospitals. For the rural health posts, they include the chief of villages and representatives of local associations of women and youths.
- Buildings on this system, VHCs were created to oversee management of the health huts, which are not part of the formal health system. VHCs participated in mobilizing communities and resources for the construction of health huts.

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[15] Fassin D et al., 1986. Les enjeux sociaux de la participation communautaires : Les comités de sante à Pikine (Sénégal). Sciences Sociales et Santé, vol. IV–no 3-4

[16] Dr Ndèye Codou Lakh, Avril 2010, Relais Communautaires: historique, fonctionnement, Présentation de la Division des Soins de Santé Primaires, MSP.

[17] Hauck FR, King J, Vian T., 1992. Primary Health Care in Senegal: Lessons Learned. *Ethnicity & Disease*, 1992 Winter; 2(1):87-92.

[18] Government of Senegal and USAID, 1986, Rural Health Delivery Services Project (RHDS) Phase II – Child Survival, Mid-term Evaluation.

[19] MoHP, Division des Soins de Santé Primaires, Capitalisation des expériences communautaires au Sénégal. Octobre 2005

Conclusion of Phase I: The community structure and iCCM were established at the health huts focused on malaria prevention and treatment with chloroquine, ORS for diarrhea (mainly promotion of homemade salt-sugar solution), immunization (referral to health posts and outreach and referral of cases they could not treat), and growth monitoring. Despite this progress, there was limited MoHP involvement in service provision at the health hut and no service data collected at community level until 2003. The introduction of pneumonia as part of an integrated package in 2003 marked the beginning of systematic collection of service statistics at the health huts and documentation of logistics, structured support by MoHP and partners to coordinate community level services, and a focus on performance quality.

4.2 PHASE II: ADVOCATING FOR THE INTRODUCTION OF ANTIBIOTICS FOR PNEUMONIA AND UPDATING MALARIA AND DIARRHEA TREATMENT (2002–2004)

This period, covering roughly 2002 to 2004, was marked by two policy decisions that culminated in the introduction of antibiotics for pneumonia and changed treatment policy for malaria at the health hut.

Key events:

- **Advocacy on the use of antibiotics** in the health hut in Senegal started in 2002. Recognizing the need and hearing of success of ARI community case management elsewhere, the advocacy effort resulted in the MoHP approving operations research to test the feasibility of introducing antibiotics for pneumonia treatment. The MoHP commissioned a feasibility study from April 2003 to June 2004 on the use of antibiotics by ASCs and *matrones* at the health huts to treat pneumonia. The ARI case management research took 18 months; the results were disseminated in June 2004 and clearly demonstrated that trained ASCs and *matrones* can correctly recognize, manage, and ensure follow-up of ARIs. The partners included USAID, UNICEF, WHO, and the Cheikh Anta Diop University. In the meantime, at the global level, USAID was advocating for Pfizer's support to CCM in Senegal.
- **Policy change on malaria first line drug and advocacy on drug of choice at health hut level:** In July 2003, Senegal changed its policy on the first line drug for treating malaria at the health facilities from chloroquine to a combination of Amodiaquine and Sulfadoxine Pyrimethamine (AQ/SP). ASCs and *matrones* at health huts were to refer all suspected malaria cases to the health posts. In 2004, USAID/Senegal, through the project, Community Action against Malaria and Tuberculosis (CAMAT) managed by CCF (now ChildFund), advocated for testing the use of the new combination AQ/SP at the community level. The NMCP approved a pilot study of directly-observed treatment with AQ/SP for simple fever/malaria, including monitoring of side effects, at the health hut. The AQ/SP protocol was quickly changed into RDT in 2006 and there was no expansion in other health huts apart from the four CAMAT intervention districts. Meanwhile, diarrhea treatment with ORS/homemade fluids was an accepted practice at the health huts; policy change in diarrheal disease treatment came later in 2008. Please see Annex 6 for details.
- **Initial delays:** Despite the keen interest in and buildup around the expansion of case management of ARI, there was an 18-month delay between June 2004, when the validation workshop recommended expansion, and the actual start of the expansion phase in January 2006. The delay was caused by:
  - Authority to introduce antibiotics in health huts not issued until late 2005 by the MoHP;
  - Re-appointment of a key champion, the previous Chief of the Division of Feeding, Nutrition, and Child Survival, to a different position outside the MoHP;

- Disintegration of the activities of the research group and the University team ceasing participation; and
- Delayed release of funding by Pfizer in late 2005.

4.3 PHASE III: EXPANSION AND INTEGRATION OF iCCM (2006–2010)

This period, starting in 2006 to 2010, marked the expansion of iCCM and consolidation of the package of care in various stand-alone projects. There was also further revision of the treatment policies, notably ORS and zinc for diarrhea treatment and introduction of RDTs and ACTs for malaria treatment at the health huts.

Key events:

- Expansion of antibiotics for pneumonia:
  - Once policy **guidelines** were issued and funding secured in 2005, the first phase of expansion was launched with important roles played by nongovernmental organizations (NGOs), and technical assistance provided by UNICEF and USAID through the Basic Support for Institutionalizing Child Survival (BASICS) project. **The new individual patient forms included malaria, diarrhea, and pneumonia, marking a step towards integrated training.**
  - **The MoHP maintained its leadership**, renewing the Technical Working Group (TWG) on iCCM, and specifically assigning key technical staff from the Division for Food, Nutrition, and Child Health (DANSE) to coordinate TWG activities. USAID, through the BASICS project and Management Sciences for Health (MSH), provided technical assistance on service delivery and pharmaceutical management, respectively.
  - **Technical support to iCCM implementation:** USAID and UNICEF continued to provide technical assistance. The USAID/BASICS project provided support to the MoHP secretariat for iCCM implementation until the end of the project 2006. Expansion **of ARI case management,** and integration with diarrhea and malaria case management continued through the CAMAT project with additional funding from USAID/Senegal until the project ended in December 2006. From 2007, USAID technical assistance to iCCM has continued through two bilateral projects, the Community Health Program and the Maternal Child Health-Family Planning-Malaria project, led by Child Fund and IntraHealth, respectively.
- **From AQ/SP to ACT and RDTs.** In January 2006, the NMCP shifted from AQ/SP to ACT and RDTs. The NMCP developed a plan to train all health facilities and health huts and introduce RDTs and ACT nationwide. USAID, through the CAMAT project, complied with the national strategy and started training ASCs and *matrones* in conducting RDTs and administering ACTs in the health huts of its intervention area.

There was weak coordination within MoHP to link the expansion of the malaria program with the expansion of ARI and strengthening diarrhea case management; malaria tended to be a more directed intervention under the NMCP.

- From ORS to low-osmolarity ORS and zinc:
  - **Introduction of ORS/zinc**: Building on lessons learned from the introduction of antibiotics and ACTs/RDTs in the health hut, MOH set up a steering committee to manage the introduction of zinc and low-osmolarity ORS.
  - MoHP formally **changed the diarrhea case management** policy in 2008 in accordance with WHO/UNICEF guidelines. MoHP policy guidelines issued in 2009 paved the way for a pilot study carried out by USAID through its Community Health Program led by ChildFund

in three districts (Joal, Kolda, and Fatick). It covered both public sector health facilities and health huts, and 72 health huts were enrolled in the study.

- The evaluation of the initial phase of diarrhea treatment with ORS/zinc at the health hut was carried out between November and December 2010 and results showed that trained ASCs and *matrones* could correctly assess, classify, and manage diarrhea with ORS and zinc. Further expansion of zinc and low-osmolarity ORS was initially restricted because the stock of zinc tablets was inadequate.
- **The Home-Based Management of Malaria: an opportunity to expand iCCM.** In September 2008, the NMCP initiated a pilot program for Home-Based Management of Malaria (PECADOM) outside of health huts in three test districts (Ranérou, Dioffior, and Mékhé). The program was designed to increase access to appropriate care to remote populations not covered by health huts. The strategy utilizes community volunteers called DSDOM (*Dispensateurs de Soins à Domicile*) to test and treat confirmed simple malaria cases at home using RDTs and ACTs. Twenty "hard to reach" villages, not covered by health huts and situated more than five kilometers from a health facility, were enrolled. The results of an evaluation carried out in 2009 showed success and created interest of beneficiary communities to expand the package of services provided by the DSDOM.[20]

- **Expansion of the iCCM package to include management of acute malnutrition at community level.** In 2008, the MoHP updated the protocol for the treatment of acute malnutrition, including community management, and implemented it in some districts. By 2010 there were about 2,300 community-owned health huts staffed by community volunteers with division of labor for case management and health education/mobilization respectively.

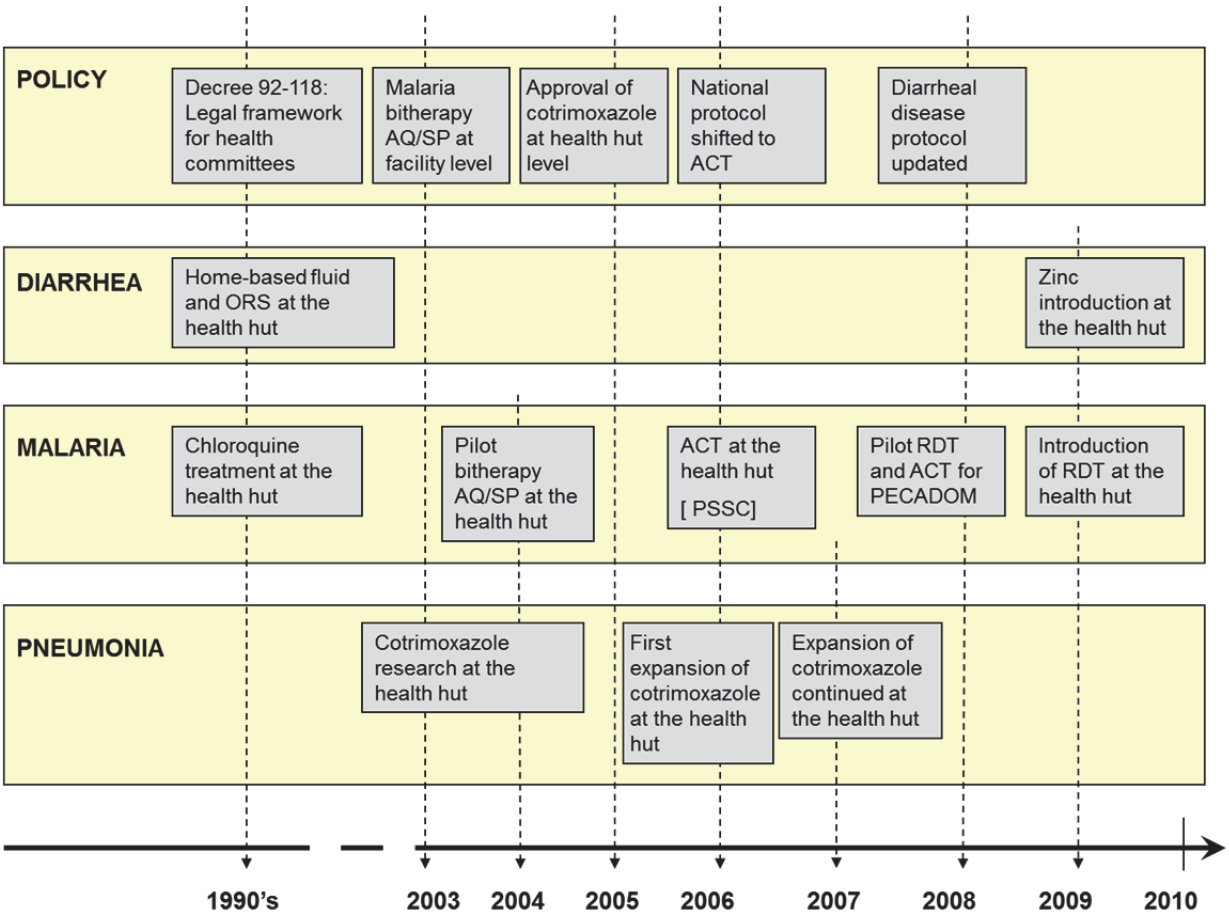
4.4 BUILDING PARTNERSHIPS FOR ICCM

- **Impact of President's Malaria Initiative (PMI):** Senegal is one of the 15 PMI countries, and is receiving substantial support for the expansion of PMI activities including iCCM. With PMI's support, treatment with ACTs at the community level was rolled out to nearly 1,300 health huts nationwide in early 2009. Senegal is also a Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) malaria grant recipient (Rounds 4 and 7). Using combined PMI and Global Fund grant money, Senegal secured all public sector needs for ACTs and RDTs through 2012, including the needs of health huts.
- **UNICEF** has allocated additional funding to the NGO Consortium to support the expansion of iCCM, complementing the activities financed by USAID. This partnership between UNICEF and the NGO Consortium aims to: 1) enroll new health huts in 10 districts spread across four regions, 2) integrate ARI and diarrheal disease case management to increase the package of services offered in selected health huts supported by PMI in eight districts across three regions, and 3) provide additional equipment to all health huts in 57 districts spread out over 13 regions.

Main stages in the process of introducing malaria, ARI and diarrheal disease case management at the community level in Senegal are summarized in Annex 6.

[20] PNLP 2009, La Prise en Charge des Cas de Paludisme à Domicile au Sénégal: Leçons Apprises–Roll Back Malaria, Progress & Impact Series, Number 4 . November 2010, (Focus on Senegal).

Figure 3. Summary of key historical events related to iCCM in Senegal



5. FINDINGS

To ensure that the analysis of findings from the documentation exercise captures what are considered to be key components of iCCM programs, this section follows the iCCM benchmarks endorsed by the CCM Task Force, presented in Annex 1. The benchmarks include eight components, namely: 1) coordination and policy setting, 2) financing, 3) human resources, 4) supply chain management, 5) service delivery and referral, 6) communication and social mobilization, 7) supervision and performance and quality assurance, and 8) M&E and the health information system.

5.1 COORDINATION AND POLICY SETTING

This section presents findings, as well as promising practices and challenges, under coordination and policy setting for iCCM introduction and expansion in Senegal.

Although elements of community case management (diarrhea, malaria, and unauthorized use of antibiotics) have existed since the 1970s, support from the health system was limited. Like most countries, Senegal faced policy decisions related to MoHP-sanctioned use of some drugs by non-professional health workers that are normally prescribed by health professionals. These included more complicated regimes for malaria treatment with AQ/SP and later ACTs and RDTs, use of antibiotics for childhood ARI, and diarrhea treatment. MoHP partners conducted consistent advocacy work to upgrade the services delivered at the health hut as a strategy for increasing access to case management for the three leading causes of under-five mortality.

Ministry of Health Headquarters, Dakar

For both antibiotics and AQ/SP, approval of ASCs and *matrones* to handle these drugs involved conducting pilot studies. The introduction of zinc for diarrheal disease treatment at health huts also required an initial learning phase before its expansion.

Given that use of AQ/SP was changed to ACT three years after its approval and implemented at the community level for less than one year, the influence of the ARI pilot program was particularly noteworthy in Senegal. Three factors contributed significantly to the success of the ARI pilot phase: 1) sustained advocacy, supported by scientific evidence of effectiveness; 2) the active involvement of respected professionals within the MoHP and Cheikh Anta Diop University who provided technical leadership; and 3) the participatory approach of the Steering Committee. The documentation team also found that there was excellent collaboration between UNICEF and USAID, who were both actively engaged and supported the pilot studies and dissemination workshops and seminars for key decision-makers as part of the advocacy efforts.

Other findings concerning coordination and policy settings pertain to the expansion phase of the program and denote areas where additional action is recommended.

First, despite the high level of commitment of central level MoHP officials, the rigorous coordination which marked the ARI pilot phase seems to have tapered off during the expansion phase. This is partly due to the NGO Consortium not directly supporting the central MoHP, as well as ongoing challenges with the institutionalization of iCCM. Additionally, several government departments and agencies had responsibility for different components of iCCM, but there was limited inter-departmental coordination, namely: 1) diarrhea and ARI by the DANSE; 2) malaria by the NMCP, who receives direct funding from PMI and Global Fund; 3) community strategies by the Division of Primary Health Care (DPHC); and 4) the office of the Prime Minister's Program for Reinforcing Nutrition for community nutrition. For CCM for Childhood Illness, there is a definite need for a formal platform which would allow MoHP officials and other government representatives to meet regularly to discuss integration, complementarity of efforts, and intervention synergies.

Second, the documentation team found a consensus from the interviewees that the MoHP's ownership of the program has weakened now that the NGOs play an increasingly important role in implementation of iCCM while NMCP directs malaria case management strategy.

Promising Practices in Advocacy and Planning

- Use of **global and local evidence and success stories to change opinions**, such as the global Community-Integrated Management of Childhood Illness framework, the study on findings that most under-five deaths occurred without contact with the formal health system and the success of iCCM in Nepal.
- Use of **credible local leaders as champions** for policy change, i.e., the former Director of Pharmacy and Laboratories and the former Head of the DANSE, both respected personalities, who attended and chaired advocacy meetings and workshops giving credibility to the process.
- **Involvement of development partners** like UNICEF and USAID, who in turn made available financial resources and/or technical assistance for pilot studies and consecutive expansion.
- Establishment of a **broad-based technical steering committee** to lead the research for ARI community case management, and strategic selection its members, including the Medical Association, the Association of Pharmacists, the Pharmacists Union, and the Cheikh Anta Diop University.
- **Wide dissemination of research findings** and consensus around the expansion plan.

Challenges and Barriers

- **Lack of institutionalization of coordination.** Key informants reported a decrease in the MoHP's engagement at the regional and district levels, particularly in terms of coordination and leadership.
- **Lack of central coordination system for iCCM** and multiple government departments and agencies involved in supporting elements of iCCM who lack a regular formal platform to discuss integration, complementarity of efforts, and intervention synergies.
- **Different literacy criteria required** for CHWs implementing ARI and malaria case management, contributing to lack of integration in the early phase.
- **Lack of consensus for the complete** integration of interventions.
- **Dependency on donors for financial resources.** MoHP did not have readily available resources to back a policy decision to implement, as evidenced in the delay to implement the expansion phase until Pfizer made money available.
- **Lack of professional incentives,** e.g., nurses who were expected to provide supervision to the ASCs and *matrones* were less supportive on account of a perceived increase in workload from iCCM.

Lastly, although the iCCM program progressed steadily without having a national policy on community health in place, it now seems increasingly important for the MoHP to develop this document. The available technical guidelines are beginning to show their limitations as the health system is continually evolving in an effort to provide more services directly to the community. The fact that a number of other priority programs beyond iCCM (e.g., immunization, tuberculosis, nutrition, HIV, and reproductive health) also use the community network to deliver services to the community accentuates the need to have consistent guidelines.

Table 1. Successes, bottlenecks and solutions in terms of coordination and policy setting

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ Smooth adoption of the use of antibiotics at the community level complementing the existing diarrhea and malaria case management. ▪ Establishment of a functional coordination structure, including all entities involved.	▪ Resistance of professionals, including pharmacists. ▪ Malaria pilot phase did not use the same coordination structure that could have made the integration easy. ▪ Two different pilots (one for ARI and one for malaria AQ/SP) that gave the impression of vertical interventions.	**Solutions Adopted:** ▪ The composition of the ARI Steering Committee was strategically considered and inclusive. ▪ The process for sharing results at each stage and deciding on next steps was carefully planned. ▪ The involvement of respected researchers alleviated resistance.

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Expansion Phase		

▪ National leadership facilitating collaboration and harmonization of interventions.
▪ Well-established criteria for expansion plan.
▪ Standardized technical tools developed by consensus.
▪ Institutionalization of the coordination mechanism at the decentralized level (e.g., regular coordination meetings and mechanism for the head nurses to validate data).
▪ Full integration of focal points of technical partners as members of the district management teams.
	▪ No national policy and implementation framework on community health limiting speed of integration.
	▪ Reduction of the MoHP leadership and coordination of partners at the national and operational level.
	▪ Lack of visibility of the head nurses and irregular supportive supervision visits to health huts.
	▪ Malaria program not fully engaged/sharing with the DANSE, in part due to multiple funding streams and program arrangements.
		Solutions Suggested:
		▪ Develop a comprehensive national policy on community health to:
		  ▪ define institutional and technical support responsibility for community-based health services at all levels, and
		  ▪ promote better integration of programs through a community health secretariat.
		▪ Address the ownership of iCCM issues raised by personnel at different levels of the MoHP in a timely fashion.
		▪ Re-launch the framework for consultations with partners at the operational level.

5.2 FINANCING

This section presents the promising practices, as well as challenges and barriers, under financing for iCCM introduction and expansion in Senegal.

At present, because of insufficient funding for iCCM through the national health system, there is a heavy reliance on outside funding sources. Each of these funding sources comes with different requirements, and with varying degrees of work-burden and coordination challenges.

Although the MoHP continues to provide strategic and technical leadership at all levels, there is currently neither a clearly identified budget line nor a short- or long-term financial plan to support the program. The government's contribution to iCCM activities remains limited to: 1) salaries of state employees involved in strategy development, technical guidance, and program management at the central level, and employees involved in coordination, program implementation, monitoring, and supervision at intermediate and peripheral levels; 2) drugs and supplies for iCCM and logistics costs; and 3) contributions of local councils through the decentralized Senegalese system.

A related concern is ownership, as discussed above. Participants at the July 2, 2010 workshop on the preliminary findings of the documentation exercise noted that having the government contribute financially to the program through direct budget lines would be an important indicator of its ownership and long-term commitment.

Promising Practices in Financing

- **Strong role of communities** in financing iCCM: Communities play significant roles in maintaining the health huts in Senegal, contributing both financial and non-financial resources. Community participation takes on different forms, from investments such as constructing

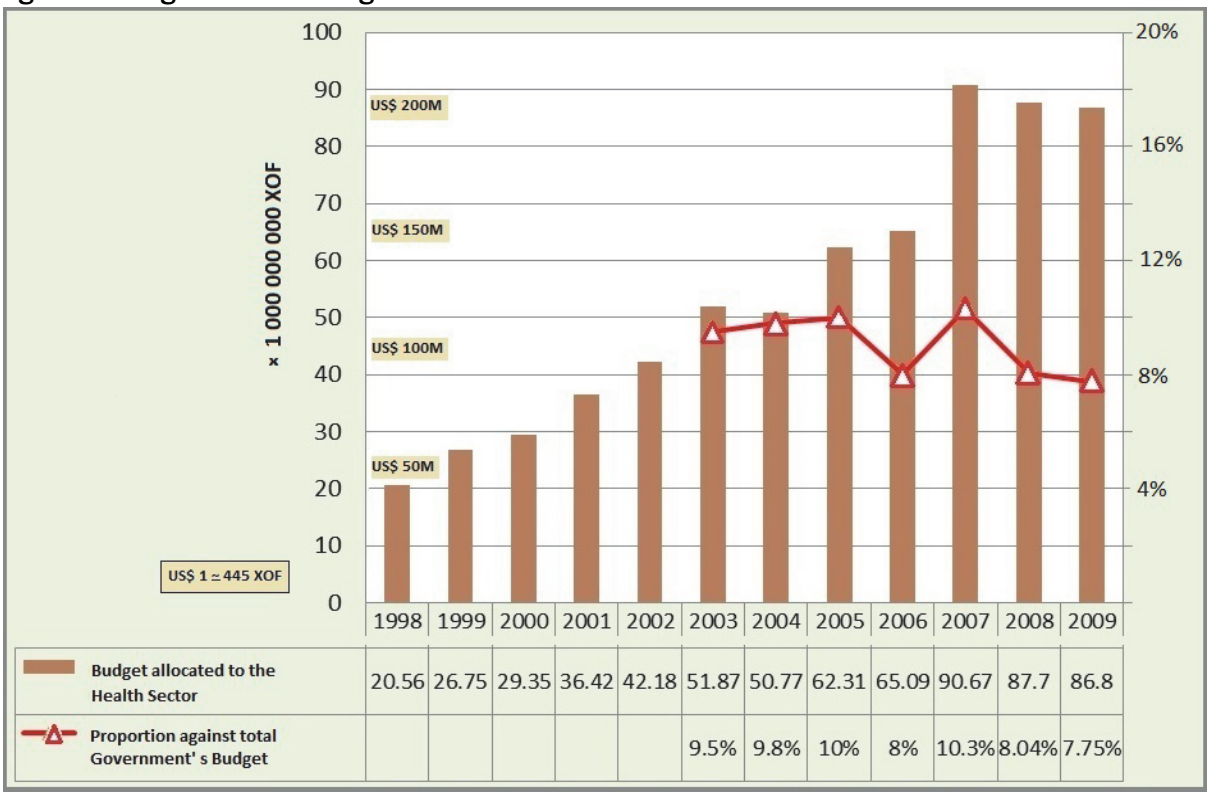
health huts and buying medicine for the huts, to longer-term engagements such as providing financial incentives for ASCs. Other examples of initiatives taken by local entities are listed in Annex 7. Income-generating activities initiated by community health committees have also been noted, although the amounts of revenue generated and the impact on the health huts have not been documented.

- **Government subsidy to cost of drugs** at the health huts through health districts covering part of the budget deficit: The districts receive an annual drug supply from MoHP central to help cover these deficits. They also use funds from the sale of medicine through a cost-recovery system.

Challenges and Barriers

- **Financial resources for iCCM at national level are limited:** Despite a four-fold increase in the national health budget between 1998 and 2007, financial resources for iCCM are limited (See Figure 3 below), as evidenced, for example, by irregular supervision of health huts due to insufficient recurrent budget. The MoHP budget **has no specific iCCM budget line,** casting doubt on the level of local ownership of the program.
- **Lack of costed iCCM expansion and resource mobilization plans** with projected medium-term financial commitments by MoHP and development partners.
- **Sustainability** of iCCM program **is dependent on donor funds**, including UNICEF, USAID, PMI, and Global Fund: While iCCM has leveraged malaria-specific funding to accelerate expansion, there are coordination challenges and **delayed full integration** in some health huts because each funding stream has specific performance demands on managers.

Figure 4. Trends in health sector budget in franc CFA (XOF) and equivalent in US dollars, and proportion against total government budget from 1998 to 2009



SOURCE: Plan National de Développement Sanitaire–PNDS 2009-2018

Table 2. Successes, bottlenecks, and solutions in terms of financing

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ Financial commitment for the piloting of antibiotics and AQ/SP at the health hut. ▪ Technical support, including research steering committee, by a united group of partners.	▪ No budget line initially allocated to specific iCCM pilot studies in MoHP and any partner's program.	**Solutions Adopted:** ▪ UNICEF and USAID committed funds for the ARI research and AQ/SP pilot.
Expansion Phase		
▪ Constant and firm financial commitment of partners to support the scale-up. ▪ Government's health sector budget increased by a factor of almost four over the past decade. ▪ Practice of joint and transparent collaboration, facilitating resource mobilization by the main partners (UNICEF, USAID, and Pfizer). ▪ Efficient resource mobilization by NGOs.	▪ No secure costed iCCM expansion and resource mobilization plans for the long term and no clearly defined budget line for iCCM in the MoHP budget. ▪ Shortcomings in MoHP management of funds allocated by UNICEF for iCCM activities. ▪ Shift in UNICEF financial/administrative procedure which led to MoHP staff being less motivated. ▪ High per diem rate for MoHP limits support supervision visits to health huts.	**Solutions Adopted:** ▪ UNICEF has shifted a portion of its funding to NGOs. **Solutions Suggested:** ▪ Develop a strategic plan for expansion and resource mobilization plan. ▪ Advocate government and donor financial commitments in the medium term for continued expansion and integration of the full iCCM package. ▪ The technical bodies of the MoHP must—at a minimum—provide a line item for supervision in their respective budgets (national, regional, and district) in order to restore the engagement of the public sector technicians. ▪ Negotiate an affordable package for district staff to support health huts.

5.3 HUMAN RESOURCES

At the end of 2010, the USAID Community Health Project operated with a total of 11,120 CHWs, including 3,748 ASCs and *matrones*, and 7,342 relais. The pilot phase of the PECADOM initiative has trained 20 DSDOM and is preparing its extension, while other NGOs are operating at a smaller scale.

During the documentation exercise, the team paid particular attention to recruitment, training, performance, and supervision of the ASCs and *matrones*. The findings clearly show that they can properly offer case management services to hard-to-reach populations. The ASCs and *matrones* in the Senegal program are confident in their abilities, highly appreciated by the communities they serve, and, for the most part, motivated to continue as volunteers without regular compensation.

The standardization of the CHW recruitment process is one of the innovations of the program, with communities being very involved in selection. Criteria include residency in the community, knowledge of the local language, availability, initiative, literacy, and good communication skills. One of the drawbacks to the recruitment system, however, is that the head nurses who supervise the ASCs and *matrones* feel that they are not sufficiently involved in the selection process with negative consequences for how well the ASCs and *matrones* are incorporated into the health team.

Supervision by MoHP staff from the health post is essential for long-term sustainability, for ensuring compliance with government standards and regulations, and for ongoing motivation of CHWs. Currently, supervision is irregular (the standard should be once a month) due to the lack of financial resources for head nurses to visit all 1,600 health huts. Other constraints include the high workload of most head nurses and, as noted above, the fact that many do not feel sufficiently involved in the selection of ASCs and *matrones*.

The documentation team also noted concerns pertaining to financial compensation for the ASCs and *matrones*. They are recruited as volunteers, but they do receive modest monetary benefits on the sale of medicines, and they may also receive compensation when attending training sessions and meetings or when asked to help with social mobilization for activities such as immunization campaigns. Nevertheless, these very modest financial incentives are irregular and the results of the FGDs clearly indicate that some ASCs and *matrones* would prefer to receive more regular compensation. However, given limited financial resources, this is neither feasible in the short term nor sustainable in the long term.

Promising Practices in the Area of Human Resources

- ASCs and *matrones* recruitment using a criterion agreed with community members leading to **high acceptance of their services by the community**.
- The **expressions of solidarity**, such as cleaning the health huts or accompanying the ASCs and *matrones* on mobilization activities from the beneficiary community are important factors of motivation and therefore retention for ASCs and *matrones*.
- **Former investments** by USAID in previous years to organizing the relais into formal associations, i.e., the Associations des Relais Polyvalents (Associations of Multipurpose Relays or ARPVs). It was widely acknowledged that the ARPVs generated a great deal of interest and hope in terms of their effectiveness and the possibility of long-term sustainability (see more details in Annex 8).
- A good network of support at all levels of the health system:
  - At the national level, technicians from the DANSE are developing approaches, tools, and guidance, and the community of partners discusses technical and strategic issues within a Steering Committee.
  - At the district and provincial levels, MoHP technical teams monitor the implementation process. Trained trainers and supervisors are widely available in each district. Technicians from partners, mainly project managers from the USAID Community Health Program and UNICEF, work in parallel with MoHP to help in activity planning, in daily supervision of Community Development Agents (CDAs) and in ensuring that results are recorded, documented, and submitted.
  - At the very peripheral level, head nurses are assisted by project personnel and CDAs to supervise and to provide daily support to the ASCs and *matrones*.

Challenges and Barriers

- MoHP staff **does not regularly provide supportive supervision**.
- Nurses are not sufficiently involved in selection of ASCs and *matrones*, which undermines CHW incorporation into the health team.
- The modest monetary compensation of ASCs and *matrones* has the potential to result in high attrition should other alternatives for earning a livelihood become available to them.
- There is potential underutilization of available human resources from the MoHP for technical support because NGOs are implementing the program. Most district and regional officers interviewed during the documentation exercise expressed their desire to be more involved, particularly in management and monitoring of the program. ASCs also are consistently requesting more presence from the head nurses, who are their "official" supervisors.
- There is a lack of ownership and strategic exploitation of structures built by previous investments, such as the ARPVs.

Table 3. Successes, bottlenecks, and solutions in terms of human resources

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ Program designed to be grafted onto existing MoHP structures and supervision of health huts, implemented by the existing staff health post.	▪ Health post staff facing problems supervising ASCs and *matrones* at the service delivery sites. ▪ Limited budget allocation for health posts to supervise community-based activities.	**Solutions Adopted:** ▪ Budgeted post-training support meetings and additional help beyond the district to support iCCM. ▪ Recommendation for NGO support, where available, to strengthen the intervention during the initial years.
Expansion Phase		
▪ Valuable health package offered to remote populations by adequately trained and self-confident ASCs and *matrones*. ▪ Sustained motivation and availability of the vast majority of ASCs and *matrones* as volunteers. ▪ Innovation for financial or in-kind support and certain expressions of solidarity from the community (such as cleaning the huts or assisting in mobilization activities).	▪ Limited involvement of head nurses in the selection of CHWS, restricting their sense of "ownership." ▪ Expressed dissatisfaction of some ASCs and *matrones* about the lack of community support. ▪ Expressed need for more systematic financial incentives from certain ASCs and *matrones*.	**Solutions Adopted:** ▪ The selection of ASCs and *matrones* by the beneficiary community remained (and should remain) paramount. **Solutions Suggested:** ▪ Continue dialogue with the community to strengthen non-financial motivation and feedback for CHWs. ▪ Greater involvement of head nurses during community selection of ASCs and *matrones*. ▪ Explore alternative approaches to supervision and technical support e.g., include funds in the training budget for post-training support meetings, with incentives for all participants. ▪ Public swearing and awarding ceremony of recognition.

5.4 SUPPLY CHAIN MANAGEMENT

The availability of inputs for diagnosing and treating malaria, diarrhea, and pneumonia is a critical component for the successful management of iCCM. One of the strengths of the Senegal program is that the supply chain delivering drugs to the community level is an integral part of the national supply chain system. This helps to promote sustainability and ensure that the drugs provided conform to the MoHP's standards. Timers and scales for the health huts are often procured by partners and in some cases the local government (councils).

There are three main sources for drugs found in the health huts: 1) donations from well-wishers living abroad (these sometimes do not conform to government standards for pharmaceutical products allowed at the health hut, however, given regular stock-outs, authorities are hesitant to ban these donations to health huts); 2) fixed government annual allocation to districts which, with a few exceptions (ACTs are subsidized and RDT kits are supplied for free by the NMCP), are dispensed at full cost recovery; and 3) purchase with proceeds from the sales (or cost recovery) on the government allocation, including drugs donated by the government.

Examination of the stock cards in 12 health huts in the district of Khombole and 15 health huts in the district of Kolda showed that stock-outs are frequent (see Figure 4 below). In five of the 27 huts visited, there were problems related to the availability of at least two key items for more than three out of six months (more than 120 consecutive days) during the January to June 2010 period. Only two out of the 27 huts reported no stock-outs of key items during the period under review.

Specifically, the team observed:

- **ORS and zinc for diarrhea treatment**: ORS packets were available almost everywhere and with only one out of 27 health huts reporting a stock-out during the first six months of 2010. Zinc, however was out of stock in 15 health huts between January and May 2010. There are problems with both the procurement and distribution of zinc.
- **ACTs and RDTs for malaria**: both ACTs and RDTs stock-outs were reported in 14 of the 27 huts visited. Furthermore, ACTs and RDTs are not always available at the same time. Only nine health huts (two out of 15 in Kolda District and seven out of 12 in Khombole District) had a constant and permanent availability of both items from January to June 2010.
- **Cotrimoxazole for pneumonia treatment**: 10 huts out of the 27 visited reported stock-outs of Cotrimoxazole during the first six months of 2010, although it was available at national level. Four of these huts (two in Khombole District and two in Kolda District) never had Cotrimoxazole in stock during the six-month period under review.

Key factors contributing to stock-outs are:

- Some supplies such as zinc tablets are periodically unavailable at the national level. Initial stock for the learning phase had been procured by UNICEF for the feasibility study and there has been no further procurement since.
- ASCs and *matrones* continue to have difficulty estimating their needs and placing their orders in a timely fashion.
- Health post personnel may not offer sufficient help because they do not fully understand their role in supporting drug supply for health huts.
- Personnel at the district health level may not see the needs of the health huts as a priority and may not take appropriate actions when the stocks are low.

Promising Practices in Supply Chain Management

- **The linkage of the health huts to the national supply chain system** for health posts enables them to benefit from economies of scale.
- **Examples of good logistics actions** (i.e., redistributing stock of medicines among the health huts in the catchment area) are documented in the USAID/Senegal Community Health Program reports.
- Several contacts with health huts are **opportunities to fix drug supply issues**, at least through regular monthly supervision by CDAs and supervision integrated into immunization and antenatal care outreach activities by nurses from health posts (described later in section on *Supervision*).

Challenges and Barriers

- **Frequent stock-outs** make case management impossible when drugs are unavailable.
- Despite long experience, there are persistent difficulties in **quantification of needs of the health huts**. The quantity of drugs needed for health hut activities does not seem to be burdensome for the districts; realistically, it should be feasible to accurately estimate needs by looking at the pattern of utilization in past years.
- There is a **lack of integration** of the health huts into the public health sector.

Figure 5. Visual presentation of the number of days that stock-outs of key items occurred in 15 health huts of Kolda District and 12 health huts in Khombole District, from January to June 2010

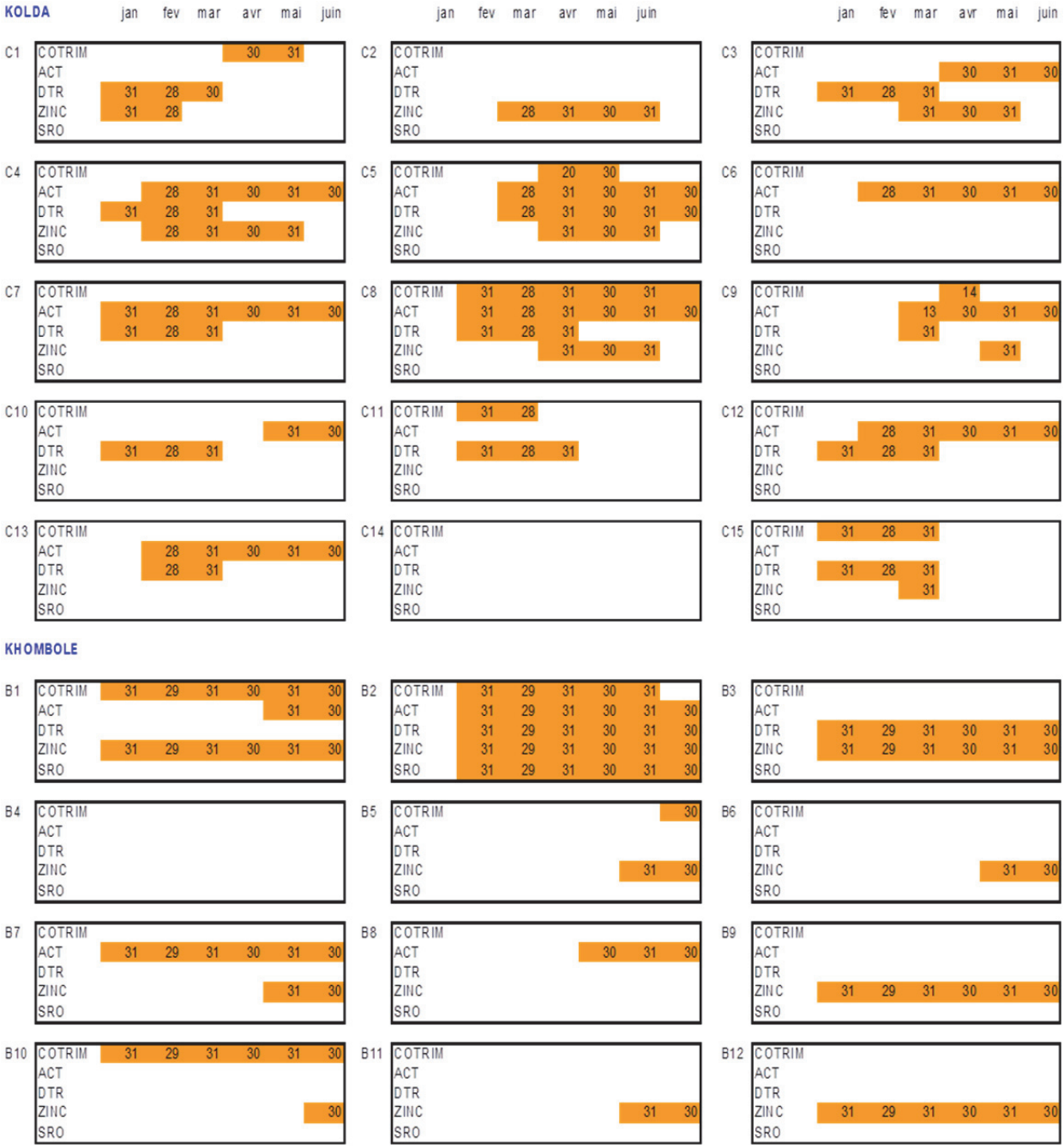


Table 4. Successes, bottlenecks, and solutions in terms of supply chain management

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ N/A	▪ N/A	▪ N/A
Expansion Phase		
▪ Inclusion of all medicines necessary for iCCM of Childhood Illness on the National Essential Drug List. ▪ Annual allocation of medicines to health districts from the MoHP that can be given to health huts. ▪ Cost recovery system ensuring a permanent supply of drugs at the health facility level. ▪ Integration of the supply system for health huts and the national logistics system, ensuring sustainability and conformity with norms.	▪ Donation of drugs which do not always conform to national standards ▪ Recurrent stock-outs of key products, particularly zinc for the treatment of diarrhea (also a problem at the national level), and Cotrimoxazole for the treatment of pneumonia (only a problem at the health hut level).	**Solutions Adopted:** ▪ USAID through the MSH project provided technical support to train head nurses, ASCs, and *matrones* on drug management; health huts were equipped with tools and materials including calculators for drug qualification. **Solutions Suggested:** ▪ Assess current training needs and drug management tools for iCCM at all levels. ▪ Resolve stock-outs by: 1) strengthening communication among the different levels of the system; 2) strengthening the role of health facility personnel, particularly the responsibility of head nurses to manage drug supply of health huts; and 3) redistributing existing stock.

5.5 SERVICE DELIVERY AND REFERRAL

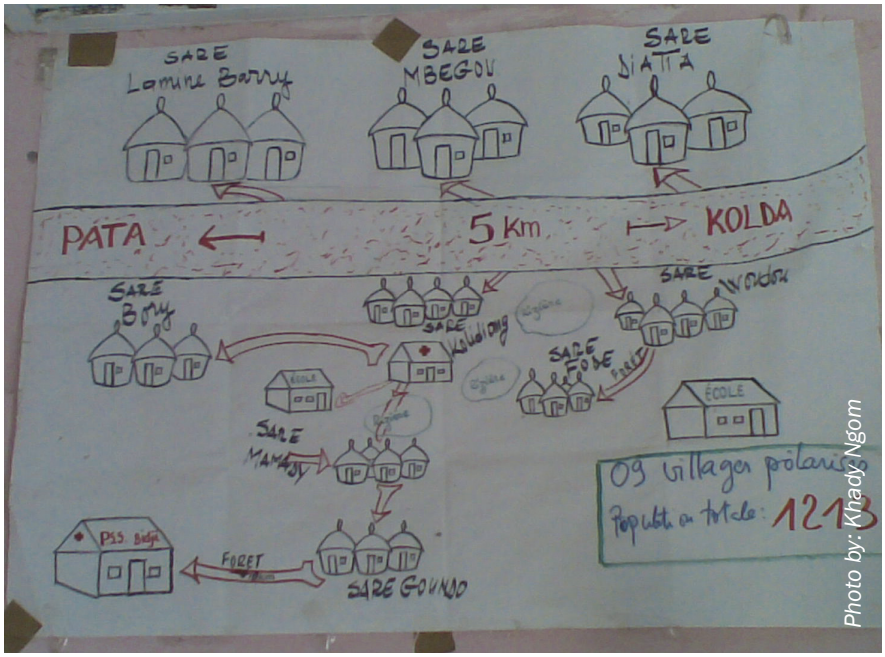
There is a high level of satisfaction with the delivery of services from the ASCs and *matrones* to the community, especially related to hours of operation and the functional referral system from the health huts to other facilities. From senior MoHP policy makers to mothers in the community, those interviewed expressed a deep sense of pride in the iCCM program because the ASCs and *matrones* deliver much-needed services via an approach that is well-adapted to the local context. Mothers stated that they know the ASCs' and *matrones*' hours and how to contact them when they are not in the health huts. FGD results and data from the document review indicate that ASCs and *matrones* systematically refer patients exhibiting danger signs and complicated cases they cannot treat.

As discussed earlier in the supply chain management section, the visits by the documentation team at health huts have shown important stock-outs of some key drugs and supplies. Although no specific question was asked about how the ASCs handle these issues, it is clear that the service linked to an unavailable drug cannot be delivered. Two questions have to be raised:

- First, the role of VHCs in making sure that priority services are available in permanence at the health hut does not seem to be very robust. Several times, FGDs with ASCs and *matrones*

mentioned that VHCs see their involvement limited to budget control and accounting matters. Their role in overseeing the availability of drugs and in making sure services are adequately available at the health hut seems to be perceived as being of secondary importance.

- Second, mothers never raised the question of drug stock-outs during the FGDs, probably because they refer sick children to health posts or treat them with alternative products, putting into question the fundamental reason for the existence of health huts.



Mapping of the villages covered by a health hut in Saré Kolidiang

Health huts that received technical support from both the USAID/BASICS project and the USAID/Senegal Community Health Program consistently collected data of cases treated by specific illness during their respective intervention. Figure 5 (below) shows the trends over time.

Despite the fact that the CHW decision-making on referrals to health posts appears to be adequate, caregivers do not always follow their advice. The barriers were not fully explored, although persistence of strong beliefs in religious leaders is a factor and is discussed later in Section 6.6 *Communication and Social Mobilization*.

Despite the scarcity of data, there is some feedback on referrals from the health post to the health huts. The feedback from health posts to health huts seems to work best in the zone of Mbour, as reported in the USAID/Senegal Community Health Program. The disparity in results is directly related to the individual interest of the head nurse. In spite of several discussions with the regional teams and with the national Steering Committee, there is no strategy established to encourage head nurses to provide systematic feedback to health huts on referrals.

Promising Practices in Service Delivery and Referral

- **Outreach activities** are conducted by head nurses with direct service provision at the health hut level, combined with supervision of ASCs and *matrones*. However, this needs to be disseminated and scaled-up.
- Some head nurses are **providing feedback** to health huts on referred patients.

Mothers gathering in preparation for FGD session

Challenges and Barriers

- There is **limited data** collected on the patients seen by illness classification.
- **Relations between NGO agents and some health facility staff are sensitive** due to differences in operating styles and accountability requirements.
- **Caregivers do not always follow advice**; there is a need to explore the barriers to referral in detail.
- **No particular strategy has been established** to encourage all head nurses to provide feedback on referrals from the health hut.

Figure 6. Changes in the number of episodes of fever treated with ACTs, ARI treated with Cotrimoxazole, and diarrhea treated with ORS at the health huts in the USAID/BASICS, USAID/Senegal Community Health Program and PMI area from 2004 to 2010

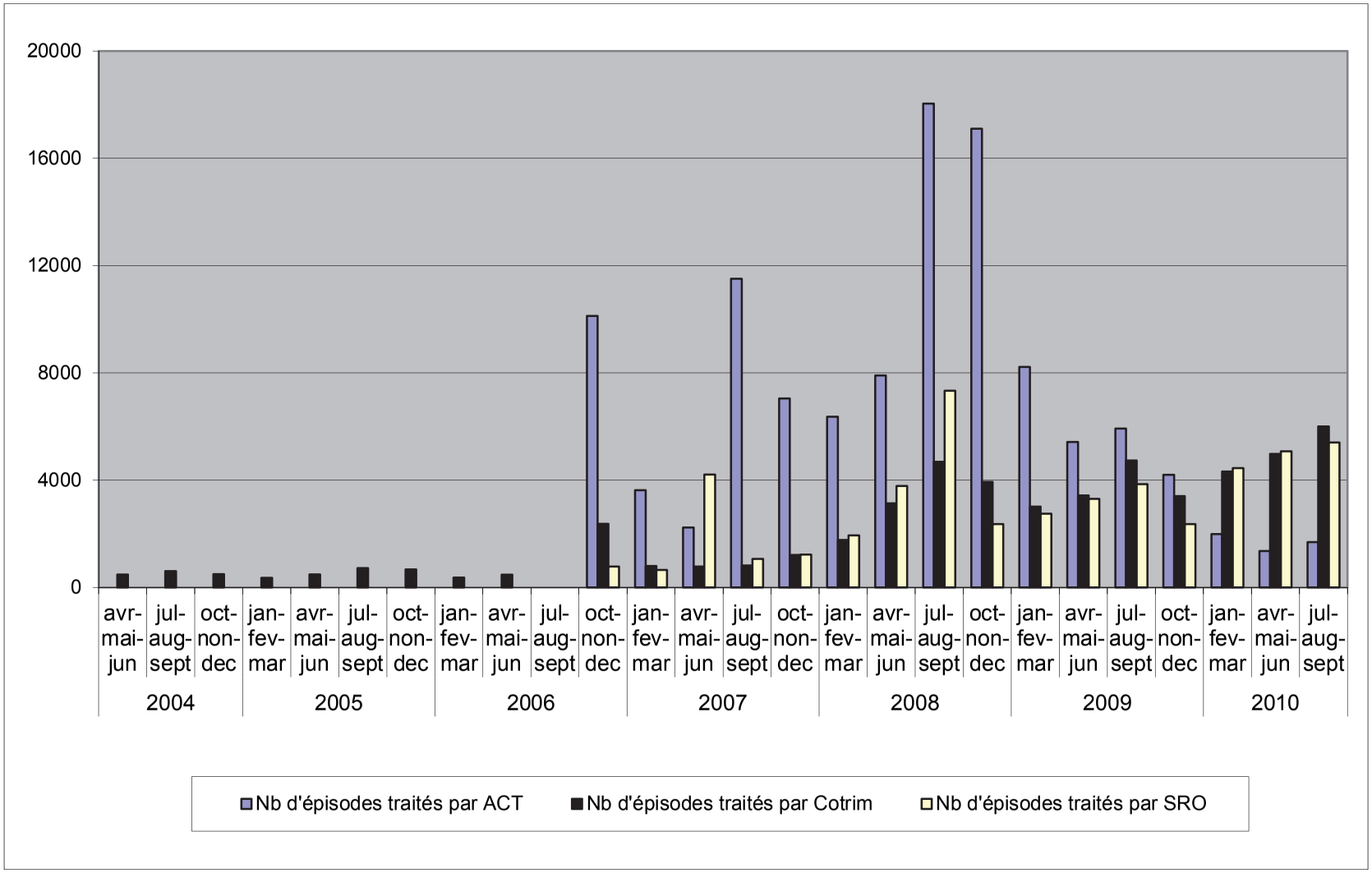


Table 5. Successes, bottlenecks, and solutions in terms of service delivery and referral

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ N/A	▪ N/A	▪ N/A
Expansion Phase		
▪ Perceived effectiveness and satisfaction of all actors. ▪ Approach adapted to the needs and local culture, e.g., the committee structure at the health hut level maintains the democratic system but is also "stretched" to accommodate traditional leaders. ▪ Unanimously expressed satisfaction of mothers with ASCs and *matrones*' interventions, especially their hours of operation. ▪ Services provided by ASCs and *matrones* always available in a timely manner.	▪ No available data on services provided by illness classification. ▪ Operation of a few health huts dependent on the presence of NGOs whereas supervisors from the affiliated health posts are not always present in the field. ▪ Impossible for health posts to sustain the same level of support provided by NGOs, which hired additional staff. ▪ Sensitive relationship between NGOs and the health system because of differences in their respective operating styles and criteria for accountability. ▪ Lack of dissemination and capitalization of solutions that work, e.g., combining supervision of the health huts with the outreach strategy for immunization.	**Solutions Suggested:** ▪ Conduct a formal evaluation of the quality of care provided by the ASCs and *matrones*. ▪ Strengthen coordination in the field and develop an enabling environment for open dialogue. ▪ Plan joint MoHP-NGO Consortium supervision to make NGO activities visible and to validate them. ▪ Create platform to share innovative solutions more broadly.

5.6 COMMUNICATION AND SOCIAL MOBILIZATION

This section presents the promising practices, as well as challenges and barriers, under communication and social mobilization for iCCM introduction and expansion in Senegal. Communication and social mobilization activities that encourage the utilization of services and promote lasting changes in behaviors and practices are an essential pillar of any iCCM program.

The documentation team noted that the Senegal iCCM program is supported by a comprehensive information, education, and communication (IEC)/BCC component that includes all the classic elements of a successful program: mass media, group communication, and interpersonal communication. The program provides adequate materials for the CHWs, with a focus on preventive measures. The team also documented a number of successes in the communication and social mobilization component. Examples include two well-received television series and an initiative called "*Badiénu Gox*," based on the Senegalese tradition that a paternal aunt has a special responsibility for the well-being of her brother's family.

Mothers gathering in preparation for FGD session

Compliance with referral from the health hut to the health post is low. The common practice is for the mothers to first go see the *marabout* (Islamic holy man). The barriers to complying with referral advice need further research.

In terms of bottlenecks and other issues requiring attention, the team cited two financing issues: the high costs associated with producing and broadcasting the television series, and the cost of training CHWs and other community agents in the "*Badiénu Gox*" program. The documentation team also noted that the iCCM program is not making the best use of other potential health educators from different sectors such as education and agriculture.

Another major concern with the IEC/BCC activities is the fact that messages on home-based care and danger signs with proper care-seeking behavior are diluted in the mass communication campaigns.

Promising Practices in Communication and Social Mobilization

- There are **adequate BCC materials** available for the various categories of CHWs, and they combine their efforts with local theater groups targeting perceived harmful traditional practices.
- **Specific communication campaigns**, combined with home visits to provide malaria prevention and treatment messages, ITN distribution and re-treatment campaigns, as well as events addressing hygiene and sanitation. This can be replicated to cover other elements of iCCM to complement routine communication activities.

Challenges and Barriers

- **Informational content centered on recognition of danger signs** and encouraging families to seek early care is not always sufficient in the IEC/BCC campaigns.
- **Caregivers do not always comply with referrals**, preferring to visit a religious leader instead.

Table 6. Successes, bottlenecks, and solutions in terms of communication and social mobilization

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ The radio series "*Fagaru mo gën fejju*" (Better safe than sorry) produced by USAID through the BASICS project.	▪ High cost of producing and broadcasting the media series.	▪ N/A
Expansion Phase		
▪ The television series "*Sama dom sama yitté" (*I'm taking charge of my child's future) with the *Programme de Renforcement de la Nutrition* (PRN) was well-received. ▪ Strong presence of NGOs in the field of community intervention, in particular those members of the NGO Consortium supported by USAID. ▪ Contractual arrangements by the PRN, linking local groups and local NGOs for the implementation of key family practices as part of the community IMCI strategy. ▪ Implementation of the "*Badiénu Gox"* program and other similar approaches used by the NGO Consortium to share pertinent advice of influential people in the community	▪ High cost of producing and broadcasting the media series. ▪ High cost of "*Badiénu Gox*" training for ASCs and *relais communautaires.* ▪ Limited knowledge of mothers concerning danger signs and appropriate care-seeking behavior.	**Solutions Adopted:** ▪ DANSE diversified financial resources and requested support from IntraHealth for the television series and from the Executive Secretariat of the National Council for the Fight against AIDS for "*Badiénu Gox"* training. **Solutions Suggested:** ▪ Conduct an in-depth review of the technical content of the IEC/BCC strategy. ▪ Improve mothers' knowledge concerning danger signs and appropriate care-seeking behavior. ▪ Involve other development sectors such as teachers, veterinarians, religious leaders, and agricultural agents in communicating health messages.

5.7 PERFORMANCE QUALITY ASSURANCE

Supervision and ongoing quality assurance is key to the success of iCCM and maintaining community confidence in the services. This section presents the promising practices, as well as challenges and barriers, under supervision, supervision, and quality assurance for iCCM introduction and expansion in Senegal.

Supervision

In the iCCM program design, the head nurses at the health posts are in charge of the health huts in their areas and play an important role in supporting the ASCs and *matrones*. This includes training, supervision, and validating data sent in by the health huts. During the expansion phase, supervision is sometimes integrated into outreach activities by health post staff. The CHWs and head nurses also benefit from the support provided by the NGOs supporting iCCM implementation through their CDAs.

One of the main findings concerning supervision is that the head nurses are not conducting regular supervision visits, in part because the public health system does not provide adequate resources or demand accountability. Reasons given include: lack of transportation, lack of financial incentive, and, in some cases, a heavy workload which can include responsibility for 10 or more ASCs and *matrones*. In addition, post-training support meetings, planned and budgeted in the implementation plan during the pilot phase, have been abandoned. The MoHP and partners found that, within the current context and in the long term, they cannot expect the head nurses to systematically do on-site visits to health huts to supervise ASCs and *matrones*. Even during the introduction of antibiotics, regular post-training follow-up meetings were preferred as an alternative to classic on-site supervision. Although direct observation of the ASCs and *matrones* in action is recognized as one of the best ways to ensure high-quality services and performance, the documentation team found that it was not retained during the expansion phase. In fact, direct observation or simulation can be made during outreach visits by head nurses or by the CDAs during their visits.

The CDAs, having more resources for supervision and being accountable for results, conduct regular supervision visits. Reports show that almost all the health huts in the project area are regularly visited, either monthly or at least quarterly. While NGOs are quick to provide support to the head nurses for supervision, the results-driven approach lead NGOs to exert some pressure on head nurses, sometimes creating frustration.

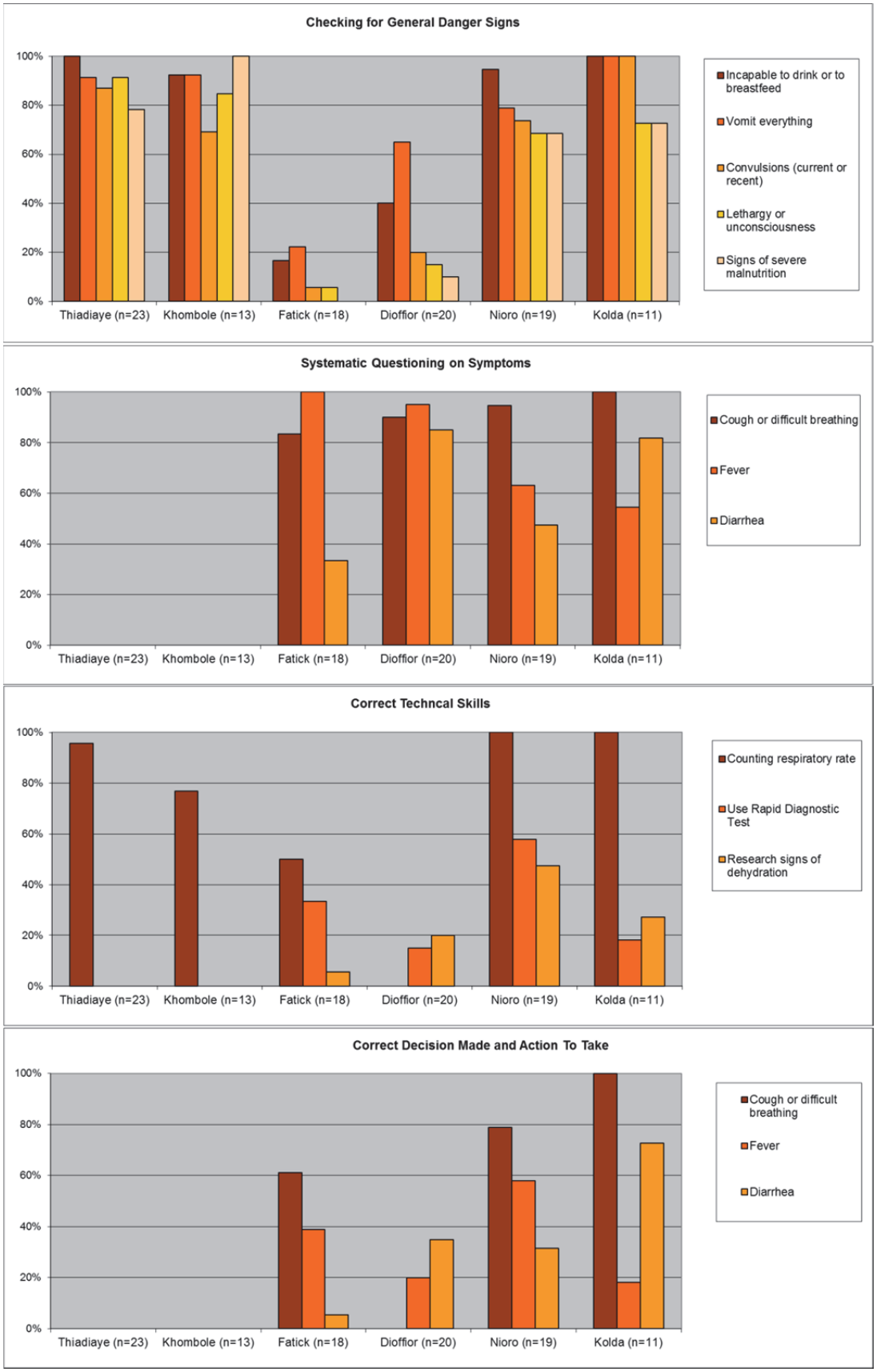
Quality of Care

Analysis of records from registers is the tool used by supervisors to monitor CHW skills, and direct observation of child case management is not included on the supervision checklist. Both the activity-reports reviewed and field interviews conducted by the documentation team did not mention direct observations being conducted by supervisors.

To compensate for this lack of data, the documentation team included direct observation of a sample of CHW skills, and found the following:

- **Identification of danger signs, which include vomiting everything, convulsions, lethargy or unconsciousness:** ASCs and *matrones*' ability to systematically look for general danger signs varies from one district to another. In four districts, 80% of ASCs and *matrones* were able to identify general danger signs; the performance rates were much lower in Fatik and Dioffor. In these two districts, ASCs and *matrones* identified only 5%–40% of danger signs besides "vomiting everything."
- **Cough and difficulties breathing:** ASCs and *matrones* performed well in these skills. Only one district scored notably low on counting the respiratory rate.
- **Case management of malaria:** Here results were mixed, where only two districts performed well (95%–100% could correctly answer questions about fever). In general, the rate of correct performance of RDT was low, with an average of 32%.
- **Case management of diarrhea:** The simplified observation exercise conducted by the documentation team indicated that diarrhea case management was the least mastered by ASCs and *matrones*. The most significant was the observation that very few ASC and *matrones* knew how to correctly look for signs of dehydration (child drinking eagerly when offered fluids and reduced skin turgor). Correct responses ranged between 6%– 47%.

Figure 7. Performance of some ASCs according to direct observations in the districts of Thiadiaye, Khombole, Fatick, Dioffior, Nioro, and Kolda in June 2010



Promising Practices in Performance Quality Assurance

- **Leadership and commitment of public health officers**, such as Regional Medical Officers, was complementary to the empowerment of health post staff.
- **Supervision activities were integrated** into antenatal care and immunization outreach services as supported by USAID/IntraHealth project and using a checklist for iCCM used by CDAs (see Annex 9).
- **Regular group monitoring meetings** with ASCs and *matrones* help to overcome constraints of money and human resources for individual visit to health huts.

Challenges and Barriers

- Regular supervision was **funded from external sources**.
- Even when monitoring visits are conducted, **processes are not always adhered to**, including when partners oversimplify forms, not everyone is on board, and head nurses made changes either because they did not appreciate the importance of each step and tool or for pragmatic reasons.
- **The introduction of new drugs** normally used by professional health workers at health hut level calls for close support to health huts that was not required before. While NGOs provide much of the needed support, the health system has not yet fully filled this role/gap.

Table 7. Successes, bottlenecks, and solutions in terms of supervision and performance quality assurance

FINDINGS		SOLUTIONS ADOPTED/SUGGESTED
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ Dedicated attention from the MoHP at the central level and from a number of experts from different partners.	▪ No resources provided for head nurses to conduct monthly supervision.	**Solutions Adopted:** ▪ Collective monitoring meeting.
Expansion Phase		
▪ Official recognition of the head nurses as being the primary MoHP person responsible for health huts. ▪ Head nurses are available and trained in training, supervision, and support of ASC/*matrones*. ▪ Institutionalization of the data validation system by the head nurses, used as an opportunity for one-on-one coaching of ASC/*matrones*.	▪ Limited resources and leadership of public sector for supervising community level services. ▪ No direct observations as part of routine monitoring of ASCs and *matrones*, and no alternative system in place to ensure adequate monitoring of the quality of the CHW performance. ▪ No sustainable approach to maintain CDAs' level of support.	**Solutions Suggested:** ▪ As noted under the Financing section above, ensure that the MoHP devotes some financial resources to supervision of community-level activities. ▪ Institute opportunities to measure and monitor quality of CHW performance during monthly meetings and any visit to health huts (e.g., immunization outreach). ▪ In addition to the collective CHW monitoring meetings, review the role of CDAs to focus on clinical work.

FINDINGS		SOLUTIONS ADOPTED/SUGGESTED
SUCCESSES/STRENGTHS	BOTTLENECKS	
▪ NGO staff (the CDAs) specifically assigned to support ASC/*matrones* in USAID/Senegal Community Health Program zone.		▪ Accelerate the implementation of a performance-based evaluation system for MoHP staff, including supervision of ASCs and *matrones* as an element of the Performance-Based Financing design. ▪ Include in the performance contracts a requirement for developing a quarterly action plan at the operational level and transmitting it to the central level.

5.8 MONITORING AND EVALUATION AND THE HEALTH INFORMATION SYSTEM

This section presents the promising practices, as well as challenges and barriers, under M&E and the Health Information System for iCCM introduction and expansion in Senegal.

During the pilot and learning phases to introduce a new element of iCCM (antibiotics, bi-therapy for malaria treatment, zinc), data were systematically collected, analyzed, and documented to determine whether the intervention was effective and feasible for Senegal. During the expansion phase, it became clear that this level and this intensity of data collection was not replicable or necessary on a larger scale. Instead, data collection needs to monitor progress and respond to ongoing challenges in program implementation through the National Health Management Information System (NHMIS). A major shortfall is that tools and standardized guidance for integrating of community level data into the NHMIS are not yet available at the operational level. Therefore, there is lack of attributing contribution of health huts to national, regional, and district indicators related to ARI, diarrhea, and malaria. Senegal should consider revising and disseminating the currently available tools and procedures, using the global iCCM indicator framework to select some indicators appropriate for the country.

MOH officials and NGO partners discussing the findings from the documentation exercise during the validation workshop in Dakar

Involvement of MoHP personnel at regional level varies from one region to another, but it is generally limited. However, some examples of successful regional involvements such as in Kolda were reported. The documentation team perceived an extra burden for the central level which has taken on some of the data management tasks that the decentralized levels should be managing. The NMCP approach of holding quarterly program review meetings for district staff and partners is a promising approach. These meetings create opportunities for district-level personnel to present malaria data and indicators, while maintaining a broad view of health hut activities and promoting discussion of data and making joint-decisions.

At district level, although described in the iCCM Implementation Guideline, the documentation team did not find the set of tools available that would specifically enable these levels of the MoHP to follow the progress of the health huts' activities. Although the NGO Consortium has attempted to streamline data collection, analysis, and reporting, in practice, implementation of this process has not worked well because opportunities for sharing information and making joint decisions with health regions and districts are rare.

At the community level, through the CDAs, implementing NGOs under the USAID/Senegal community program are charged with supporting health huts to collect and manage data at that level and to report to the district on a monthly basis, as described above. In some districts, some health huts analyze their data and take action. A number of health huts, especially in areas supported by the project, have data posted on the wall. Although the VHC has an important role to play in monitoring progress locally of any activities at the health hut, it appears that no systematic process has been conducted to simplify the M&E system appropriate for the VHC. Since the Senegalese iCCM program is quite mature, this should be the right time to select basic indicators or data elements that are meaningful for monitoring health hut activities at the local level. These indicators should be put into a tailored training program for committee members so that they are easily understood and empower the committee members in the local use of data for decision-making.

Promising Practices in M&E and the NHIS

- **Regional level:** The NMCP approach to M&E is an example of a promising practice.
- MoHP's efforts to **integrate community case management** data into the NHMIS is a second example.

Challenges and Barriers

- **MoHP's involvement at regional level has declined significantly**, and now the NHMIS is expected to take over its role in M&E.
- There has been **poor dissemination of guidance** on the inclusion of iCCM data in the health system, as well as a lack of follow-up.
- There is **no available set of tools** for the district level that would specifically enable various levels of MoHP to follow progress.

Table 8: Successes, bottlenecks, and solutions in terms of M&E and the health information system

FINDINGS		SOLUTIONS
SUCCESSES/STRENGTHS	BOTTLENECKS	
Pilot Phase		
▪ Systematic and complete collection of data, documentation, and active involvement of many monitoring experts.	▪ N/A	▪ N/A
Expansion Phase		
▪ M&E tools and procedures codified, available, validated, and documented at the central level. ▪ Opportunities for discussing data to make informed decisions exist at the regular meetings organized by districts and regions. ▪ PNLP has a successful model of M&E system.	▪ Program monitoring at the operational level only carried out by NGOs. ▪ No specific tools available at the regional or district level for monitoring health hut activities. ▪ Impossibility of tracking the contributions of health huts to the performance indicators at all levels of the system.	**Solutions Suggested:** ▪ Define an M&E system clarifying role of each level from the health hut to national level. ▪ Strengthen the use of data for decision-making at all levels. ▪ Review the package of tools the ASCs and *matrones* use and ensure they are fully consistent across the board, i.e., consistency of the information collected in district monthly reports, health post monthly reports, ASCs and *matrones* monthly reports, iCCM register, and iCCM individual forms. ▪ Integrate key iCCM indicators into the NHMIS to reflect the contributions of community-led activities and to ensure their quality. ▪ Consider using the list of "iCCM Indicators" recently developed by global partners, available at: www.ccmcentral.com

6. LESSONS LEARNED

The lessons learned are organized into four broad categories: establishing a favorable policy environment, reinforcing links between the health system and the communities, rapidly scaling up the delivery of quality services by CHWs to households, and optimizing behavior change within the program.

6.1 ESTABLISHING A FAVORABLE POLICY ENVIRONMENT AND EFFECTIVE INSTITUTIONAL SUPPORT

Evidence-based Advocacy

The Senegal experience clearly shows that there are certain factors which favor the adoption of an innovative idea such as iCCM for Childhood Illness. These include: 1) the use of scientific evidence during advocacy sessions; 2) the sharing of perspectives by district managers and care providers; and 3) individuals who have the courage to challenge the status quo. After scientific evidence of the effectiveness of iCCM, demonstrating that trained community workers can correctly dispense antibiotics, ORS/zinc and anti-malarials, was a sound basis for decision-making and policy change.

Need for Policy Based on Experience

The initial phase of the iCCM program was implemented without a national policy on community health in place. The strong leadership of the MoHP and its ownership of the process were sufficient to successfully launch this initiative. However, as the program has expanded and involves CHWs from different government programs providing diverse health services, a national policy on community health is needed to ensure consistent standards of implementation and to promote synergies among programs.

Ownership and Empowerment of Decentralized Government Levels

Although NGOs support program implementation in the field, the MoHP continues to provide technical and strategic leadership and has overall responsibility for coordinating activities. It is therefore very important to address the ownership issues raised by personnel at different levels of the Ministry. A community health policy and implementation strategy would define roles and responsibilities and empower regional and district levels to play their respective roles.

Adapting to Local Context and Culture

A critical lesson learned during the seven years of implementation is the importance of adapting the approach to the local context and culture to ensure acceptance and ownership by the beneficiaries through local health committees. This lesson also applies to the following section on reinforcing links between the health system and the communities. In the Senegalese context, village elders play an essential role and need to be involved in all discussions about health huts and selection of CHWs, and their role is fundamental in ensuring local ownership.

6.2 REINFORCING LINKS BETWEEN THE HEALTH SYSTEM AND THE COMMUNITIES

Sequence of Scale-up Can Vary

Although it might seem logical to first provide training in clinical IMCI to the health facility staff who supervise the CHWs, the Senegal experience demonstrates that this is not a precondition for a successful community-based case management initiative.

Importance of Head Nurses in Supporting CHWs

In the Senegal program, the head nurses are the first line of contact between the CHWs and the health system and the importance of their role in supporting the CHWs cannot be underestimated. As the program has scaled up, the head nurses have become less involved due to a number of factors, some of which are beyond their control. Head nurses can improve direct observation of care provided by CHWs, monitor quality, coach for improved performance, and analyze data from CHW reports for problem-solving. For the continued success of the program, it is essential to make a special effort to ensure that the CHWs benefit fully from technical and moral support of the head nurse.

Harmonized Tools, Procedures from Community to National Levels

It is important to have a "dashboard" or a set of tools and procedures for monitoring activities at all levels of program management, from the peripheral village level to the national level, both from the Ministry and implementing partners.

Data Needs Differ in Startup and Expansion

When designing iCCM programs, it is important to distinguish between data to determine the feasibility of an intervention during the initial phase and data for program monitoring and timely decision-making during expansion phase.

Regardless of partner support, the routine data collected at the community level in the expansion phase should be integrated into the overall health information system. The indicators, which need to be reviewed periodically, should clearly measure the contribution of the community-level program to the overall health system. This weakness in the Senegal program, highlighted during the documentation exercise, needs to be addressed.

6.3 RAPIDLY SCALING-UP THE DELIVERY OF QUALITY SERVICES BY CHWS TO HOUSEHOLDS

The documentation team highlighted five critical lessons learned for rapidly scaling up an iCCM program:

1. The program design should include both an initial and an expansion phase with allocation of resources before it starts. In order to avoid delays, the initial program phase should include clear policy directives and commitment for rapid expansion if the results prove conclusive.
2. Technical support from NGOs facilitates rapid scaling-up of the program. The NGOs offer technical expertise, effective interventions in the field, and an ability to mobilize human, financial, and material resources. It is, however, important for the ministry of health to coordinate and lead the process.
3. For an iCCM program to succeed, the supply chain management system must function well. Without drugs and diagnostic tools such as RDT kits, visits to health huts lose value.

4. Quality assurance should not decline during the expansion phase, even if the objective is to rapidly cover a large proportion of the target population. Certain standards and procedures need to be respected, especially where post-training monitoring and supervision are concerned. Again, direct observation of case management to monitor CHWs is an essential requirement to be included in monitoring and quality assurance.
5. Securing financing is important to long-term program sustainability. Although ministries of health are not in a position to fully fund line items for all community-level activities, allocating funds for supervision of community activities in the budgets of the ministry's departments, divisions, and decentralized levels would demonstrate ownership.

6.4 DESIGNING AND IMPLEMENTING BCC ACTIVITIES FOR iCCM

BCC Strategy Review

At this stage of the program, it is time for an in-depth review of the technical content of the IEC/BCC strategy. The review should include an assessment of targets (whose behavior: mothers, fathers, families, communities?); messages (what aspect of the behavior?); and means of communication for different actors.

One of the principal lessons learned for optimizing behavior change is the importance of adapting the BCC strategy to the cultural values of the community. Program managers should continue to actively seek out opportunities to ensure that behavior change activities are both effective and acceptable. In addition, resource mobilization should cover both case management and BCC activities. The challenge is to maintain a balance between clinical aspects and BCC.

Mass Media

Integrating health messages into mass media needs to be done very systematically. Ideally, managers of the different health programs would develop a joint plan, including their priority messages and a pre-positioned budget. At a minimum, the iCCM program should develop its own comprehensive mass media plan.

Optimizing Resources

Better use of all available resources (human, material, and financial) would result in a more effective behavior change program. For example, the involvement of the Ministry of Communication should be more tangible. The decentralized levels of the MoHP should also mobilize local resources, e.g., develop partnerships with local media or leading advocacy campaigns directed toward influential people in the area.

CONCLUSION

This document has presented the findings and factors accounting for the success of iCCM in Senegal including the technical and strategic leadership of the MoHP, the involvement of respected health professionals, the creation of a framework conducive to open exchange, and the sustained commitment of financial and technical partners.

Although the purpose of this exercise was not to quantitatively measure increased access and improved outcomes, there are a number of positive findings indicating program effectiveness. Examples include:

- After ASCs and *matrones* were trained in the use of RDTs, the number of cases of fever diagnosed as malaria declined significantly. This has resulted in a more rational, cost-effective use of relatively expensive antimalarial drugs.
- The number of cases of diarrhea treated with ORS and the number of cases of pneumonia treated with antibiotics appear to increase in parallel with the number of health huts involved in the program.

This documentation exercise also highlighted areas needing improvement that would further strengthen Senegal's program if addressed in a timely fashion. These include:

- Reinforcing the MoHP's sense of ownership;
- Improving the M&E system;
- Addressing stock-out issues and securing long-term financing;
- Strengthening the BCC component;
- Monitoring the quality of the services provided by the ASCs and *matrones*; and
- Developing a national policy on community health for better integration of all health-related activities at the community level.

Table 9. Principal recommendations for the ongoing development of the program

PRINCIPAL RECOMMENDATIONS FOR THE SENEGAL PROGRAM	
COORDINATION AND POLICY SETTING	▪ Develop a comprehensive national policy on community health to: 1) ensure a sustainable level of institutional and technical support for community-based health services, and 2) promote better integration of programs. ▪ Put in place a formal coordination platform at national, regional, and district levels which would allow MoHP officials and other government representatives to meet regularly to discuss integration and complementarity. ▪ Address in a timely fashion the ownership issues raised by personnel at different levels of the MoHP.
FINANCING	▪ The MoHP should increase the budget allocated at the national, regional, and district levels to cover part of the cost of supervision of community-level activities.
HUMAN RESOURCES	▪ Strengthen other forms of non-financial motivation for ASCs and *matrones*, and provide regular feedback and encouragement, ideally through regular supervision visits, and public swearing and awarding ceremony of recognition.
SUPPLY CHAIN MANAGEMENT	▪ Resolve stock-outs by: 1) integrating health huts to the national supply chain system for health posts, 2) strengthening communication among the different levels of the system, 3) improving control at all levels of the system, and 4) redeploying existing stock.
SERVICE DELIVERY AND REFERRAL	▪ Conduct a formal evaluation of the quality of care provided by the ASCs and *matrones*, and barriers of caregivers to follow referral pathway. ▪ Harmonize operation styles and accountability requirements of health facility staff and NGOs. ▪ Find ways to share innovative solutions more broadly.
COMMUNICATION AND SOCIAL MOBILIZATION	▪ Conduct an in-depth review of the technical content of the IEC/BCC strategy, ensuring strong focus on danger signs and encouraging early care. ▪ Explore other sources of funding (e.g., IntraHealth and the National Council for the Fight against AIDS) for the costs of broadcasting television series and for training community workers. ▪ Improve mothers' knowledge concerning danger signs and appropriate care-seeking behavior. ▪ Make better use of all available resources (human, material, and financial) including the Ministry of Communication and other development agents.
SUPERVISION AND PERFORMANCE AND QUALITY ASSURANCE	▪ Ensure that the ASCs and *matrones* benefit fully from everything the head nurse has to offer (technical guidance, institutional support, and moral encouragement). This includes making better use of monthly CHW meetings to make up for the lack of regular supervision in the field. ▪ Accelerate the implementation of a performance-based evaluation system for MoHP personnel that includes supervision of ASCs and *matrones*; include as an element in the personnel performance contract the preparation of a quarterly action plan and its transmission to the central level of the MoHP. ▪ As noted under the Financing section above, ensure that the MoHP devotes some financial resources to supervision of community-level activities. ▪ Integrate CHW supervision into the outreach services provided by head nurses.

PRINCIPAL RECOMMENDATIONS FOR THE SENEGAL PROGRAM	
M&E AND THE HEALTH INFORMATION SYSTEM	▪ Provide clear policy guidance on the inclusion of iCCM data in the health system. ▪ Review the package of tools the ASCs and *matrones* use and ensure that they are fully consistent across the board, e.g., the information collected in the iCCM register should be the same as the information collected on the individual IMCI forms. ▪ Integrate key indicators into the NHMIS to ensure that the contributions of community-level activities are reflected in the health information system. ▪ Consider using the list of "iCCM Indicators" recently developed by global partners, available at www.ccmcentral.com

ANNEX 1. ICCM BENCHMARKS FRAMEWORK

COMPONENTS	ADVOCACY AND PLANNING	PILOT AND EARLY IMPLEMENTATION	EXPANSION/SCALE-UP
Component **One**: Coordination and Policy Setting	Needs assessment and situation analysis for package of services conducted	Discussions regarding ongoing policy change (where necessary) completed	Routine stakeholders meetings held to ensure coordination of CCM partners
	Stakeholder meetings to define roles and discuss current policies held		
	National policies and guidelines reviewed		
Component **Two**: Costing and Financing	CCM costing estimates based on all service delivery requirements undertaken	Financing gap analysis completed	Long-term strategy for sustainability and financial viability developed
	Finances for CCM medicines, supplies, and all program costs secured	MOH funding in CCM program invested	MOH investment in CCM sustained
Component **Three**: Human Resources	Roles of CHWs, communities, and referral service providers defined by communities and MoH	Role and expectations of CHW made clear to community and referral service providers	Process for update and discussion of role/expectations for CHW in place
	Criteria for CHW recruitment defined by communities and MOH	Training of CHWs with community and facility participation	Ongoing training provided to update CHW on new skills, reinforce initial training
	Training plan for comprehensive CHW training and refresher training developed (modules, training of trainers, M&E)		CHW retention strategies reviewed and revised as necessary.
	CHW retention strategies, incentive/motivation plan developed	CHW retention strategies, incentive/motivation plan implemented and made clear to CHWs; community plays a role in providing rewards, MOH provides support	Advancement, promotion, retirement to CHWs who express desire offered
Component **Four**: Supply chain management	Appropriate CCM medicines and supplies consistent with national policies (inclusion of RDTs where appropriate) and included in essential drug list	CCM medicines and supplies procured consistent with national policies and plan	Stocks of medicines and supplies at all levels of the system monitored (through routine information system and/or supervision)
	Quantifications for CCM medicines and supplies completed		

COMPONENTS	ADVOCACY AND PLANNING	PILOT AND EARLY IMPLEMENTATION	EXPANSION/SCALE-UP
	Procurement plan for medicines and supplies developed	Logistics system to maintain quantity and quality of products for CCM implemented	Inventory control and resupply logistics system for CCM implemented and adapted based on results of pilot with no substantial stock-out periods
	Inventory control and resupply logistic system for CCM and standard operating procedures developed		
Component **Five**: Service Delivery and Referral	Plan for rational use of medicines (and RDTs where appropriate) by CHWs and patients developed	Assessment, diagnosis and treatment of sick children by CHWs with rational use of medicines and diagnostics	Timely receipt of appropriate diagnosis and treatment by CHWs made routine
	Guidelines for clinical assessment, diagnosis, management, and referral developed	Review and modify guidelines based on pilot	Regular review of guidelines and modifications as needed
	Referral and counter referral system developed	Referral and counter referral system implemented: community information on where referral facility is made clear, health personnel also clear on their referral roles	CHWs routinely referring and counter referring with patient compliance, information flow from referral facility back to CHW with returned referral slips
Component **Six**: Communication and Social Mobilization	Communication strategies including prevention and management of community illness for policy makers, local leaders, health providers, CHWs, communities, and other target groups developed	Communication and social mobilization plan implemented	Communication and social mobilization plan and implementation reviewed and refined based on M&E
	Development of community and social mobilization content for CHWs on CCM and other messages (e.g., training materials, job aids)	Materials and messages to aid CHWs	
	Materials and messages for CCM defined, targeting the community and other groups	CHWs dialogue with parents and community members about CCM and other messages	
Component **Seven**: Supervision & Performance Quality Assurance	Appropriate supervision checklists and other tools developed, including those for use of diagnostics	Supervision visit every one to three months, includes reviewing of reports, monitoring of data	CHWs routinely supervised for quality assurance and performance
	Supervision plan established, including number of visits, supportive supervision roles, self-supervision, etc.	Supervisor visits community, makes home visits, provides skills coaching to CHWs	Data from reports and community feedback used for problem-solving and coaching

COMPONENTS	ADVOCACY AND PLANNING	PILOT AND EARLY IMPLEMENTATION	EXPANSION/SCALE-UP
	Supervisor trained in supervision and has access to appropriate supervision tools	CCM supervision included as part of the CHW supervisor's performance review	Yearly evaluation includes individual performance and evaluation of coverage or monitoring data
Component **Eight**: M&E and Health Information Systems	Monitoring framework for all components of CCM developed and sources of information identified	Monitoring framework tested and modified accordingly	M&E through HMIS data performed to sustain program impact
	Standardized registers and reporting documents developed	Registers and reporting documents reviewed	
	Indicators and standards for HMIS and CCM surveys defined		Operations research and external evaluations of CCM performed as necessary to inform scale-up and sustainability
	Research agenda for CCM documented and circulated	CHWs, supervisors, and M&E staff trained on the new framework, its components, and use of data	

ANNEX 2. ARI STEERING COMMITTEE, ARI RESEARCH TEAM, AND ARI TECHNICAL WORKING GROUP

ORGANIZATIONS AND MEMBERS OF THE ARI STEERING COMMITTEE

Chair: Directeur de la Santé, Dr Mandiaye Loume
Members:

- DANSE (Division de l'Alimentation, de la Nutrition et de la Survie de l'Enfant)
- Chaire de Pédiatrie
- DERF (Direction des Etudes, de la Recherche et de la Formation)
- DSSP (Division des Soins de Santé Primaires)
- DPL (Direction de la Pharmacie et du Laboratoire)
- PNA (Pharmacie Nationale d'approvisionnement)
- OMS (Organisation Mondiale de la Santé)
- ISED (Institut Santé et Développement)
- UNICEF (Fond des Nations Unies pour l'Enfance)
- BASICS II (Basic Support for Institutionalizing Child Survival, phase two)
- ECR – ECD (les Equipes Cadres de Région et de District)
- Syndicat et l'Ordre des Pharmaciens

ARI RESEARCH TEAM

- Pr Guélaye SALL[21]
- Dr Assane SYLLA
- Dr Cheikh SARR
- Dr Babacar GUEYE
- Djiby Ndiaye[22]
- Dr Talla from the Région Médical of Thiès[23]
- Dr Emmanuel Wansi facilitated the group

LIST OF THE ARI TECHNICAL WORKING GROUP

- Pr Guélaye SALL, Cordonnateur du Comité
- Dr Aboubakhry Thiam, CTL/Basics Senegal
- Dr Mactar Camara, Chargé de programme Survie de l'Enfance USAID-Dakar

[21] Team leader

[22] Joined the group later after the protocol was developed

[23] Regional Officer who participated in the development of the protocol to bring the perspectives from the field

- Dr Assane SYLLA, Chaire de Pédiatrie, Université de Dakar
- Dr Serigne Abdou Diagne, Conseiller RPM Plus/MSH
- Dr Florie Guidetti, UNICEF, représentant Dr Costa
- Dr Mame Marie Mbayame DIONE, MOHP/DANSE
- Dr Talla, Région Médical de Thiès,
- Niama Konaté, ICP de Ngoundiane
- Dr Cheikh SARR, Conseiller Suivi-Evaluation a BASICS II
- Djiby Ndiaye, Assistant IRA a BASICS II WARO
- Dr Isseu Diop TOURE, OMS-Dakar
- Ibrahima Ndao, UNICEF-Dakar
- Dr Papa Ndiaye, Institut Santé et Développement/UCAD
- Dr Cheikh Oumar DIA, Ordre des Pharmaciens, Dakar
- Dr Moussa Diakhate, DS/Division des Soins de Santé Primaires
- Dr Babacar GUEYE, UNICEF

ANNEX 3. CASE MANAGEMENT OBSERVATION CHECKLIST

OUTILS UTILISES POUR LES SEANCES D'OBSERVATION DIRECTE

Fiche d'Observation

District :_____ Poste de santé :_____ Case de santé :_____
Nom de l'ASC _____ Superviseur :_____

ETAPES	OUI	NON
RECHERCHER LES SIGNES GENERAUX DE DANGER	**Note _____**	**Sur 5**
▪ Incapable de boire ou téter		
▪ Vomit tout ce qu'il consomme		
▪ Convulsions (actuelles ou récentes)		
▪ Léthargie ou inconscience		
▪ Signes de Malnutrition sévère		
EVALUER ET CLASSER	**Note _____**	**Sur _____**
TOUX OU DIFFICULTES RESPIRATOIRES		
▪ A interrogé la maman sur le symptôme toux/difficultés respiratoires		
▪ A correctement compté le nombre de mouvements respiratoires		
FIEVRE		
▪ A interrogé la maman sur le symptôme fièvre		
▪ A correctement fait le test rapide		
DIARRHEE		
▪ A interrogé la maman sur le symptôme diarrhée		
▪ A cherché le signe de déshydratation [BOIRE AVIDEMENT] ▪ OU un autre signe de déshydratation ACCEPTABLE _____		
TRAITER	**Note _____**	**Sur 3**
▪ A donné la bonne dose de COTRIMOXAZOLE OU a référé OU a donné des conseils sur les soins à domicile selon la classification		
▪ A donné la bonne dose d'ACT OU a référé OU a donné des conseils sur les soins à domicile selon la classification		
▪ A donné correctement du SRO/TRO OU a référé OU a donné des conseils sur les soins à domicile selon la classification		
CONSEILLER	**Note _____**	**Sur 2**
▪ A conseillé la mère sur QUAND REVENIR IMMEDIATEMENT		
▪ A donné un rendez-vous pour le suivi		
DECOMPTE DE LA FREQUENCE RESPIRATOIRE *Demander à l'ASC de faire à la fin si ça n'a pas été fait*	**Note _____**	**Sur 2**
▪ A correctement compté le nombre de mouvements respiratoires		

ANNEX 4. KEY EVENTS IN INTEGRATED COMMUNITY CASE MANAGEMENT

DATE	KEY EVENTS	RESULT/IMPACT ON ICCM IMPLEMENTATION
Mid-1970s	▪ The Belgian and Sine Saloum project launched the use of CHWs to treat diseases.	▪ Health huts were introduced and provided treatment of malaria and diarrhea.
March 2002	▪ The West Africa Regional Workshop on community IMCI took place in Mbour, Senegal.	▪ Eight countries participated. ▪ The workshop allowed for CCM to be presented as a key element of the c-IMCI implementation framework. ▪ Based on Nepal's experience, advocacy for the introduction of ARI CCM at health huts.
April 2002	▪ Results from the "Evaluation of Community Drug Management for Childhood Illness" were disseminated.	▪ Participants recommended the feasibility of ARI CCM in health huts. ▪ MoHP Director of Pharmacy was identified as a champion of ARI CCM.
June 2002	▪ Global child health specialists gathered in Stockholm, Sweden to discuss the "Evidence Base for Community Management of Pneumonia."	▪ The meeting allowed for the support of the launch of operational research on ARI CCM in Senegal. ▪ The meeting also stimulated USAID's and UNICEF Senegal country offices' support to MoHP and partners for a feasibility study.
April 2003	▪ Field activity for the MoHP-commissioned pilot study on the "Feasibility of the introduction of antibiotics into the health huts in Senegal" began. Activity took place in four districts: Kédougou, Khombole, Thiadiaye, and Vélingara.	▪ Establishment of a Steering Committee, research team, and technical working group for the feasibility study.
July 2003	▪ A national consensus changed malaria treatment from chloroquine to AQ/SP at the health facility level only.	▪ Chloroquine replaced by AQ/SP at the health facility level only. ▪ CHWs were not permitted to use AQ/SP.
June 2004	▪ Results of ARI CCM study, started in April 2003, were disseminated at a workshop in Mbour, Senegal.	▪ Workshop participants strongly recommended the gradual extension of the intervention to the field.
July 2004	▪ National workshop held for malaria management at the community level.	▪ Directly observed treatment of simple fever/malaria by AQ/SP, combined with strong monitoring was piloted at the health hut.
August 2004	▪ AQ/SP was implemented in the district of Joal and expanded in the CAMAT intervention area, including Mbour, Popenguine, and Thiadiaye.	▪ 118 ASCs and 475 relais were trained.
September and December 2004	▪ USAID, BASICS, and World Vision completed a joint evaluation of the AQ/SP pilot study at the health hut.	▪ The evaluation showed excellent results in CHW competency, client compliance, referral, and follow-up visits.

DATE	KEY EVENTS	RESULT/IMPACT ON ICCM IMPLEMENTATION
November 2004	▪ Pfizer Child Health Initiative Scientific Advisory Board Meeting took place in Dakar, Senegal.	▪ Pfizer made a commitment to finance CCM expansion and limited operations research in Senegal.
March 2005	▪ Workshop to plan for the extension of CCM took place in Dakar, Senegal.	▪ Plans for field extensions were initiated and the operations research questions and next steps were defined.
2005	▪ The MoHP published ministerial policy guidelines on ARI and disseminated to the regions and districts.	▪ Approval of authorities marked the beginning of expansion in the regions.
August 2005	▪ Workshop to validate the iCCM implementation guide and training modules.	▪ National technical documents now available for extension.
January 2006	▪ Expansion launched in Kolda, Senegal with a regional advocacy meeting, training of trainers, and training of ASCs.	▪ New cadre of trainers and trained ASCs. ▪ Approach is implemented in 18 districts.
January 2006	▪ Shift to ACT as a replacement of the AQ/SP protocol.	▪ There is little resistance among health professionals as the ASCs proved competency in managing antibiotics for pneumonia treatment and malaria biotherapy.
March 2006	▪ Sub-regional workshop in Dakar, Senegal on Community Case Management of ARI.	▪ 13 countries share experiences in CCM. ▪ Several countries, both African and Western, participated in workshop to learn about the Senegal experience. ▪ First list of common CCM indicators drafted.
June 2006	▪ Senegal announced as one of 15 PMI countries.	▪ PMI interventions focused on ITN, vector control, malaria in pregnancy as well as access and quality of diagnosis and treatment. This complemented GF support which covered the costs of ACT.
July–September 2006	▪ Steering committee renewed to lead the introduction of zinc and low-osmolarity ORS in the treatment of diarrheal disease in Kolda (42 health huts), Joal (19 health huts), and Fatick (11 health huts).	▪ UNICEF positioned to provide initial stock of commodities, while the PNA became positioned to procure them. ▪ 72 health huts included in the feasibility study on the use of zinc and low-osmolarity ORS for diarrheal disease case management.
September 2006	▪ Technical assistance agreement between the BASICS project and the MoHP concludes.	▪ Technical leadership passed onto NGO Consortium. ▪ NGO coordination is geographically situated away from MoHP headquarters. This causes direct contact to become more difficult. ▪ NGOs are focused on expansion efforts, rather than on support to the central MoHP.
October 2006	▪ USAID/Senegal Community Health Program launched, directed by ChildFund.	▪ Project represents the support of USAID to the Government of Senegal for scaling up CCM and integrating all three diseases: malaria, ARI, and diarrhea.

DATE	KEY EVENTS	RESULT/IMPACT ON ICCM IMPLEMENTATION
2007–2008	▪ PNLP engages in extensive efforts to expand ACT for malaria treatment nationwide at the facility and health hut level.	▪ In early 2009, with PMI's assistance, the treatment with ACTs at the community level was rolled out to all 1,297 heath huts nationwide.
September 2008	▪ PEDACOM pilot phase launched with the training of DSDOM in three districts.	▪ 20 DSDOM trained and equipped to provide home-based management of malaria treatment outside of health huts.
Late 2009	▪ Pilot of zinc and low-osmolarity ORS at the facility level implemented in Kolda, Fatick, and Thiès.	▪ Feasibility study for the introduction of zinc and low-osmolarity ORS simultaneously at community and facility levels.
2010	▪ Evaluation of zinc and low-osmolarity ORS at health facilities in Kolda, Fatick, and Thiès.	▪ Results suggest that community workers are as competent as health professionals in overall knowledge and practice.

ANNEX 5. DECREE 92-118

DECRET N°92-118 DU 17 JANVIER 1992 FIXANT LES OBLIGATIONS PARTICULIERES AUXQUELLES SONT SOUMIS LES COMITES DE SANTE

Le Président de la République,
Vu la Constitution, en ses articles 37 et 65 ;
Vu la loi n°66-70 du 13 juillet 1966 portant Code des obligations civiles et commerciales ;
Vu le décret n°79-416 du 12 mai 1979 portant organisation du Ministère de la Santé publique, modifié par le décret n°90-349 du 27 mars 1990, modifié par le décret n°91-437 du 8 avril 1991 ;
Vu le décret n°91-423 du 7 avril 1991 portant nomination du Premier ministre.
Vu le décret n°91-429 du 8 avril 1991 portant nomination des ministres ;
Vu le décret n°91-430 du 8 avril 1991 portant répartition des services de l'État ;
Vu la circulaire n°1753 MSPAS du 15 mars 1991 relative à la planification des services de santé;
Sur le rapport du Ministre de la Santé publique et de l'action sociale,
Décrète:

PREMIERE PARTIE.—OBLIGATIONS PARTICULIERES AUXQUELLES SONT SOUMISES LES ASSOCIATIONS DE PARTICIPATION A L'EFFORT DE LA SANTE PUBLIQUE DENOMMEES COMITES DE SANTE

Article premier. – Les obligations particulières auxquelles sont soumises les associations de participation à l'effort de santé publique visées à l'alinéa premier de l'article 821 du Code des obligations civiles et commerciales dénommées ci-après Comités de santé, sont fixées conformément aux dispositions des articles suivants.

Art. 2. – La participation à l'effort de santé publique est un processus par lequel les individus et les familles prennent en charge leur santé comme ceux de la communauté depuis l'identification des besoins jusqu'à l'évaluation des programmes. Elle couvre des domaines multiples et variés allant des activités préventives et curatives à la réalisation et à l'équipement d'infrastructures, à la participation financière en passant par la planification et à la mise en œuvre et l'évaluation des projets de programme de santé.

Art. 3. — Les comités de santé ont le même ressort que les zones opérationnelles des formations sanitaires (postes de santé, centres de santé, hôpitaux), en étroite collaboration avec les autorités administratives et sanitaires.

Art. 4 – Les comités de santé sont placés sous la tutelle du Ministre de la Santé publique et de l'action sociale. Le Ministre peut ainsi prendre des mesures conservatoires, telles que la suspension du bureau du comité, la mise en place d'un comité intérimaire de six mois chargé d'organiser la constitution du nouveau bureau ou le dépôt d'une plainte contre un ou plusieurs dirigeants du comité, qui lui permettent d'agir aux lieu et place en cas de détournement de fonds, ou lorsque le comité est détourné de sa mission, ou en cas de violation des dispositions statutaires ou de blocage du fonctionnement.

Art. 5. – Les comités de santé sont représentés dans les comités de développement sanitaire régionaux et départementaux réunis pour traiter des questions de santé publique.

Art. 6. – Préalablement à toute activité, les comités de santé devront se conformer à la déclaration prévue à l'article 818 du Code des obligations civiles et commerciales selon les modalités définies par les articles suivants.

Art. 7. – Le dossier de déclaration comprend:

- une lettre par laquelle le président du comité de santé déclare la constitution de cette association :
  - quatre exemplaires dactylographiés des statuts ;
  - quatre exemplaires du procès-verbal de l'assemblée constitutive faisant obligatoirement ressortir la composition du bureau ;
  - l'avis du chef de formation sanitaire.

Art. 8. – Le dossier de déclaration est envoyé au Ministère de la Santé publique et de l'action sociale par le canal du préfet. Le Ministère de la Santé publique et de l'action sociale transmet au Ministre de l'Intérieur pour délivrance du récipissé de déclaration d'association.

Art. 9.–Dès enregistrement de leur déclaration par le Ministère de l'intérieur, les comités de santé acquièrent la personnalité morale.

Art. 10. – Le président doit faire connaître dans les trois mois au Ministre de l'Intérieur tous changements survenus dans la composition du bureau du comité de santé selon les modalités définies à l'article 8.

DEUXIEME PARTIE.—STATUTS TYPES DES COMITES DE SANTE

Titre I.—Objet

Art. 11. – Il est créé conformément aux dispositions du décret n°92-118 du 17 janvier 1992 un comité de (nom de la formation sanitaire). Sa durée est illimitée. La formation sanitaire est le siège du comité. Le siège petit être transféré en tout autre endroit de la localité par décision de l'assemblée générale.

Art. 12. – Le comité de santé de …… a pour but :

- la promotion de la santé des individus, des familles et des communautés ;
- la mobilisation des collectivités locales pour le développement sanitaire ;
- l'amélioration des prestations de service de santé pour mieux répondre aux besoins des populations.

Art. l3. – Le comité de santé de …… oeuvre au service de tous. Il est ouvert à tous, dans le respect des convictions individuelles, dans l'indépendance à l'égard des partis politiques et des groupes de pression, en excluant toute discrimination de race, de religion et de classe sociale.

Titre II.—Composition

Art. 14. — Sont membres du comité de santé, les populations desservies par la formation sanitaire.

Titre III.—Administration et fonctionnement

Art. 15. – Le comité de santé se compose des instances suivantes :

- l'Assemblée générale comprend :
- pour les comités des postes de santé en milieu rural : les chefs de carré des villages ou leurs représentants et les représentants des groupements de femmes et associations de jeunes ;
- pour les comités des postes de santé en milieu urbain : les délégués de quartiers et les représentants des groupements de femmes et associations de jeunes ;
- pour les comités des districts sanitaires : les représentants des comités de postes et du comité des riverains du centre de santé ;
- pour les comités des hôpitaux : les représentants des comités de districts.

Toutefois, seules les personnes âgées d'au moins 18 ans sont éligibles et chaque membre a droit à une voix.

Art. 17. – L'assemblée générale se réunit en session ordinaire deux fois par an sur convocation du bureau et en session extraordinaire à la demande du responsable de la formation sanitaire autant de fois que l'intérêt du comité de santé l'exige. L'assemblée générale se réunit à la majorité absolue de ses membres. Si ce quorum n'est pas atteint, il est convoqué avec le même ordre du jour, une deuxième assemblée générale est convoquée et délibère quel que soit le nombre de présents.

Tout membre peut se faire représenter aux votes de l'assemblée générale.

L'assemblée générale élit son Président et son Secrétaire de séance.

L'assemblée générale délibère sur les rapports relatifs à la gestion du comité de santé. Elle définit les priorités. Elle approuve les comptes de l'exercice clos, vote le budget du plan de l'exercice suivant et approuve la nature et le montant de la contribution aux prestations de service proposées par le bureau. Elle approuve le règlement intérieur, procède s'il y a lieu au renouvellement du bureau et délibère sur toutes questions mises à l'ordre du jour par le bureau.

Art. 18 – Le bureau comprend :

- un président ;
- un vice-président ;
- un trésorier et son adjoint.

Ils sont élus pour deux ans et par l'assemblée générale. Ils sont rééligibles deux fois.

Le président a une voix prépondérante en cas d'égalité des voix lors des délibérations du bureau.

Le représentant de la formation sanitaire assiste avec voix consultative aux réunions du bureau.

Cependant, le bureau peut être élargi en fonction de l'importance et à la diversité des activités du comité de santé.

Les fonctions de membre du bureau sont gratuites.

Art. 19. — Le bureau se réunit une fois par mois sur convocation de son président ou à la demande du tiers des membres de l'assemblée générale ou sur convocation de l'autorité administrative ou sanitaire. Les procès-verbaux des séances sont signés par le président.

Art. 20. – Le bureau centralise les besoins de santé des populations desservies par la formation sanitaire, coordonne et évalue les actions et programmes du comité. Il élabore et exécute le budget du plan d'opération annuelle, identifie et mobilise les ressources de la communauté. Il détermine les modalités de prise en charge des malades en tenant compte de la situation de référés ou de non référés. Il veille à ce que les ventes de médicaments et produits éventuels représentent au moins 60 % des recettes du comité.

Le responsable de la formation sanitaire est chargé d'orienter le plan d'action vers la résolution des problèmes de santé, d'assurer le lien entre la formation sanitaire et la population, d'appuyer le comité dans la mobilisation sociale, d'organiser les activités sanitaires, de suivre l'avancement des programmes et des réalisations, de veiller à la bonne utilisation des outils de gestion et de leur exploitation, d'assister le président dans le suivi du respect des statuts et du règlement intérieur.

Art. 21. – Le président organise et dirige les réunions du bureau. Il veille au respect des statuts et du règlement intérieur. Il coordonne et contrôle les diverses activités. Il présente un rapport à l'assemblée générale. Les dépenses sont ordonnancées par le président. Le trésorier est le dépositaire des fonds appartenant au comité de santé. Il a la charge de toutes les opérations comptables. Il fait fonctionner le ou les comptes ouverts au nom du comité dans un établissement bancaire ou postal. À cette fin, il signe les chèques avec le président et le responsable de la formation sanitaire. Le responsable de la formation sanitaire détient le chéquier. L'émission des chèques de guichets est interdite.

Art. 22. – L'assemblée générale désigne en dehors du bureau trois membres chargés de vérifier tous les six mois les comptes et l'exécution du budget en cours. Ils vérifient également les comptes de l'exercice clos. Ces contrôleurs établissent un rapport qu'ils soumettent à l'assemblée générale. Une copie de ce rapport est adressée aux autorités de tutelle qui ont le droit de contrôle externe.

Art. 23 – Les délibérations du bureau relatives aux acquisitions, échanges et aliénations d'immeubles nécessaires au but poursuivi par le comité de santé, constitutions d'hypothèques sur lesdits immeubles, baux excédant neuf années, aliénation de biens rentrant dans la dotation et emprunts doivent être soumis à l'approbation de l'assemblée générale.

Art. 24.–Le comité de santé est représenté en justice et dans tous les actes de la vie civile par le président du bureau. En cas d'empêchement ou de défaillance, le bureau peut donner mandat à tout membre pour représenter le comité en justice. Le représentant du comité doit jouir du plein exercice de ses droits civils.

Titre IV.—Ressources, dotation

Art. 25. – Les ressources du comité de santé proviennent :

- des contributions aux soins ;
- des activités génératives de fonds (activités socioculturelles) ;
- des cotisations et des libéralités des membres de l'assemblée générale ;
- des subventions ;
- des revenus de ses biens.

Art. 26. – Les comités perçoivent et gèrent à leur niveau la totalité des recettes générées.

Art. 27. – La dotation comprend :

- les meubles et les immeubles nécessaires au but recherché par le comité de santé.

Art. 28. – Il est tenu au jour le jour une comptabilité deniers pour recettes et dépenses et s'il y a lieu une comptabilité matière distincte qui forme un chapitre spécial de la comptabilité d'ensemble du comité de santé.

Titre V.—Dispositions finales

Art. 29. — L'assemblée générale convoquée spécialement pour se prononcer sur la dissolution du comité de santé, doit comprendre au moins les quatre cinquièmes de ses membres. Tout membre peut se faire représenter aux votes de l'assemblée générale par procuration. Pour la validité des délibérations, la majorité absolue des membres présents est requise, le cas échéant, l'assemblée générale est convoquée de nouveau à quinze jours d'intervalle et peut valablement délibérer quel que soit le nombre de membres présents. Dans tous les cas, la dissolution ne peut être prononcée qu'à la majorité des deux tiers des membres présents.

Art. 30. – Les délibérations de l'assemblée générale portant dissolution du comité de santé sont adressées au Ministre de l'Intérieur et au Ministre de la Santé publique et de l'action sociale.

Art. 31. – En cas de dissolution, le patrimoine du comité est reversé à l'organisme de même nature qui prend la succession.

Art. 32. — Un règlement intérieur définissant les modalités de fonctionnement du comité de santé est établi par le bureau. Adopté par l'assemblée générale, il est soumis pour approbation au Ministre de la Santé publique et de l'action sociale.

Art. 33. — Le présent décret abroge et remplace toutes dispositions contraires antérieures.

Art. 34. – Le Ministre de la Santé publique et de l'action sociale est chargé de l'application du présent décret qui sera publié au Journal officiel.

Fait à Dakar, le 17 janvier 1992
Abdou Diouf
Par le Président de la République
Le Premier Ministre,
Habib Thiam
JORS,1-2-1992, 5449 : 77-80

ANNEX 6. HISTORY OF POLICY CHANGES IMPACTING THE ICCM PROGRAM IN SENEGAL

HISTORY OF POLICY CHANGES IMPACTING THE ICCM PROGRAM IN SENEGAL

1. The Pilot Study for Pneumonia Treatment by Antibiotics

In late 2002, the MoHP set up a Steering Committee headed by the Director of Health to oversee the research on ARI. The research objective was to test the feasibility of introducing antibiotics for treating pneumonia into the existing health huts in Senegal. A research team of five members from the department of pediatrics of Cheikh Anta Diop University (UCAD), UNICEF, and BASICS was formed. It was led by professor Guelaye from UCAD and also head of the division in charge of food, nutrition, and child health (*Division de l'Alimentation, de la Nutrition et de la Survie de l'Enfant,* or DANSE). USAID, through the BASICS project, provided technical support to the research team.

The protocol was finalized in Washington, D.C., in January 2003 and a pilot project, known in Senegal as "*Programme IRA-Communautaire,*" or the Community-ARI program, was conducted in the field between April 2003 and June 2004. Although ASCs and *matrones* in the research districts continued to treat malaria and diarrheal disease, a deliberate decision was made to focus only on ARI. The entire research process lasted 18 months; it involved a total of 90 health huts and 113 ASCs and *matrones* in the districts of Kédougou (11 huts), Khombole (18 huts), Thiadiaye (44 huts), and Vélingara (17 huts). Intervention districts saw 18% of ARI cases versus 9% in neighboring ones without action. Under direct observation, after four sessions of one-day post-training support meetings to reinforce knowledge and skills, 98% of CHWs correctly counted respiratory rates, 97% could correctly classify ARI, and 88% correctly administer cotrimoxazole. The analysis of all patients' individual forms showed that 95% of pneumonia cases were correctly classified and 97% of them correctly treated. More than 55% of children treated were followed up.

The results of the research were disseminated in June 2004 and clearly demonstrated that ASCs can correctly recognize, manage, and ensure follow-up of ARIs. This finding opened the way for Senegal to expand the program.

2. Updating Malaria Treatment at Community Level

Malaria treatment at community level was updated through two phases: the first with the introduction of the combination of AQ/SP in 2003 and the second with ACT in 2006.

Bitherapy for Malaria at the Community Level

In July 2003, Senegal changed its policy on first line drugs for malaria from due to high chloroquine resistance, estimated at more than 25% in some areas. The combination of AQ /SP was introduced at the health-facility level. USAID/Senegal, through the project *Community Action against Malaria and Tuberculosis* (CAMAT) managed by CCF, carried out an advocacy campaign to test the use of the new combination AQ/SP at the community level. A workshop, held in Mbour District in July 2004, proposed a strategy that included: 1) the use of directly-observed treatment of simple fever/malaria by AQ/SP at the health hut, 2) pharmacovigilance through systematic follow-up of secondary effects, 3) monitoring of quality of care through supervision by head nurses, and 4) monitoring of drug efficiency through sentinel sites by the NMCP.

The treatment of the simple cases of malaria with AQ/SP was launched in August 2004 in the CAMAT intervention area starting with Joal District and expanding to Mbour, Popenguine, and Thiadiaye. In all four districts, 118 ASC and *matrones* were trained in malaria management with AQ/SP and 475 relais were trained to increase population's awareness. The supervision system included a monthly visit by the head nurse and a weekly visit by a technician from CCF. In September and December 2004, a joint evaluation visit by USAID, USAID/BASICS, and World Vision took place. Correct case management was in 99.73% of cases with a 99.63% cure rate. In addition, the ASCs referred systematically all the severe cases at the health posts. The recommended third-day follow-up visit was adhered to by 88.05% of the clients and both drugs (AQ and SP) were available at 93% of health huts. Only the CAMAT project was authorized to introduce AQ/SP at the community level in the four districts.

Artemisinin-Based Combination Therapy at the Community Level

In January 2006, the PNLP shifted to ACT as a replacement of the AQ/SP protocol. Because the ASCs were already managing antibiotics for pneumonia treatment and were able to correctly administer the bitherapy, there was little resistance among health professionals about their ability to manage ACTs.

USAID, through the CAMAT project, immediately adapted to the new strategy and proceeded to the training of the ASCs in the health huts of its intervention area. A total of 126 health huts were enrolled in four districts of the department of Mbour, and 376 community relais benefited from a training support sensitization. Following this, the national malaria program developed a plan to train all health huts and introduce ACT treatment nationwide.

3. Updating Diarrhea Treatment

Diarrheal disease treatment has been part of the ASC work from the outset. It started with homemade fluids or salt and sugar solution, then included ORS. After WHO and UNICEF recommended zinc and the low-osmolarity ORS, they were adopted simultaneously at both facility and community levels.

Zinc and Low-Osmolarity ORS

In 2008, diarrheal disease case management was updated in accordance with WHO/UNICEF guidelines. MOH directives issued in 2009 paved the way for a pilot study carried out by USAID through the community health project in three districts (Joal, Kodak, and Fatick). It covered both health structures and health huts. A total of 72 health huts were enrolled in the study. Unlike the introduction of antibiotics for ARI program, the Steering Committee recommended that the pilot program on low-osmolarity ORS and zinc be immediately scaled-up.

The evaluation of the project was carried out between November and December 2010 by the "*Institut de Population Développement et Santé de la Reproduction*" of Cheikh Anta Diop University. It demonstrated that ASCs performed as well as health professionals in knowledge of home management of diarrheal disease (56% vs. 50%) and did better than health professionals in the knowledge of zinc posology by age (93% vs. 70%). The same trend was observed in the prescription of the kit zinc-ORS. In two districts, prescription at health huts ranged between 98% and 50%, whereas in health facilities the range was 51% to 26%.

Further expansion of zinc and low-osmolarity ORS was restricted because there were not enough zinc tablets available to cover the health huts in the project areas of intervention.

ANNEX 7. COMMUNITY SUPPORT

EXAMPLES OF INITIATIVES TAKEN BY LOCAL AUTHORITIES TO SUPPORT THE ICCM PROGRAM

Collected in the Regions of Kaolack, Fatick, Thiès and Diourbel

RURAL COMMUNITY	DISTRICT	NATURE OF SUPPORT PROVIDED
Khaone	Kaolack	Financial motivation of 30,000 FCFA/month for each of nine *matrones* in 2010; the ASC will follow in 2011
Thiomby	Kaolack	Subsidy of drugs for a value of 450,000 FCFA (i.e., 50,000 FCFA per hut for nine health huts) Promise to reward the actors of the most successful both compartments from 2011
Ganick	Guinguinéo	Subsidy in priority drugs for a value of 250,000 FCFA for three health huts in 2009 and 2010
Keur Saloum Diané	Sokone	250,000 FCFA contribution: 150,000 FCFA purchase of drugs for six health huts, plus 100,000 FCFA to support the association of relays
Djilor	Foundiougne	1,000,000 FCFA to support the creation of a federation of the associations of the community actors
Mont Rolland	Tivaouane	1,000,000 FCFA purchase of drugs for two health huts (2010)
Taïba Ndiaye	Tivaouane	840,000 FCFA purchase of drugs for four health huts (2010)
	Tivaouane	350,000 FCFA purchase furniture for one health hut (2010)
Fandéne	Thiés	Drugs 100,000 FCFA by health hut x 13 health huts = 1,300,000 FCFA
Koul	Mekhé	Construction of six health huts (8,000,000 FCFA by health hut) for a total amount of 56,000,000 FCFA
Keur Moussa	Pout	Purchase of drugs for eight health huts (30,000 FCFA/health hut x eight health huts = 240,000 FCFA)
Kayar	Pout	Purchase of drugs: 75,000 FCFA for one health hut
Darou Nahim	Mbacké	Purchase of drugs: 156,630 FCFA for two health huts
CR Taïf	Mbacké	Purchase of drugs: 115,000 FCFA for two health huts
Sadio	Mbacké	40,340 FCFA of drugs for one health hut
Madina	Mbacké	30,000 FCFA of drugs for one health hut
Dalla	Mbacké	75,000 FCFA of drugs for one health hut
Nguénième	Thiadiaye	30,000 FCFA of drugs for one health hut
Dalla	Mbacké	75,000 FCFA of drugs for one health hut
Nguénième	Joal	2,500,000 FCFA of drugs for 19 health huts
Fissel	Thiadiaye	62,075 FCFA of drugs for health huts
Sandiara	Thiadiaye	650,000 FCFA of drugs for 12 health huts

ANNEX 8. ASSOCIATIONS DES RELAIS POLYVALENTS (ASSOCIATIONS OF MULTIPURPOSE RELAYS)

ASSOCIATIONS DES RELAIS POLYVALENTS (ARPV)

Text extracted from:
CRI Consult, Inc., March 18, 2005
USAID/SENEGAL HEALTH PROGRAM & STRATEGIC OPTIONS ASSESSMENT
Submitted Under USAID Order Number 685-O-00-05-00104-00

"One of the more innovative efforts is fostering of formal contractual relationships between *Associations des Relais Polyvalents* (ARPV) and local administrations in 123 Rural Communities....The USAID projects DISC and PREMAMA facilitated development of and paid for formal contracts between the Rural Communities and the new associations. The ARPVs make quarterly workplans with the Rural Communities, district health offices, and USAID and other external funding agencies, to engage in various community outreach activities—discussions, fairs, etc. Although the effort is quite new, facility-level reporting indicates that there is an increase in use of facilities, including antenatal visits and sleeping under ITNs, that bodes well for health outcomes. The ARPVs are relatively affordable—about US$3,500/district/year—so USAID hopes to interest other donors and/or funding agents in their support.

There were some concerns that community outreach workers (*relais)* who had previously worked on a voluntary basis might have trouble returning to that voluntary basis should funding for ARPV cease. There was widespread agreement that any attempts to strengthen capacity at the local level should be accompanied by an early and explicit exit strategy.

It is noted that the relatively new ARPV, the PREMAMA community-based distributors, and many of the ADEMAS promoters fall loosely into the category of 'private, non-profit sector.' The innovative contracting of ARPV as a non-profit organization in each Rural Community has important implications for sustainability. As Senegal's experience with contractualization in the health sector progresses, chances for similar institutional innovations may arise and should be investigated.

For example, a somewhat critical need exists to examine the sustainability of the ARPV experience. An early idea was that ARPVs could be contracted by 'other donors,' which in the Senegal context is certainly a good option. However, the average cost of ARPVs per district is only about US$3,000/year, which should be affordable to local governments, strong *mutuelles,* international NGOs, and/or local private health supporters. A creative health financing approach might identify a number of different sources for financing ARPVs and other contracted health actors. The current WHO-inspired interest in 'contractualization' is an area of health financing with much room to grow."

CRI Consult, Inc.,
3109 Grand Ave.–#489
Miami, FL 33133 USA

ANNEX 9. SUPERVISION CHECKLIST

FICHE DE SUIVI ET DE SUPERVISION DES CASES DE SANTE UTILISEE DANS LE PROGRAMME DE SANTE COMMUNAUTAIRE DE USAID/SENEGAL

Programme Santé
Santé Communautaire
Mis en Ouvre par CCF, Africare,
Plan & World Vision

GRILLE DE SUIVI /SUPERVISION DES ACTIVITES DU PROGRAMME SANTE COMMUNAUTAIRE

Date de la supervision : ……..

Période objet de la revue : ……..

DONNEES GEOGRAPHIQUES

- Région médicale de .....
- District sanitaire de .....
- Poste de santé de :.....
- Case de : .....
- Nom de l'ASC .....
- Nom *Matrone* .....

AFFFICHAGE DANS LES CASES

(Vérifiez et cocher l'affichage de ces supports)

- Carte des villages polarisés par la case
- Cibles couvertes par la case
- Distance de la case au poste de santé en km
- Noms des membres Comité de santé, Acteurs communautaires
- Personnes Ressources Volontaires
- Graphique de morbidité des principales maladies
- Graphique SPC (Taux de malnutrition, Couverture)
- Graphique de Supplémentation en Vit A
- Graphique de Déparasitage au Mebendazole

Etat de la case de santé

- Propreté, espace, aeration…
- Confidentialité de la case (clôturée, intimité assurée…)

ET DE LA QUALITE DE LA PRISE EN CHARGE

TENUE DU REGISTRE ET QUALITE DE L'ENREGISTREMENT DES DONNEES	OUI/ NON	OBSER-VATIONS
Les registres et cahiers spécifiques sont bien tenus (Non déchirés, Propres)		
Tous les registres standards de la case sont disponibles		
Les registres sont-ils tracés selon le modèle retenu par le PSSC		
Tous les enregistrements sont complètement remplis		
Les consultations sont différenciées des consultants dans le Registre de consultation générale		
Toutes les affections sont enregistrées dans un registre de consultation unique		
Les groupes d'enfants inscrits et pesés sont-ils enregistrés dans le Registre de SPC de la case		
Les anciens cas sont différenciés des nouveaux cas dans le Registre SPC		
Les femmes accouchées avec l'assistance de la *Matrone* formée sont enregistrées dans le Registre de Maternité de la case		
Les femmes accouchées à domicile avec l'assistance de la *matrone* formée sont différenciées des cas non assistés		
Les femmes accouchées par un personnel qualifié sont enregistrées ainsi que les lieux d'accouchement ?		
Le nombre de visites rendues au couple mère-nouveau-né aux 3eme-8eme-15éme-45éme jours est enregistrés dans le Registre de maternité (dans la colonne prévue)		
Les cas référés pour accouchement difficile, maladie infantile grave sont précisés dans le registre de maternité et/ou de consultation générale (souligné ou écrit en rouge dans la colonne TRAITEMENT/CAT)		
Les cas contre référés sont bien notés dans le Registre de maternité et/ou de Consultation générale (souligné ou écrit en rouge dans la colonne Observations)		

QUALITE DE LA PRISE EN CHARGE AU MOIS DU PASSAGE	OUI/ NON	OBSER-VATIONS
Selectionner au hasard 3 cas d'enfants pris en charge par l'asc et la matrone et verifiez la conformite de la pec par rapport aux normes et protocoles		
Les cas sont correctement classes (concordance entre les signes et le classement)		
Les cas bien classés sont correctement pris en charge (concordance signes, classement, traitement)		
Les cas correctement classés sont correctement traités (selon la posologie et durée recommandée)		
Les Conseils donnés sont pertinents par rapport à la prise en charge		
Les cas traités sont revenus au moins une fois au 3éme jour – ou vus par l'ASC entre le 4eme et le 6éme jour		
Les cas graves sont soulignés dans le Registre		
Il y'a concordance entre les signes rapportés et la décision de référer		

MEDICAMENTS ET PRODUITS MEDICAMENTEUX	OUI/NON	OBSER-VATIONS
Vérifiez la conformité des formes et présentations des médicaments vendus par l'ASC et la *Matrone* aux normes du Projet		
La case dispose d'une fiche de stock pour chaque médicament		
La fiche de stock est à jour pour chaque médicament traceur [**VERIFIEZ SUR LES 3 DERNIERS MOIS SI PASSAGE TRIMESTRIEL]**		
Le décompte physique de chaque médicament correspond au décompte théorique indiqué sur la fiche de stock		
S'il n'existe pas une fiche de stock pour le médicament traceur, est-ce que le décompte physique correspond aux nombre total de cas enregistrés sur le registre pour la maladie en traitement?		
Inscrire le GAP (en nombre de comprimés, en sirop) dans la case et indiquez (en résumé) les raisons du GAP données par l'ASC/*Matrone*.		
Indiquez le coût du traitement (ou de l'unité, par ex. Le comprimé) vendu aux parents		
L'ASC/*Matrone* a effectué sa première commande après la dotation initiale du district/Projet		
La commande de l'ASC/*Matrone* a été vendue par le poste ou visée par l'ICP **[VERIFIEZ LE CAHIER DE COMMANDE]**		
Quel est le prix du comprime/Sirop du médicament traceur acheté par l'ASC au niveau de l'ICP /Centre de Santé ? [**CALCULEZ LA MARGE DE BENEFICES SELON CHAQUE NIVEAU ET APPRECIEZ LE COUT AU NIVEAU DE LA CASE]**		
Indiquez le nombre de jours de rupture pour chaque médicament traceur		
Indiquez l'origine de la rupture [Niveau ASC, Poste ou District]		
LE MATERIEL TRACEUR EST-IL DISPONIBLE ET FONCTIONNEL ?		
Indiquez le nombre de jours de rupture si le matériel traceur n'est pas fonctionnel		
Vérifiez la capacité des ASC/*Matrone* à utiliser correctement le matériel traceur		

ACTIVITES DE SUIVI DES ASC SUR LE TERRAIN

CAHIER DE SUIVI-SUPERVISION DE LA CASE	OUI/NON	OBSER-VATIONS
La case a –elle un cahier de supervision ou de visite ?		
Ce cahier est-il signé à chaque visite ?		
Nombre de visites indiquées dans le trimestre sous revue		
QUESTIONS À L'ASC		
Durant les 3 derniers mois combien de fois l'ICP vous a rendu visite à l'ASC ?		
l'ICP a-t-il effectué la visite de stratégie avancée prévue dans le mois ?		
A la fin de chaque visite l'ICP a-t-Il fait le feed-back à l'ASC sur les points forts ou faibles de l'ASC ?		
Apres la visite, l'ICP a-t-il aidé l'ASC à résoudre les problèmes identifies durant la dernière visite (aide directe ou entretien avec le comité de case)		

ACTIVITES DE PROMOTION ET D'IEC	OUI/NON	OBSER-VATIONS
Evaluez les activités IEC planifiés et réalisés durant la période sous revue		
Analysez la pertinence des thèmes par rapport à la période (**OUI/NON)**		
Analyser la pertinence des cibles pour chaque thème (**OUI/NON**)		
La réunion d'autoévaluation et de programmation a- t-elle été planifiée et réalisée durant la période sous revue ?		
Les Supports IEC sont disponibles (Cartes Conseils, Dépliants, Fiches techniques et Manuels du Relais..)		
Les OCB et/ou relais exécutent le paquet de communication intégrant le ciblage/NetMark et la distribution communautaire des moustiquaires imprégnées conformément au plan d'action.		
Les OCB et/ou relais transmettent tous les mois les données sur la communication au superviseur de CCF et/ou à l'ICP		

MOUSTIQUAIRES IMPREGNEES	OUI/NON	OBSER-VATIONS
La case dispose de moustiquaires imprégnées pour le ciblage le jour de la supervision.		
Les moustiquaires imprégnées du programme ciblage NetMark sont disponibles dans la case tous les jours durant le mois précédant la supervision.		
Les Coupons de Réduction NetMark sont échangés contre une MII au niveau de la case de santé.		
Les données sur les moustiquaires sont transmises tous les mois au superviseur de CCF et à l'ICP		

NIVEAU D'APPROVISIONNEMENT EN FICHES DE REFERENCE ET CONTREREFERENCE ET AUTRES	OUI/NON	OBSER-VATIONS
La case de santé est régulièrement approvisionnée en fiches de référence et de contre référence		
L'ASC et la *Matrone* ont archivé les fiches de contre référence remise par le malade référé et signée de l'ICP		

NIVEAU DE CONNASSANCE DES ASC (OU/NON)	OUI/NON	OBSER-VATIONS
L'AC connaît les signes généraux de danger pour les maladies de l'enfant et du nouveau-né		
L'AC sait rechercher le tirage sous-costal pour la pneumonie grave		
L'AC connaît les signes de la tuberculose chez un malade suspect		
L'AC connaît les conseils à donner en cas de maladie		

GESTION ADMINISTRATIVE ET FINANCIERE DE LA CASE	OUI/NON	OBSER-VATIONS
Les Membres du Comité de Santé sont formés en gestion financière		
Les membres du Comité sont orientés sur les composantes du Programme		
Les membres du Comité connaissent le type de services offerts par la case-site de santé		

GESTION ADMINISTRATIVE ET FINANCIERE DE LA CASE	OUI/NON	OBSER-VATIONS
Les réunions du Comité sont tenues régulièrement (le bureau se réunit chaque mois)		
Le stock de médicaments est renouvelé régulièrement		
Les ASC, *Matrone* et Relais reçoivent une motivation [**INDIQUEZ LA NATURE EN COLONNE OBSERVATION**]		

Synthese/Recommandations

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L'Equipe de Superviseurs (prénom et nom + signature)