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Performance Needs Assessment on Emergency Obstetrical and Neonatal Care among Providers in the Malanville-Karimama Health Zone of Benin

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Acronyms

English	(French)	
AIDS		Acquired Immunodeficiency Syndrome
BASICS		Basic Support for Institutionalizing Child Survival
CCC		Community Care Center
CHA	(ASC)	Community Health Agent
CHC	(CCS)	Community Health Complex
CMC	(COGEC)	Commune Management Committee
DHMO	(DDSP)	Departmental Health Management Office
EONC	(SONU)	Emergency Obstetrical and Neonatal care
FHMO	(DSF)	Family Health Management Office
FP	(PF)	Family Planning
IEC		Information, Education, Communication
MKHZ		Malanville-Karimama Health Zone
MOH	(MSP)	Ministry of Health
NGO	(ONG)	Non Governmental Organization
PAC		Postabortion Care
	(PADS)	Health Development Support Project
	(PBA/SSP)	Benin-Germany Primary Health Support Project
PIA	(AAP)	Performance Improvement Approach
PNA	(RBP)	Performance Needs Assessment
	(PROSAF)	Borgou Department Integrated Family Health Project
RH		Reproductive Health
SPMC	(COGES)	Sub-Prefecture Management Committee
STDs		Sexually Transmitted Diseases
TBAs		Traditional Birth Attendants
UON	(BONC)	Unmet Obstetrical Needs
UNICEF		United Nations Children's Fund
USAID		U.S. Agency for International Development
VHC	(CVS)	Village Health Committee
VHU	(UVS)	Village Health Unit
WCNA		West, Central and North Africa
WHO		World Health Organization
ZH	(HZ)	Zone Hospital
ZST	(EEZ)	Zone Supervision Team

Executive Summary

After the brainstorming Days on the "Role of Midwives in Maternal Mortality Reduction," and the dissemination of results of a "Regional Study on Addressing Obstetrical Emergencies" held in August 1999, plus the EONC-sponsored (Emergency Obstetrical and Neonatal Care) roundtable organized in May 2000, a national plan for EONC was developed to provide the framework for improving EONC in Benin. This plan identified the implementation of EONC pilot experiments among the selected priority activities. PRIME II assistance was requested for the establishment of these experiments in the Malanville-Karimama health district. The MOH and PRIME II also agreed to use the Performance Improvement Approach (PIA) for this program's planning and implementation. As the first step of this process, a performance needs assessment (PNA) was done in October-November 2000. With the partners, the EONC providers needed to identify pilot interventions for improvement of their performance in order to provide a high quality zone.

The observations of EONC providers (midwives/nurses and care assistants) combined with in-depth interviews (providers, supervisors, program managers, community members), review of health records and statistics, and inventory of service provision centers, enabled documentation of EONC performance, and providers' needs in maternity wards and within the community. This included the potential for EONC to supply at the community level and set up of community partnerships for emergency evacuation systems; as well as an overall increase of EONC quality/access in the zone.

The assessment showed a significantly large gap between the desired and the actual performance of the providers in the maternity wards. In fact, none of the providers in these facilities (midwives, nurses, care assistants) was able to perform the tasks relating to obstetrical and neonatal emergencies according to standards. The causes of performance gaps were identified in relation to the information/feedback, environment, motivation, institutional support and knowledge/skills.

The assessment further confirmed the existence of a potential for EONC services to be offered at the community level as well as an emergency evacuation system. Indeed, there are midwives and traditional birth attendants (TBAs) at the village level where these are customarily the first recourse for health care. They provide services relating to pregnancy and delivery and play a crucial part in mobilizing and sensitizing the populations.

Nevertheless the assessment showed weaknesses in their skills, revealed by prevalence of practices that can be detrimental to the mother and the newborn and ignorance of risk factors and alert signals. The midwives and TBAs typically had little or no training.

Moreover, their work conditions are sometimes inappropriate. They receive little or no supervision and their motivation system is not standardized. Among the other factors that could help EONC at the community level, the assessment showed that the health personnel collaborates somewhat with the Community Health Agents (CHA)

and already takes charge of supervising some of these in the recommended strategy areas.

There are community structures (CMC/SPMC/VHC – Community Management Committee; Sub-Prefecture Management Committee; Village Health Committee) that play a part in referrals. There is also a positive attitude towards the financial contribution systems among the communities.

On the basis of the assessments results and conclusions, the assessment team identified the priority interventions to improve provider's performance in quality EONC service supply in the Malanville-Karimama Health Zone. These include:

- elaborating EONC job descriptions;
- establishing feedback facilitating practices;
- providing health facilities with transport, equipment and air communication means;
- strengthening logistics;
- improving hygiene conditions within health facilities;
- improving motivation and supervision systems; and
- strengthening provider's skills in maternity wards.

In addition, the assessment team recommended the set up of community partnerships that would enable the EONC program to increase the CHAs' skills (midwives and village birth attendants) in providing home EONC and setting emergency evacuation systems to interface between the community and the referral centers.

Introduction

Background

Upon request by USAID/Benin and within the frame of its collaboration with the MOH of Benin, PRIME II provides technical and financial support to strengthen the EONC program and develop a training strategy for the providers in the utilization of family health service protocols.

After the Brainstorming Days, priority actions were decided including the establishment of an EONC technical work group, the designing of a national EONC training guide and the implementation of pilot experiments to improve the addressing of obstetrical and neonatal emergencies in a pilot zone.

PRIME's assistance was requested more particularly for the establishment of similar experiments in the Malanville-Karimama Health Zone. The MOH and PRIME II also agreed to utilize the PIA for this program's planning and implementation.

As the first stage of this process, a PNA was done in October/November 2000 to gather data on the actual performance and the needs of providers who work in EONC facilities, as well as in the communities.

This technical report presents the main results/conclusions and recommendations for the assessment.

The results will be disseminated among the main stakeholders. Once validated, they will enable the stakeholders to select the most appropriate interventions to improve provider's performance in EONC within the health facilities and the community.

Description of the Malanville-Karimama Health Zone

The Malanville-Karimama Health Zone is located in the Borgou Department, North of the Alibori. Malanville and Karimama, two sub-prefectures, make up the zone which is bordered on the south by the Kandi urban commune and the Segbana sub-prefecture, on the east by Nigeria, west by Burkina Faso and north by Niger. The Malanville-Karimama Health Zone spreads over 8,749 square kilometers and is home to 128,542 people (Malanville: 98,802; Karimama: 38,740).

The Malanville-Karimama Health Zone is made up of one zone hospital (ZH) in Malanville, one sub-prefecture health center in Karimama, and seven community health centers (Malanville: 5, Karimama: 2). The staff in maternity wards that includes midwives, or, nurses and care assistants is unevenly distributed. In fact there are only four midwives at the level of the zone, three of which are on post in the Malanville sub-prefecture and one only in the Karimama sub-prefecture. Four maternity centers are managed by nurses, the others being attended to by care assistants.

According to the service data (statistics) available at the department level, the maternal mortality rate (4.42/100,000)[1] and the rate of early neonatal mortality (6.47/100,000)[2] are particularly high in the Malanville/Karimama health zone in comparison with the whole of the department. According to the zone's health statistics, 2,917 deliveries were recorded in the zone's health centers for 1999, of which 255 were dystocias (difficult childbirths). The rate of maternal mortality in relation to the number of deliveries is estimated at .07% and the rate of prenatal mortality is at 2%. Nevertheless taking into account that only 49% of deliveries are performed in the health centers, this indicates that a wide proportion of maternal and neonatal mortality occurs in the community. This low performance is largely due to lack of skilled personnel in 44.5% of maternity hospitals; lack of EONC knowledge and skills; poor product management, particularly antibiotics, anticonvulsants and solutes; absence of a reliable blood management system; inadequacy of the ZH's technical platform; and delayed referrals.

In addition, despite the fact that 59% of the zone's population lives within five kilometers of health centers, health services often are underutilized.

1 Malanville (1998): 4.89‰; Karimama (1998): 2.06‰; Borgou department (1998): 2.14‰; Benin (Health and Population Survey 1996): 4.98‰.

2 Borgou Department (1998): 1010/100.000

Methodology

Goal and Objectives of the PNA

The PNA was done by a PRIME II technical assistance team between August and November 2000, in close collaboration with resource persons of the Benin MOH. In agreement with the partners, the assessment's goals were to determine EONC provider's needs in identifying pilot interventions that could contribute to improving their performance towards quality EONC delivery in the Malanville-Karimama Health Zone.

The PNA's main objectives were to:

1. Determine the actual performance of midwives/nurses and care assistants providing EONC services in maternity hospitals;
2. Define performance gaps and decide whether the problem could find be solved;
3. Determine roots causes for each performance gap;
4. Identify possible interventions to close the performance gaps and determine cost/benefit for each intervention;
5. Determine the actual performance of matrons and TBAs together with these providers' potential to improve EONC in a pilot community;
6. Determine potential for establishing EONC community partnerships in a pilot community;
7. Collect baseline data on EONC access and quality to document the impact of interventions on the services;
8. Make recommendations of pilot interventions aiming at closing the performance gaps and community partnerships on a trial basis for EONC.

Techniques and tools

The PNA consisted of an evaluation and description survey in the health facilities within the Malanville-Karimama Health Zone and also in the community.

The idea was to collect the following data:

- Providers EONC performance and needs in maternity hospitals and the community;
- EONC potential;
- Potential for community partnerships;
- EONC quality/access.

Concerning providers/EONC performance and needs in the health facilities, the PNA was meant to be comprehensive, since it targeted all the facilities in the sub-prefectures of Malanville and Karimama. Regarding the EONC potential and performance diagnosis, the assessment was planned in two pilot zones (villages) and

one control zone (See Sample Characteristics in Annexe 1). Village selection criteria were: the existence of a CCC (Community Care Center) within five kilometers, the existence of matrons and/or village birth attendants in the village, the existence of a Commune Management Committee or a local volunteer committee operating in the village.

With reference to the targets, the assessment dealt with all staff in maternity hospitals, including their direct supervisors and service managers (heads of posts, maternity hospital managers;, program managers (FHMO, ZST, PROSAF, BASICS, PADS, PBA/SSP)); CMC/SPMC members; CHAs (matrons, village birth attendants); family relations; and previously delivered women (See Sample Characteristics in Annexe 1).

Data collection was principally done using techniques of in depth interviews, observation by stimulation and documentary analysis.[3]

A total of six instruments to measure provides EONC performance and needs in the facilities and eight instruments for EONC performance and diagnosis in the community were prepared (See Data Collection Tools in Annexe 2). The prepared tools can be summarized as follows:

- Guides for in depth interviews with MOH officials, program or project managers and direct supervisors:
  These tools were aimed at collecting data on managers and supervisors' perception; and knowledge of providers EONC performance needs in relation to the five performance factors.
- Guides for in depth interviews with service providers:
  These tools were aimed at collecting data on providers EONC performance needs in relation to the five performance factors.
- Inventory tools for maternity hospitals equipment:
  This checklist was to collect data on equipment availability, including a part on service data relating to family planning (FP), postabortion care and EONC;
- Tools to monitor performance by midwives, nurses and care assistants:
  The monitoring guide was aimed at collecting data on EONC skills. Given the difficulty in observing real obstetrical and neonatal emergency cases, monitoring was done on the basis of case studies.
- Guides for interviews with SPMC/CMC members, previously delivered women, families:
  These tools were to collect data on community EONC awareness/knowledge and their needs.
- Guide for interviews with matrons and TBAs:
  These tools were to collect data on providers' actual performance and needs in the community.

3 EQGSS-B report, EDS 1996, patients files, study on VONN (Unmet obstetrical and neonatal needs).

Stages of Assessment

Planning

The PNA was conducted in several successive stages in which the stakeholders were involved systematically (MOH, PROSAF, PBA/SSP, PADS mainly) so as to ensure their continuous participation throughout the process and facilitate appropriation of the assessment results. These various stages are in line with the conceptual framework of performance improvement shown in Annexe 3. The various stages are described below.

a. Stakeholders agreement/Pre-planning

From August 8-14, 2000, Dr. Boniface Sebikali, the Resident Advisor for PRIME II/Intrah in Benin, accompanied by Mrs. Olga Doko, midwife at the Family Health Management Office (FHMO) met with the health officials of the Borgou Department, Malanville-Karimama Health Zone and representatives of the Borgou Department integrated Family Health Project (PROSAF), and of the Benin-Germany Primary Health Care Project (PBA/SSP).

The discussions allowed them to obtain their agreement for the PNA towards improving providers' performance in EONC in the Malanville-Karimama Health Zone and to collect preliminary data necessary for the planning of the assessment. These meetings also allowed clarifying the PIA that PRIME II intends to use and to confirm stakeholders' support to the assessment.

b. Definition of the desired performance for EONC providers

On October 2 and 3, 2000, the PRIME II team worked with members of the Malanville-Karimama ZST to prepare and conduct an Orientation Workshop on the Performance Improvement Needs Assessment. The aim of the workshop was to determine the stakeholders' main expectations in terms of EONC providers' performance. Representatives from the FHMO, Borgou Health Departmental Office (DHMO), Malanville-Karimama ZST, PROSAF, PBA/SSP, the zone referral hospital and the Malanville urban district health center participated in the workshop. From this workshop, the following was achieved:

- A common comprehension of maternal mortality problems in Benin and the PIA was reached.
- The survey's main targets (EONC providers[4]) were determined in reference to the recommendations made as a result of the Brainstorming Days on the Role of Midwives in Maternal Mortality Reduction, held from August 2-6, 1999.
- The desired performance, indicating the critical tasks for addressing obstetrical and neonatal emergencies was defined for the providers in maternity hospitals. (See Table 1.)

4 These are the midwives, nurses and care assistants working in referral maternity hospitals, sub-prefectures health centers (CSSP), urban district health centers (CSCU) and community health center (CHC).

- The providers' needs to achieve the desired performance were identified, taking into account the agents profiles and their levels of service provision.
- Existing data on providers' performance and needs were reviewed, including the study or management sub-systems conducted by PROSAF and the study on unmet obstetrical needs (UON).

Table 1: Desired performance for maternity providers

Upon completion of the Orientation Workshop on the PNA, the stakeholders defined the desired performance for EONC providers as follows.

All midwives and all nurses (100%) should be able to:

- Take the required steps in case of
  - Extra-uterine pregnancy
  - Placenta praevia
  - Uterine break
  - Hemorrhage during delivery
  - Perineo or cervico-vaginal tearing
- Detect and treat an abortion threat
- Treat
  - Incomplete abortion with infection
  - Severe gravidic anemia
  - Severe malaria during pregnancy
  - Infection during pregnancy
  - Cases of pre-rupture
  - Case of inefficient expulsive efforts
  - Case of prolapse of the cord
- Detect and treat
  - Hypertensive illness during pregnancy: pre-eclampsia and eclampsia
  - Severe gravidic vomiting
  - Premature delivery threat
  - Premature rupture of membranes
- Examine the newborn
- Reanimate the newborn
- Treat or refer a case of underweight newborn
- Treat or refer a case of an infected or infection prone newborn
- Treat or refer a case of an icteric newborn
- Apply aseptic rules to protect patients, staff personnel and own self

All care assistants (100%) should be able to:

- Take the required steps in case of
  - General hemorrhage
  - Hemorrhage during delivery
- Detect and treat an abortion threat
- Treat an incomplete abortion with infection
- Treat
  - Severe gravidic anemia
  - Severe malaria during pregnancy
- Recognize and give emergency care before calling or hierarchic superior or refer in cases of complicated delivery
- Recognize and perform first aid in case of gravidic vomiting
- Recognize alert signals of a premature delivery threat and provide first aid
- Recognize the symptoms of a premature membrane rupture and perform first aid
- Assess the newborn's status and perform initial moves for reanimation
- Recognize underweight, traumatized, ill shaped icretic, infection prone or infected newborn
- Apply aseptic rules to protect patients, staff and oneself
- For each of the tasks, key procedures, indicators were defined emphasizing the life saving ones. These indicators were used as a basis to measure providers' actual performance

c. Elaboration of data collection tools

From October 4-10, 2000, the PRIME II team held work sessions with delegates from the ZST and other persons designated by the stakeholders to see to the PNA's technical preparation, including:

- Finalizing of desired performance in EONC for the midwives and nurses on the one hand and care assistants on the other;
- Prepare the study's goal and objectives as well as its methodology;
- Definition of the survey approach (application of PIA in the maternity hospitals and diagnostic study of performances and potential in EONC in the community);
- Identification of data to be collected as well as the data collection techniques that will be utilized;
- Preparation of data collection tools.

d. Training of data collectors

A total of 12 data collectors selected from the Borgou DDPS, Malanville-Karimama ZST, Malanville referral hospital, Malanville urban community health center, local NGOs, Kandi Sub-Prefecture health centers and the social service of Malanville, Kandi and Gogounou participated in the survey. About 90% of them had previously participated in the PNA technical preparation sessions, held from October 2-13, 2000. The selection criteria were:

- Be a provider with EONC experience or social worker;
- Have previous experience in data collection;
- Speak at least one local language.

From October 23-28, 2000, the PRIME II team worked with the Malanville-Karimama ZST to prepare and conduct a seminar to train data collectors in needs assessment techniques towards performance improvement.

This workshop aimed at giving the data collectors a clear definition of the EONC problems in Benin and of the PIA, establish a common understanding of the survey methodology, harmonize data collectors in utilization of the tools and finalize the PNA logistic and administrative aspects.

During the workshop:

- Maternal mortality problems in Benin and the PIA were defined;
- The aim and objectives of the survey were clarified;
- The survey's methodology was clarified, including the utilization of the results, the study's approach, the types of data to be collected, the targets to be investigated and the techniques for data collection;
- Sketches of tools were reviewed to establish a common understanding of the contents;
- Conditions for the application of various data collection techniques (in-depth

interview, direct observation, focus group, documentary analysis) were discussed. The participants rehearsed the above techniques through role games;

- The designed instruments were tested;
- The targets, the villages where the survey was to take place were identified. The selection of villages was done in a rational manner (See List of Villages in Annexe 4).
- The survey timetables were elaborated for the sub-prefectures of Malanville and Karimama (See Survey Timetable in Annexe 5);
- Written instructions were elaborated for the collection and management of data. These instructions were reviewed and discussed with the data collectors and supervisors.

e. Pre-testing of tools

The tools were tested in the Bembereke sub-prefecture, precisely in the community health center of Beroubouay and in the villages of Kabanaou and Sombwa.

In Beroubouay, the data collectors interviewed providers (midwives and care assistants), CMC members and women previously delivered in EONC. They also analyzed the records of patients who had received treatment at EONC.

In the villages, the data collectors conducted in depth interviews with matrons, village birth attendants and family relations (women and men).

At the end of the visit in the Bembereke sub-prefecture, the data collectors reviewed and finalized the tools in conjunction with the lessons learned from the test.

Data Collection

Data collection was done from November 2-14, 2000 and was conducted in two phases:

The data collectors were then split in two groups, for each of the sub-prefectures of Malanville and Karimama, and began to collect data in the Malanville commune. The expected results for each group had been defined before hand in terms of number of sites and targets to visit. A pooling of field experiences enabled the data collectors to provide feedback and correct the shortfalls that had not been detected during the pre-testing of the tools.

Once in the field, they were sent in teams of two data collectors, depending on their profiles and mastery of the local languages (See List of Data Collectors in Annexe 6). Upon completion of a visit at a given site, each team of data collectors participated in a pooling of remarks and notes. The tools were examined for exhaustiveness and systematically corrected at the end of the each day. The tools examined were systematically reviewed by the supervisors and discussed with the concerned data collectors, if needed.

After the collection, a meeting of data collectors, supervisors and coordinator was held to cross review and correct the tools.

Movements in the field were facilitated by the logistic support provided by DHMO and PROSAF.

The survey's achievements in the health facilities (providers' performance in maternity hospitals) and community (community diagnosis) are presented below.

Table 2: Providers EONC performance in maternity hospitals

Targets	Expectations	Achievements
Midwives/Nurses	06	06
Care assistants	10	09
Direct Supervisors	08	08
Managers	04	04
Maternity Inventory:		
Zone Hospital	01	01
CCSP	01	01
CHC/CCSV	07	07

Table 3: Community Diagnosis

Targets	Expectations	Achievements
Family Health Management Office	01	01
Malanville-Karimama Health Office	01	01
Malanville-Karimama Health Zone Coordination		
Zone Hospital Manager	01	01
CCSP/CHC/CCSV Manager	08	08
CMC/SPMC	10	13
Matrons, TBAs	± 18	13
Women Previously Delivered	± 9	13
Villages/Families	10/18 groups of 5 pers.	10/30 groups of 5 pers.
NGO		
PROSAF	01	_
PBA/SSP	01	01
PADS	01	01
ABPF	01	_
BASICS	01	01
OSVJORDAN	01	01

Data Processing and Analysis

The tools were coded gradually as they were received by the statistician in charge of processing the survey data. Processing was done using dbase software, applied to SPSS to calculate frequencies and percentages.

The results were presented in chart form for quantitative data and in declaration list form for qualitative data.

From November 26 to December 1, a workshop was convened for analysis purposes

including the PRIME II team, ZST members, representatives of the data collector's team of PBA/SSP, PADS, ZH, CHC. The participants reviewed and interpreted the data and drew conclusions on the providers' actual performance and their needs, as well as, at the level of the health facilities in the community. The participants made recommendations in terms of possible interventions to be facilitated towards improvement of EONC providers' performance. These interventions were examined for cost and benefit in order to select the most appropriate ones.

The analysis of data collected in the community was done which enabled them to draw conclusions on the potential and obstacles for EONC and the establishment of community partnerships.

Validation of results

From December 6-8, 2000, a planning workshop for EONC interventions was held in the PROSAF office in Parakou.

This workshop, which was chaired by the DHMO representative, convened 18 delegates representing key partners and actors in EONC from the departments of Borgou and Alibori. These partners and actors are: FHMO, DHMO, Malanville-Karimama Health Zone, WHO, PROSAF, PBA/SSP, BASICS and UNICEF. PADS was not represented though invited.

During the workshop:

- A common understanding of the PIA was established;
- Dissemination of PNA results was done, including the goal, health zone background, methodology, results and conclusions in relation to improving providers EONC performance in maternity hospitals and community partnerships in EONC matters;
- The goal and objectives of interventions were clarified in harmony with the MOH expectations in EONC issues.

The participants were able, through the work sessions to:

- Confirm the interventions identified during the analysis of the assessment data. To this end, the participants examined and discussed the links between the root causes and performance gaps as well as the interventions' adequateness in closing or reducing the observed performance gap;
- Prepare a comprehensive action plan in relation to each selected intervention. The plan shows the cause, the intervention, the expected result for each intervention, a description of the intervention, the main steps for its implementation, the responsible party for each step, the support structure/structures and the timetable or implementation opportunities.
- Define the next steps towards finalizing and implementing the plan.

Limitations

In order to limit tool-connected bias, all tools were pre-tested in conditions similar to those of the survey itself and comparable targets. Distortions linked with data

collectors were minimized through selection of the data collectors (profiles and origin), training which emphasized practice and tool calibration with the data collectors, a pre-testing of tools in which all the data collectors participated and a review of the completed tools with the data collectors after the first three days of survey to correct shortfalls which had not been detected during the pre-testing.

The very small size of the surveyed population did not allow performing a statistical analysis of the data collected.

Nevertheless, the survey's exhaustiveness, at least for the targets selected to assess EONC performance in the health facilities allows considering that the results obtained are significant. As regards to the community level, the number of surveyed individuals, though modest, nevertheless allows them to see some interesting trends.

The evaluation of providers EONC competence level should require that the providers be observed in real work conditions. Unfortunately, owing to the low probability to observe a true-life obstetrical or neonatal emergency at the time of the data collectors visit, this approach was not feasible. Moreover, even if this obstacle had been removed, this approach would not have permitted observation of all the providers on the same tasks. It was therefore decided to propose typical case studies for each obstetrical or neonatal emergency and ask the providers what action they would have taken for each. This method presents the inconvenience that it may lead to under-estimating the provider's expertise, for she or he may forget to mention some procedures that they would have done in a true life situation. In order to minimize the inconveniences inherent in this method, a review of maternity rolls was also done to analyze the actual behaviors before real cases that had occurred prior to the survey team's visit. The combination of these two methods enabled them to have a fairly good overall view of providers' actual performance.

Results and Conclusions

Characteristics of EONC providers

The PNA targeted all the providers who offered EONC services in the Malanville-Karimama Health Zone. These were six midwives or nurses and ten care assistants operating in the ZH, CCSP, one CCSV or CHC as shown in the following table:

Table 4: Location of assessment targets.

Target Sites	Midwife or Maternity Hospital Nurses	Maternity Hospital Care Assistants
Zone hospital	2	1
CSSP/Karimama	1	3
CCSV/Malanville	1	-
CHC Guene	1	1
CHC Tomboutou	-	1
CHC Madecali	-	1
CHC Garou	1	1
CHC Kompa	-	1
CHC Birni Lafia	-	1
TOTAL	6	10

Sixty-six percent of the surveyed midwives or nurses are posted in the sub-prefecture of Malanville and 33.3% in that of Karimama. Three are maternity managers as well (ZH of Malanville, Karimama CCSP and Guene CHC). For most they are between 30 and 45 years of age and all have a primary education level. 66.6% have been on their present post for two years or less. 16.7% have between two and five years and 16.7% have over five years of service.

55.6% of the surveyed care assistants are posted in the Malanville sub-prefecture. Three are maternity managers as well (CHC of Birni Lafia, Madecali and Tomboutou). They are between 22 and 45 years of age and have a primary education level (33.3%) or secondary school level (66.7%). Most have been on their present post for five years or more (66.7%).

Actual performance of maternity providers and causes of performance gaps

Actual performance

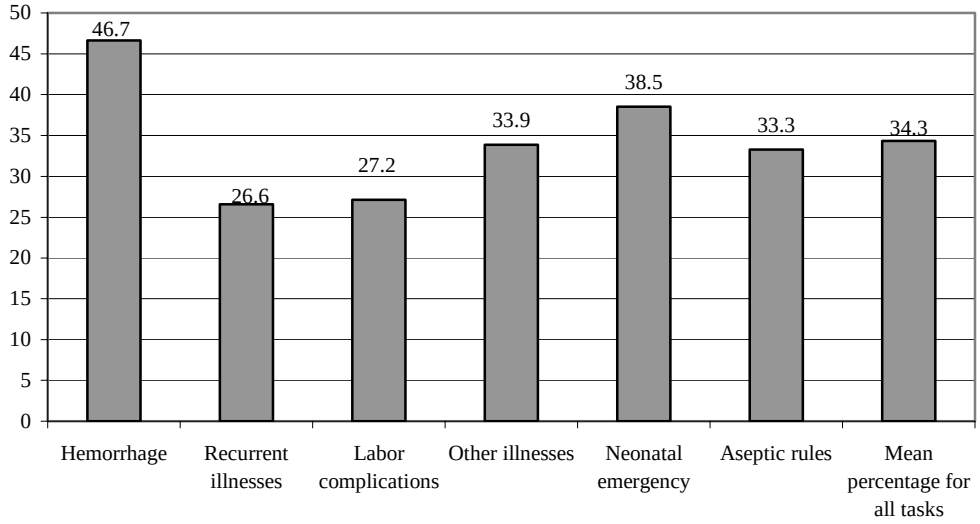
During the survey a typical case study was proposed for each task from the samples to the midwives, nurses and care assistants. They were asked to read the case and describe what action they would take to handle it. For each task a series of indicators had been defined emphasizing the vital ones.

a. Actual performance of midwives and nurses

The analysis reveals that none of the midwives or nurses was able to describe all the vital procedures corresponding to a given task. And so it went for all the

tasks. As shown in Chart 1 below, the midwives and nurses were able on the average to cite 34% of the procedures/indicators only with a maximum of 46.7% for the treatment of cases of hemorrhage. The tasks for which the procedures/indicators were the least cited include the treatment of cases of pre-rupture (16.7%), treatment of severe malaria during pregnancy (19.4%), treatment of an infection during pregnancy (22%), treatment or referral of a case of an infection prone or infected newborn (23.8%), tested and treatment of hypertensive illnesses during pregnancy: pre-eclampsia and eclampsia (25%) (See Annexe 7).

Chart 1: Actual performance by midwives/nurses



In order to confirm results obtained from the case studies, the data collectors also seek information in maternity records, and, on occasion, real cases coinciding with the day of visit, to approach the provider's true life behavior in cases of obstetrical or neonatal emergencies. It must be noted that there are exceptions at the ZH and with the procedures performed by the providers in case of an emergency at the maternity.

The data gathered from the records of the ZH and CCSV was small, nevertheless it confirms the actual performance recorded from the case studies submitted to the providers. The gaps between the desired performance and the actual performance as recorded from the documentary analysis or from actual case is still 100%. None of the providers was able to carry out the adequate action corresponding to all the indicators of desired performance.

Examples of cases taken from records:

- Take the proper steps in case of severe malaria during pregnancy:

  Two midwives/nurses performed five out of six indicators and the third person covered only two indicators.

None of them checked whether the patient was conscious or not. Their recommended treatment did not include Diazepam or any anti-emetic (when convulsions or vomiting are not ruled out).

- Take the proper measures in case of pre-rupture:

  The midwife who got this case reported only three out of seven indicators. These were not covered:

  - Take a venous approach with a catheter
  - Administer a tocolytic
  - Empty the bladder
  - Observe the behavior of the woman in delivery

- Take the adequate measures in case of hemorhange during delivery:

  Only three indicators out seven were mentioned by the three midwives/nurses. These were not mentioned:

  - Take a venous approach with a catheter
  - Check color of mucus membrane
  - Massage uterus to check the firm globular uterus

- Perform the appropriate procedure in case of pre-eclampsia:

  Six indicators out of eight were covered by one of the three midwives/nurses. The troublesome indicators were:

  - Seek the edema and perform an albumin test
  - Set a self-retaining catheter
  - Put a handkerchief on the month or a Guedel cannula

- Take the appropriate steps in case of placenta praevia (observed in true life situation):

  The midwife covered only three out of eight indicators. The following were not covered:

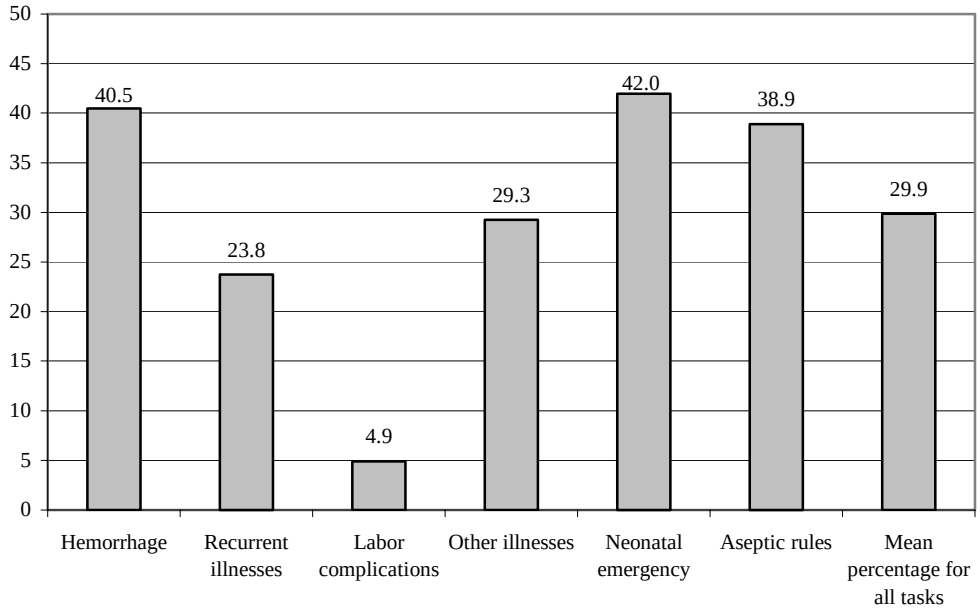
  - Quickly ask questions on the presence, coloring of blood, presence of pain and frequency of repeated bleeding.
  - Check color of mucus membrane
  - Check fetus heart sounds

b. Actual performance of care assistants

Likewise, none of the care assistants was able to describe the proper procedure with all the indicators for a given task. This was observed also for all the tasks. As shown in Chart 2 below, the care assistants could cite only 29% of the procedures/indicators on the average, with a maximum of 65.7% for treatment of

an incomplete abortion with infection. The tasks whose indicators were least cited include identification and first aid for complications prior to calling on a hierarchic superior or resorting to a referral (4.9%); treatment of severe malaria during pregnancy (15.9%); identification of an underweight, traumatized, ill shaped, icteric, infection prone or infected newborn (21%); detection and treatment of an abortion threat (24.4%); and taking the proper steps in case of hemorhange during delivery (29.6%) (See Annexe 7).

Chart 2: Actual performance by care assistants



These results confirm the conclusions of the evaluation of the health system's management quality in the Borgou department conducted in December 1999 by PROSAF. Indeed this evaluation had revealed an overall weakness in complying with standards for the PNA activities in family health. For instance, the following was found:

"poor quality of prenatal consultation characterizing by: insufficiency of systematic detection of serious alert signals done in only 10% of cases, thus exposing 90 % of PNC consultanst to complications harmful to the lives of the mother and child. Insufficiency of systematic detection of general risk factors, evidenced by the fact that these are sought out only in approximately 4% of cases, thus exposing 96% of the patient to abortion, premature deliveries and dystocial delivery"

"poor quality of treatment for deliveries characterized by insufficiency of detection of risk factors (4.3) and pre-eclamptic signs (8.7), which can cause death of mother and child during delivery."

Causes of performance gaps

The analyses of the root causes of performance gaps revealed various problems met by the providers in the field. These root causes are summarized below, by performance factor.

Information

In order to perform their expected tasks, providers need to know the institution's expectations from the tasks they must accomplish. The information is generally given through written job description and memos but also through their performance evaluation and immediate feedback by a supervisor, a team head, colleagues or clients.

In a general manner, the providers think they know what is expected of them in EONC matters in maternity hospitals. Direct supervisors and the managers confirmed this during the survey's investigations. Nevertheless, the type of tasks mentioned by the providers suggests that they do not know what is actually expected of them in EONC matters. Moreover, these expectations are not written anywhere.

Cause:	Lack of job description including the main tasks in EONC for providers in maternity hospitals.

Except for the dissemination of monitoring results and the utilization of the supervision logbook there are no other standardized and institutionalized procedures to give systematic and regular feedback to the providers.

Cause:	Systematic feedback is not among customary work practices.

Environment

Work environment is an important factor allowing the providers to perform their expected tasks. The environment is made up of different elements including those that generally favor service provision, availability of the necessary resources and tools of sufficient quality and quantity of practice (policies and instructions, equipment and supplies, place, etc.)

Providers working conditions in hospitals are not satisfactory.

The transport system within maternity hospitals still remains problematic, because they do not always have access to efficient transport means (motorbike, vehicle) to perform their work.

The referral system is not always efficient because:

- There is no communication system between the peripheral health facilities and the referral hospital.
- Transport cost and inadequacy of some means (ambulance, taxi, motorbike ambulance) sometimes create a bottleneck in case of emergency evacuation.
- The management system for products utilized by EONC in the centers is not efficient, which causes stocks to run out in most health centers.

The clinical material available in the health centers does not comply with standards

and norms set by the MOH.

Waste disposal is not always adequate in the Malanville-Karimama Zone's health facilities.

Causes:	The criteria defined for the utilization and maintenance of transport means the health facilities do not allow for efficient/optimal utilization; under-estimated cost of installation of Air Communication Networks in the health facilities for emergency evacuations; insufficient collaboration between NGOs, community health services and structures to organize communities to take charge of emergency evacuations; lack of decentralization of product procurement source; weak logistic management system (regular follow-up of stock, orders, and re-supply in relation to the needs; insufficient information leading to ignorance of or non-compliance to norms for biomedical waste disposal.

Motivation and Incentives

Motivation is a paramount factor for good performance but the providers' motivation must pertain to anything done in order to encourage a person's performance in carrying out his work. Good performance should be positively rewarded and performance under par should bear neutral or negative consequences. The core issue is to know whether or not the person has any reason to perform as expected and whether there is someone to assess this or not.

Aside from the congratulation letters and performance and monitoring bonuses given on the basis of monitoring results by the community financing and PBA/SSP, there is no other motivation system for health agents. The existing system is not satisfactory to all the actors.

Causes:	Insufficient spectrum of motivation system; lack of motivation criteria, including individual criteria with the participation of all care providers.

Organizational support

One person's performance depends on the efforts that his organization or structure will make to help him/her attain the desired performance. This support is generally materialized through the communication of the institution vision and strategic objectives, and organizational process such as work supervision, organization, etc.

Organizational support is defined here by management and supervision benefiting those trained agents in the course of their work.

The goals and objectives in EONC are generally known for maternal and child health. To the contrary, the managers, supervisors and providers do not know the concept of EONC as such.

Work organization (distribution of tasks, roles and responsibilities) and decision-making systems contribute to good work execution in the maternity hospitals. On the

contrary, insufficient skilled manpower is a limiting element to work execution. There is one supervision system, which does not live up to all the expectations, particularly in terms of regularity, style, target and coverage.

Causes:	EONC is a strategy that is not yet well know at the peripheral level due to non dissemination of documents on policies, norms and standards in family health, including those related to EONC as well as the national and departmental action plan for EONC; the improvement process for supervision has not yet reached the health zone; the Malanville-Karimama Health Zone known for being destitute, is a barrier to some health agents enthusiasm to work here.

Knowledge and skills

The analysis of this factor consists of determining the extent of the providers required knowledge or skills to carry out their work. In other words, one must know if the worker has the wherewithal to do his work.

This insufficient knowledge and skills in EONC of all agents in the hospitals was observed. For the time being there is no training system in this area.

Causes:	Lack of provider in-service or continuous training in EONC within the maternity hospitals; basic training does not emphasize EONC due to absence of links between training and health services and also EONC were not a strategy of MOH; training capacity in EONC in the Malanville-Karimama zone is limited.

Actual performance by matrons and TBAs

Fourteen community health agents (CHAs) including two matrons and 12 TBAs were interviewed on their EONC performance. Their performance description includes the range of functions and present practices in EONC; knowledge of alert signals and risks factors as well as working conditions.

a. Matrons' tasks

When asked about their functions, at least one matron indicated that she performed the tasks related to the following activities:

- Prenatal examination including mobilization of the sick women and referral, also group animation;
- Delivery, including assistance to the women of normal deliveries, identification of difficult deliveries and referral, consultation with the mothers on breastfeeding and sterilization of materials;
- Care to the newborn including reanimation, cleaning and dressing of the umbilical cord, detecting disorders or other complications and referral.

The matrons did not cite FP among their responsibilities. Tasks such as reminding contraceptive clients or lost clients to not miss their appointments, counseling on birth spacing were not mentioned by any of the matrons.

The staff in community health complexes, the CHA chief supervisor confirmed these activities were performed by the matrons.

b. Tasks of village birth attendants

According the CHC staff and CMC members, the following care services are provided by village birth attendants:

- Care to the mother
  - assist women in normal easy deliveries
  - refer difficult deliveries and advise the families
  - accompany the referred cases to the CHC
  - find a way pregnant women can get checked during prenatal examinations
  - recommend breastfeeding.
- Care to the newborn
  - give first care to the newborn (section umbilical cord)
  - refer the newborn to the CHC in case of trouble.

EONC practices

EONC practices considered for this assessment are the CHAs' behavior or the care provided by them to the mothers and newborn in case of complications, during or immediately after delivery, which could cause traumatisms or death.

The table in Annexe 8 shows that in 17 cases of complications, the agents (matrons and TBAs) would take more measures detrimental to the mother and newborn than they would beneficial ones. Among the practices that could prove harmful, one could cite:

- Gives a local broth "commandi" or decoction if the delivery is slow or if the woman is thirsty after bleeding;
- Performs magic procedures or incantations when the woman is bleeding or when the baby presents its hand;
- Administers local products or consults a healer when the placenta is slow coming out;
- Massages the woman with a decoction in case of bleeding at the end of delivery;
- Washes the newborn with cold water if it does not cry at birth.

Among the procedures considered as beneficial, one could observe reference to CHC and breastfeeding.

Matrons, as well as village birth attendants, cited the harmful and beneficial practices described above.

Knowledge of alert signals/risk factors

Alert signals and risk factors are indicators to identify risk pregnancies and decide on a referral. Knowledge of these indicators by the CHA and the families is a condition to minimize delays in referrals of obstetrical emergencies.

The CHA were interviewed for their knowledge of eight alert signals and risk factors with a pregnant woman. One matron out of two and three village birth attendants out of 12 readily cited two alert signals namely pallor of mucous membranes and presence of oedemas. One birth attendant out of 12 also cited spontaneously "previously operated on patients."

At least one matron out of two and six birth attendants of out the 12 cited other alert signals and risk factors after being prompted (several explanations given by data collectors). Lastly two to six birth attendants said they ignored the alert signals.

Table 5: Knowledge of alert signals and risk factors by matrons (n=2)

Signals/factors	Yes (spontaneous)	Yes (prompted)	No	Total
1. Pallid mucous membranes	1	1	0	2
2. Oedemas	1	1	0	2
3. Small size	0	2	0	2
4. Multiple pregnancies	0	2	0	2
5. Young women	0	2	0	2
6. Formerly operated on	0	2	0	2
7. Women who lost several children at delivery	0	2	0	2
8. Women with claudication	0	2	0	2

Table 5 shows that out of eight alert signals/risk factors, one matron in two cited only two (pallid mucous membranes and oedemas) spontaneously. The other signals and factors were prompted.

Table 6: Knowledge of alert signals and risk factors by village birth attendants (n=12)

Signals/factors	Yes (spontaneous)	Yes (prompted)	No	Total
1. Pallid mucous membranes	3	6	3	12
2. Oedemas	3	6	3	12
3. Small size	0	8	4	12
4. Multiple pregnancies	0	7	5	12
5. Young Women	0	7	5	12
6. Formerly operated on	1	9	2	12
7. Women who lost several children at delivery	0	6	6	12
8 Women with claudication	0	6	6	12

Table 6 shows that one to three village birth attendants out of 12 cited "pallied

mucous membranes, oedemas and previously operated on" spontaneously; six to nine cited after prompting the alert signals and risk factors and two to six were totally ignorant of these.

Work conditions for CHA

Supervision

One of the two matrons in the survey said she had one supervision visit by CHC staff in the month prior to survey. This visit was a source of new knowledge and skills for her. CHC staff makes supervision visits in the communities in the frame of the recommended strategies. As things presently stand, the supervisions have already done are not up to quality standards.

Motivation

There are forms of motivation for matrons and village birth attendants: financial motivation and in kind payments.

a. **Financial motivation** consisting of:

- 15% of sales of medicines, on behalf of matrons within the financing frame of community health services. This form of motivation is not always functional;

  or

- a payment of 300 to 1000 francs that the family of the just delivered women remits to the CHA.

b. **In-kind payment**

- This is supplies such as: soap, perfume, cloth, cereals, cola nuts remitted to the CHA by the family of the just delivered woman.

Availability of materials

Matrons and village birth attendants perform tasks of which the quality depends on the material utilized, among other factors. An evaluation of materials availability was done for the CHA in the survey in reference to the functions of CHA and family health norms.

The evaluation's main facts are the following:

- Out of the 27 items observed at least one matron disposes of six items (22%). Among the available materials, the following was inventoried: delivery table, single use gloves, fixation forceps, ligature thread, soap and furniture (tables and bench). Materials for the newborn (weight scales, ophthalmic pomade), as well as, certain products (iron, folic acid, vitamin A, paracetamol) are lacking at matron's places;
- Not one village birth attendant disposed of the necessary clinical materials to perform their tasks. It must be noted that matrons and birth attendants carry out their practice at home.

Training

Matrons are generally selected by the communities upon request by CHC staff or by NGOs that intend to start a village health unit (VHU) in the community. The main selection criteria for a matron is that the community accepts her. The level of education is not an absolute criteria. Training contents generally include managing deliveries and treatment of common ailments, such as headaches and malaria.

Training lasts one to three months. It is done in CHC maternity hospitals by midwives and/or care assistants. One of the matrons in the survey said that she had been trained six months before and another five years before. After training, the matron was to work in VHU.

They are trained informally. Their practice of delivery appears as family heritage passed on by previous generations.

EONC potential in the community

Although emergency obstetrical services are necessary for the reduction of maternal mortality, they may be insufficient because even if they are available in the health facilities, women with complications may be faced with a set of barriers towards utilizing them. Some of these barriers are economic, e.g., lack of money to defray transport or service cost, cultural – e.g., the low value given to women's lives, or geographical – e.g., long distances and bad roads. These different factors can be summarized in a simple model commonly referred to as "The three delays": 1) Delay in the decision to resort to the services; 2) Delay in reaching a health facility; 3) Delay in receiving adequate treatment in the health facility.[5]

In order to initiate a pilot program that would allow impact on the two first delays, data were collected in the community to determine potential for service supply in emergency obstetrical services at home (Delay #1) and the establishment of community partnerships for emergency evacuations (Delay #2). The results and conclusions are presented below.

Factors favorable to community care supply

There is a community need for EONC

Maternal mortality remains very high in Benin. The population and health survey done in 1996 reveals a maternal mortality rate of 498 deaths for 100,000 births. The survey further shows a particularly worrisome situation in the Borgou department for other key indicators. For instance the fertility rate in this department is very high (ISF: 7.35) compared to other parts of the country, the contraceptive prevalence rate remains very low (2.5% for women), and 61.2% of deliveries are done at home, most of them without the assistance of skilled personnel.

The representatives of the Malanville-Karimama Health Zone coordination feel that

5 "The Design and evaluation of maternal mortality programs." Deborah Mmaine, Murat Z. Akalin, Victoria M. Ward, Angela Kamara. Center for Population and Family Health. School of Public Health. Columbia University, June 1997.

integrating EONC into other family health services offered in the community will help improve RH care and utilization. This should result in decreased maternal and prenatal mortality. The main barriers to EONC integration at the community level are communication constraints (expensive air communication networks, insufficient transport means, difficult access roads) for referrals and lack of EONC materials together with the management of these.

Health services do not always live up to expectations in emergency situations

Recently conducted studies on UON in several departments showed a deficit in major obstetrical interventions against very high absolute maternal indications, especially in the Malanville-Karimama Health Zone (>80%).

Furthermore, a PROSAF study done in 1999 on the management quality of the Borgou health system showed low compliance with service standards, including poor quality in addressing deliveries, problems in the management of the global health systems in particular insufficient staff quality and quantity, insufficient transport means, insufficient operational communications, especially for referral/counter referrals and considerable depletion of stocks, including medicines. (See also Results of Assessment on EONC Providers' Performance).

Population regularly turns to available care services at the community level

The needs assessment conducted in the community revealed that the populations keep turning first to the traditional healers/TBAs and matrons to solve their health problems before they go to a health facility. In case of complications, women in labor do not always go to the health facility first.

"We go to the health center and traditional healers but we first go to the traditional healer. Sometimes we do both." (one woman in Madecali).

CMC/VHC members asked about the quality of care given to the pregnant women evacuated in the health facilities expressed various opinions on the reception, the care received, provider's promptness and care cost. They emphasized the lack of patient follow-up after hospitalization.

"The reception is bad and the midwives and assistants are never there, and as a result, women give birth outside on the terrace. Guene products do not cure the diseases, except for the pharmaceutical medicines prescribed by the Malanville hospital. A physician who left Cotonou was ordered to throw away expired Guene medicines in the river this year (2000). Product cost is affordable. There is no home service after hospitalization" (one CMC member in Guene).

"There is never a follow-up by the agents. Even if the patient can not move, they refuse to go to him arguing that it is not their job." (one CMC member in Garou)

Most women and men also questioned in the villages viewed reception, provider's promptness, service cost and care received fairly satisfactory though they noted the lack of after hospitalization follow-up.

"We receive good care. Most of the time when we go to the center, we come out in good health." (one woman in Tondikou area)

"No follow-up at home. Only the matron looks after women at home after delivery." (one man in Garoutegji)

The surveyed persons expressed their wish to see health services come closer to them and regretted the proscription on TBAs to practice deliveries in the community (this practice is carried on despite the proscription).

"Had it not been a 3500 francs fine for home deliveries, here in Guene, we are sure that many women would not be delivered at the maternity, because of the poor reception there. In addition, we are detained at the maternity for three to four days. If the midwives would do some follow-up every now and then, it would be even better. But we are left to ourselves during this period." (one woman in Guene)

There are agents providing services within the community

There are CHAs in the villages that are well thought of and appreciated by the population. In each of the 14 villages visited, there was generally one TBA (100%). Moreover, there are villages with matrons also (28.6%), first aid workers and sometimes community relays. Generally the matrons and TBAs were designated by the community or had inherited the position through tradition. Nearly all of them have been providing health care for more than five years. The age of matrons and TBAs fluctuates between 45 and 65 with an average age of 57 years for the matrons and 59 for the TBAs. They are all illiterate and either married (45.5% of birth attendants) or widowed (100% of matrons and 45.5% of birth attendants). They all speak the local language.

The services generally offered by TBAs include home deliveries, postpartum care and care to the newborn infant (cleaning, umbilical dressing, herbal tea, traditional massage) nutritional counseling during pregnancy and referral of complications. In villages where there are matrons also, the TBA will collaborate with them. Due to MOH's proscription of home deliveries, more and more frequently TBAs will only accompany pregnant women to the maternity and assist the midwives during the deliveries. They also take change of follow-up for the women and babies after delivery. 73.3% of the persons, who were asked, expressed their satisfaction about the services performed by the TBAs.

"Because these women help us a great deal and we have so far not experienced bad consequences dueto the TBAs." (one woman Kompa)

The main reasons for satisfaction include low service cost during and after delivery, utilization of plants and other traditional practices considered efficient by the population, aid and assistance given particularly in case of difficult delivery and remoteness of health facilities.

Matrons generally provide a slightly wider range of services: prenatal examination ("check up" and counseling), deliveries, referrals in case of problems, postpartum care and care to the newborn infant (cleaning, umbilical dressing), weighing the

infants, support to vaccination teams. 80% of the persons questioned expressed their satisfaction about the services provided by the matrons.

> *"Because she is available at any moment, makes quick decisions on evacuation. But she is already old (about 65 years). She is assisted by a young woman who must be trained to carry on the work." (one man in Goungoun)*

Among the reasons given, one can note supply of first aid care, their behavior (availability, reception), quality of care offered, and their proximity. Desertion by some first aid workers and limited services offered (no injections, no medicines to be administered) are the main causes expressed for dissatisfaction about the services offered by first aid workers

According to the health personnel, the actual tasks for matrons and TBAs extend only to ectopic deliveries, referrals for complicated cases, women who came for prenatal consultation, accompanying the referred women, postpartum care and care to the newborn infant, sensitizing mothers on breastfeeding and vaccination.

As regards to the matrons' performance, the supervisors noted the detection of difficult cases and timely referral among the well-done jobs. Limits of competence due to lack of in-service training is the factor hampering matrons performance.

The quality of the matrons' work was assessed through its perception by CHC staff and the community.

For instance, CHC health staff said:

> *"Matrons are quick to detect difficult cases and refer them in a timely manner, which saves the lives of the mother and child most of the time."*

The referred cases include: placenta retention, defective presentation, hemorrhages and pregnant adolescents.

> *"Considering that they were trained a long time ago and that they did not benefit from any in-service training, they only limit themselves to daily routine, which decreases their competences."*

> *"Because they cannot read or write, they can not fill out patients health books."*

Only 18.2% of the interviewed CMC members (n=13) said they were satisfied with the matrons' performance. Their reasons for satisfaction are summarized as follows:

- Quick detection of difficult cases;
- Timely evacuation;
- Availability for home service;
- Minimum training;

Most CMC members (81%) were not satisfied with the activities done by the matrons or were ignorant on these.

Some members said:

"The matron delivers the women, but she has a nasty reception which drives women away."

"I don't know what a matron's role is."

And still according to the health staff, the TBAs contribute efficiently in timely referral of difficult cases and surveys of home deliveries. They perform their tasks correctly within the limits of their competence and collaborate with the health staff.

Moreover, the tasks performed by the first aid workers are limited to primary care, referral of complicated cases to CHC and assistance to the health personnel for Information, Education, Communication (IEC) activities. The health staff appreciates the assistance given by the first aid workers (serve as relays, first aid care, referrals, mobilization) within the limits of their competences. They regret the drop in their performance due to lack of in-service training.

There is potential for CHA supervision and support

a. At the community level

Community structures were set up in the Malanville-Karimama Health Zone within the frame of the Bamako initiative. These are commune and sub-prefecture management committees (CMC/SPMC) and village health committees (VHC) composed generally of eight members. These structures could play a greater part in CHA follow-up and support.

In fact, each of these structures at its level plays an actual part in referring patients (sensitizing the families for evacuations, transport), mobilization/communication activities to change behaviors and attitudes/IEC, and management of generic essential medicines (ordering, reception, packaging, inventory).

It should be noted, nevertheless, that none of these structures is actually active in motivating CHA's. In fact, there is a motivation system for the matrons and first aid workers and neither the population nor SPMC/CMC/VHC participate in it. This category of CHA disposes of a margin (15%) on sales of essential medicines and contraceptive products. They should also receive support from the population but this scheme does not seem to function at all. As regards to the TBAs, there is no set motivation system. They generally receive in kind presents for services rendered. At some CHC, they receive compensation each time they bring a woman to the maternity and, in some cases, a bonus collected from monitoring bonuses.

For the representatives of the health zone coordination, these structures could become further involved, for instance by identifying community health activities that could be trusted to them and training them towards this purpose, and by figuring out motivation schemes for the members of these structures. This was confirmed by the health staff that feels that training of CMC/SPMC members and

setting up a motivation system would help in getting them more interested in community health activities.

b. At CHC level

Among the staff of the eight CHC that were visited, some already are taking charge of supervision of the CHAs who were present in the area covered by the health structure. These were essentially the matrons, first aid workers, community relays and lastly the TBAs.

Nevertheless, it should be noted that the supervision system for CHAs is not really structured and institutionalized. Some supervisors managed to be individually organized so as to follow-up CHA activities. Some of them carry out supervision once weekly or monthly, others on the occasion of the recommended strategies. There is actually no fuel allocation for CHA supervision. There is generally no supervision schedule. According to some supervisors, in the case of community relays providing FP services, a feedback is given to the agents after the supervision visits, either verbally or in writing. Problems are solved immediately on the occasion of another supervision visit. Supervision reports are prepared and available in the chief nurse's office.

When the supervision is not done, it is generally because no program exists for it at the health facility or because the problems encountered are deemed minor and do not require any specific follow-up.

The support given to CHA by the health staff in materials supply remains limited to stock inventory and transmission of needs at zone levels. The main problems connected with the supply of materials to the VHS concern delays in satisfaction of demand and depletion of products at the source.

c. At zone and partners levels

The coordination of the Malanville-Karimama Health Zone is involved in the support to community activities. It provides financial support (especially for fuel, and other costs), material assistance (IEC materials) and human resources. It takes charge of training and follow-up of community relays together with supplying these with materials on a regular basis.

Partners in social and health development are already conducting activities aiming at strengthening health services at community level through strengthening community mobilization and community-based services (training, materials, setting referral/counter referral structures.)

Potential for community partnerships

Community partnerships is a strategy in mobilizing clinic based and non-clinic based providers, communities and families with a view to organizing timely referrals for obstetrical and neonatal emergencies. In other words, this strategy aims at decreasing delays in transport to the health facilities where obstetrical and neonatal complications can be addressed, by developing the families' capacity to identify the emergency in a timely manner, and by establishing local emergency transport systems

and solidarity or family funds.

The difficulties met by the Malanville-Karimama Health Zone are numerous and multiform, particularly when pertaining to emergency evacuations. The low health coverage especially in the Karimama sub-prefecture, the inadequate transport means for referrals, the economic constraints to defray costs, the poor state of some of the communication ways, etc., are difficulties that the Malanville-Karimama must grapple with. This is justification enough to establish community partnerships.

Lack or remoteness of health centers

All categories considered the Malanville-Karimama Health Zone consists presently of nine health facilities for a population of 124,067 souls,[6] being 12% of the Borgou department's total population. The Malanville sub-prefecture is comprised of the ZH, one CCSV and four CHC. The Karimama sub-prefecture is worse off with, only one CCSP and two CHC. Due to this situation, many communities are served by one health center. The villages visited were as far as 24 km from the nearest CHC, 60% of them within 5 km radius, 23.3% between 5 to 10 km and 16.7% in a radius exceeding 10 km. For emergencies, the populations must carry the patients over long distances, using transport means often unsuitable (horse drawn carts, bicycles, motorbikes), on difficult roads, especially in the Karimama sub-prefecture.

On this subject, one previously delivered woman says:

> *"I do not wish this to ever happen again. I pray God that it may not happen again. I could not understand, because I had regularly been to the prenatal consultations. What I wish is that the village would have a health center that could handle maternity emergencies."*

Lack of adequate means for referrals

Referral of a patient should be done with adequate transport means and in the best possible conditions so as to enable her to reach the closest health center under optimal conditions. It was observed that the transport means presently utilized are not always adequate.

When a pregnant woman needs to be transported, families generally resort to the transport means available such as dug out boats, bicycles, motorbikes, private vehicles, taxi, motorbike taxis, or horse drawn carts.

> *"If the woman is in the fields, she is taken to the CHC on a cart. If she is at home, she may walk or go by cart (with no charge). Those in neighboring villages come by motorbike with their wives on the backseat, held by someone else or not. It is difficult for those in the villages to quickly get to the CHC (one to three hours, decision making included)." A group of men.*

6 1999 Estimates.

For such cases we use bicycles, motorbikes that we do not rent, or carts. But evacuation by cart or bike is slow, and consequently some women give birth on the way to the center." A group of men.

"Evacuation of emergencies is done with horse drawn carts, which are very slow on bad dirt roads." A group of women.

"We utilize several means to take such cases to the center: cart, dug out boats, taxi, or motorbike. They all are rented. A dug out goes for 20,000 francs, a taxi between 20 to 50,000 francs. If the woman can sit on a motorbike, then we put her on it." A group of men

Some health centers dispose of motorbike ambulances. Nevertheless the population does not like this mode.

"When the case is not too urgent, we call in the motorbike ambulance for help. But if this ambulance cannot carry one accompanying person, then the woman is left alone with her pains. The top is not transparent to allow the driver to keep an eye on the woman." A group of men

Presence of mobilization structures

There are mobilization structures actually emanating from the community in the Malanville-Karimama zone, which carry out sensitization activities on health related subjects. This is so for SPMC and CMC that represents an opportunity to establish community partnerships.

"We organized a general meeting to collect the community's hopes concerning the health center. On the centers' side if there is a problem with the population (care on credit) someone is assigned to recover payments. We do sensitizing on illnesses, STDs, AIDS." members of a CMC

There also are other community structures such as USPPs. Though little or not involved in health related activities, these structures nevertheless, play an important part in mobilizing the populations.

Positive perception of the contribution system by the communities

The creation of a community fund provisioned through contributions, for example through income generating activities, is one of the strategies recommended through community partnerships. When asked about its feasibility, the people were enthusiastic.

"People will agree to contribute because the population is very poor, they will even applaud. Contributions are not made everyday, because cases do not happen everyday. We just suggested the idea to the village committee to subscribe after the cotton is sold. We can have the farmers contribute too. We can farm collective plots and the income from it will constitute the fund." CMC members.

"We decided to call a general meeting at the village level to start the contributions (100 francs for men and 50 francs for women, monthly, except for March when men will pay 500 francs and women 250 francs) in order to buy a vehicle, which will enable proper handling of transports in five years time." CMC members

"It can be done on an agreement basis. We are going to discuss and agree. Then we will set the amount to be paid by each household head. We will select one trustworthy person, one elderly person who will manage the fund." A group of women

"Here we fully agree on anything that concerns our health. The village chief will sensitize each household head with the assistance of his advisors. The sums collected will be deposited in the CVEC and used to install an air network." A group of men

Input by health staff and NGOs

Through the recommended strategies, the health centers have the opportunity to be in touch with the most remote communities and make them aware of important health issues. As a result, the health staff can contribute in mobilizing the populations and educating the families within the frame of community partnership, while providing support to the matrons and TBAs.

NGOs are not structures emanating from the communities though operating in them. There is actually a certain number of local NGOs that carry out activities connected with health IEC, support counsel, diverse training, completion of social and community works, etc.). These NGOs generally act as mediators between communities and between the communities and other partners.

Adverse factors

If it is true that there are favorable factors for community partnerships in the Malanville-Karimama Health Zone, it is likewise true there are factors that could be a hindrance to implementing such a strategy.

a. Population behavior

Some objections were expressed, indicating potential unwillingness (suspicion, lack of trust due to previous behaviors by some managers) within some of the communities, which could slow down and even close the establishment of a community partnership.

"*It is not possible because some feel they will not benefit from it. There is poverty, too, and the attitude that the managers are going to squander their money." One community manager*

"The people will feel that the committee wants to embezzle their money. Attitudes will vary from one person to the next." One CMC member

b. Behaviors of some health agents

Through their behaviors, some health agents project a negative image of health services, which could cause lack of participation and collaboration from the populations in establishing community partnerships.

"Bad reception, the midwife is never there and even if she is present, you must always go to town to get help from her. The midwife is rude with the women." A group of women

"Bad reception. It has happened that our daughters and sisters had to give birth on the floor because there was no reception." A group of women

"Bad reception. When you bring in a patient, you have to go several times to the head nurse who will keep on sleeping. Sometimes even the women give birth on the floor. It is afterwards that he will show." A group of men

Discussion/Recommendations

General observations on the performance of EONC providers in maternity hospitals

The gap between the desired performance and the actual is 100%. Indeed, none of the providers in the maternity hospitals (midwives, nurses and care assistants) was able to perform the tasks related to obstetrical and neonatal emergencies according to the norms. In other words, the tasks were for most only partially done.

Conclusions and recommendations by performance factor

Information (expectations)

Generally the providers feel they know what is expected of them for EONC in the maternity hospitals. Nevertheless, the types of tasks mentioned by the providers suggest that they do not know what is actually expected of them for EONC matters. Moreover, observation of a job description including the main EONC tasks for providers in the maternity hospital did not contain a listing of what is expected of them.

Recommendation:

Develop or update job descriptions for the agents in maternity wards and pediatric services, including the main EONC tasks for the agents and disseminate these.

Information (feedback)

Except for the dissemination of the monitoring results and the supervision logbook, there are no other standardized and institutionalized practices to give systematic and regular feedback to the providers. This is due to the fact that systematic and regular feedback is not a customary work practice.

Recommendation:

Established practices that would coax feedback in the Malanville-Karimama Health personnel's work habits. Here are a few practices:

- on the occasion of all work shift changes, organize a staff meeting between in and out shifts;
- do a compilation of statistics twice a month and give copies to all health facilities in the zone;
- have the staff exploit the collected data within their structure;
- disseminate the results from the statistics to all the health facilities;
- organize weekly meetings and monthly meetings in rotation to discuss cases received in the health facilities;
- send on time counter referral slips;
- after supervision sessions: gather all the staff and give feedback, fill out the

supervision logbook and send the report on time.

Environment

The providers work conditions in the maternity hospital are not satisfactory for transport, emergency evacuations, procurement, availability of materials, and waste disposal.

a. Transport

The criteria presently defined for the utilization and maintenance of transport means in the facilities are not adequate enough for their optimized efficient use.

Recommendation

Provide the maternity hospitals with transport means. Define and take to scale with the participation of the actors in health operations (health agents, community structures and partners), the well-defined criteria for optimal utilization and maintenance of transport means in the facilities.

b. Emergency evacuations

As it stands now, the referral system is not always efficient, due to the fact that the process of setting up the communications means was stopped because the cost of air network had been underestimated. Moreover, there is insufficient collaboration between the NGOs, health services and community structures to organize the communities in handling emergency evacuations.

Recommendations

Start over the process of supplying the Malanville-Karimama zone's health facilities with communication means (air network, mobile telephones, etc.);

Establish partnerships between public structures (MOH, Ministry of Civil Engineering, and Ministry of Rural Development), health services, NGOs and community structures to address emergencies.

c. Procurement and availability of materials

The lack of decentralization of products procurement source and the weakness of the logistics management system (regular stock follow-up, ordering and re-supply) are the reasons behind depletions of stock for certain materials.

Recommendations

Speed up decentralization of products procurement source with the concerned parties.

Strengthen the logistics management system, so as to ensure that the health facilities in the zone are supplied in materials according to family health norms and standards.

d. Waste disposal

Waste is not eliminated according to the norms. This is due to insufficient

information resulting in ignorance of, or non-compliance with norms on biomedical waste disposal

Recommendations

Disseminate information notes and have health agents organize biomedical waste disposal demonstration in work places.

Motivation

Except for congratulation letters, performance and monitoring bonuses paid on the basis of monitoring results by community funds and PBA/SSP, there are no other motivation systems for health agents. In addition, the present system is not to everyone's liking. The weakness in the motivation systems are due to the narrowness of the motivation range and the lack of individual motivation criteria, well-defined and made known to all.

Recommendation

Develop diversified motivation systems, including well-defined individual criteria, with the full participation of the health staff. The Malanville-Karimama Health Zone should also manage the motivation system.

Organizational support

a. EONC goal and objectives

EONC goals and objectives are generally known through the mother and child health programs. But the notion of EONC as such is not known by managers, supervisors and providers particularly at the peripheral level. This is due to non-dissemination of documents on policies, norms and standards for family health, including those related to EONC and to the national and departmental action plan for EONC.

Recommendations

Disseminate the documents on policies, norms and standards for family health, including those related to EONC and to the national and departmental action plan for EONC at the level of DHMO-MKHZ-CSSP and CHC.

b. Work organization

Work organization (distribution of tasks, roles and responsibilities) and decision-making systems contribute in good work performance in maternity hospitals. Nevertheless, insufficiency of qualified staff tends to limit the good performance since the MKHZ is known to be destitute and consequently makes agents hesitant to work here.

Recommendation

Establish incentive measures to coax junior and senior management staff to work in the MKHZ.

c. Supervision system

There is a supervision system, though not living up to all the expectations, especially in terms of regularity, style, target and coverage. The ongoing process to improve supervision has not yet reached the MKHZ.

Recommendation

Speed up the supervision improvement process in the MKHZ (see DHMO-Borgou Alibori).

Knowledge and Skills

There is insufficient EONC knowledge and skills among all maternity hospital agents. This is due to:

- lack of in-service or continuous EONC training for providers in the hospitals.
- the basic training does not emphasize EONC due to the lack of linkage between training and services and also because EONC was not included in MOH strategies in the past.
- the capacity for EONC training in MKHZ is limited.

Moreover there is no EONC training system for the time being.

Recommendations

Organize in-service/continuous training for EONC providers in maternity hospital using innovative training approaches.

Integrate EONC in professional health school training curricula.

Strengthen the capacity to conduct EONC training activities (trainers' teams, funding, training materials, referral documents, etc.)

General situation of performance by CHAs and EONC potential at the community level

The maternal mortality rate, particularly in the Borgou department, the low EONC performance by the health services, the general conditions in the Malanville-Karimama Health Zone (lack or remoteness of health centers, lack of adequate transport and communication means for referral, long distance and bad roads) would justify the implementation of other approaches for the provision of EONC. The development of the families' capacity to detect emergencies and the strengthening of evacuation systems between the community and health structures could be suitable answers.

Indeed, there is a potential for such strategy at the community level. There are matrons and TBAs in the villages who offer services related to pregnancy and delivery. They also are active in population mobilization and sensitizing. These agents are well appreciated by the community that calls on them on a regular basis. Nevertheless, it should be noted that there are weaknesses in their skills as evidenced by the persistence of practices that can be harmful for mothers and newborn infants

and their ignorance of risk factors and alert signals. They had little or no training. Moreover, their work conditions are not always adequate. They do not always dispose of appropriate materials, particularly so with the TBAs. They receive little or no supervision and the motivation system is not systematized.

Among the factors that could help in developing EONC at the community level, it should also be noted that:

- CHAs traditionally are the first recourse for health care;
- Health staff collaborate in a certain measure with the CHAs;
- There are community structures (CMC/SPMC/VHC) which actually play a role in referrals;
- Some health facilities already perform supervision for certain CHA's on the occasion of the recommended strategies;
- There is positive perception by the communities of the contribution systems.

Recommendations

To strengthen the EONC referral system through the improvement of quality in health facilities services and establish community partnerships for timely evacuation of obstetrical and neonatal emergencies. This can be achieved:

At the community level, through:

- Utilization of local management structures for the support to the CHAs (matrons, TBAs) and community mobilization
- Strengthening skills among families and CHA (matrons/TBA) in detecting alert signals and risk factors;
- Communication to elicit behavior change/IEC;
- Organization of emergency transport (emergency fund, communication/transport means);
- Follow-up of maternal mortality/morbidity (verbal autopsy).

At the level of health services:

- Involvement of health staff in CHA training/supervision/support (matrons; TBAs).
- Improvement of emergency management in referral centers (information/instruction, staff training; equipments/supplies, motivation, supervision).