

## **Analysis of the Implementation of the Project of Revitalization of Health Huts in the Health District of Goudomp (Senegal)**

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**ABSTRACT:** USAID through its implementing agency Africare, committed since 2006 to support the health district Goudomp in improving the services offered at the health huts especially in the fight against malnutrition, diarrhea, malaria and acute respiratory infections (ARI) in children aged 0 to 5 years. The general objective of this study is to analyze the USAID Community Health program implementation at the boxes in the Health District of Goudomp. A cross-sectional study with a survey of knowledge and practices of mothers or guardians of children from 0 to 59 months and an assessment on the quality of services in health huts of the areas targeted by the project was conducted from 2 to 5 May 2009 at the health district of Goudomp. The home delivery rate is 48.5% among persons surveyed and 18.7% gave birth in the Health Hut. On assistance to childbirth 26.4% of the women surveyed were assisted by a midwife or a community health worker. 80.3% of children were weighed every month for the last 3 months preceding the survey. The ARI care for children took place in more than 1/3 of cases (36.5%) at the health hut against 31.8% at the stations or health center. 1/3 fevers were also treated at the health huts. In terms of the cleanliness of the yard and premises, additional efforts must be made because 13 of the 19 huts visited were found fit contrary to the basic survey where 20 of the 23 huts visited were found fit. It is also the prevention of infections which is very low as practiced by 8 of the 19 huts visited. The implementation of strategies involving associations such as groupings of promoting women and youth groups should be preferred in order to allow greater involvement of the population. The success of this project will undoubtedly improve the reduction of maternal and child mortality in the health district of Goudomp.

**Keywords:** Analysis, health Huts, Goudomp, SENEGAL.

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### **I. INTRODUCTION**

The District of Goudomp, established since 2005, has one health predicament with very low indicators. The illiteracy rate is still very high among women (86%) and access to water for population remains low (64.6%). The child mortality rate due to the fact it belonged to the ancient region of Kolda is one of the most important of Senegal (205‰) [1]. This high mortality is linked to diseases such as malaria, diarrhea, acute respiratory infections (ARI), intestinal parasites that often arise in the context of malnutrition among children 0-59 months. This situation was aggravated by over twenty years of fratricidal war with its corollary of population displacement, abandonment of farmland and closure of health facilities due to staff shortages. Since the return of the lull, accessibility of health services is accentuated by the reopening of some health centers and the support of some partners in reproductive health, the fight against malaria, tuberculosis and HIV infection. However, it is clear that much remains to be done in the population's access to basic health care especially those in remote villages and difficult of access.

Health huts that occupy the most peripheral level of the health system and are an important link to the community-based service offering are experiencing difficulties in their operation. For ten years, the state of Senegal no longer built health huts. It does not equip them and does not support the staff serving their, either. These structures are to the community charge which very often is not well prepared for their management. [2] Thus, USAID through its implementing agency Africare, committed since 2006, to support the district of Goudomp in improving the services offered at the health huts especially in the fight against malnutrition, diarrhea, malaria and acute respiratory infections in children aged 0 to 5 years.

Since 2008, twenty five huts of the health district were enrolled by Africare (six in 2008 and nineteen in 2009).

The project also set up around health posts, intervention sites where outreach activities are conducted, monitoring of child growth, support of tuberculosis patients and distribution of treated mosquito nets. The main objective of this project is to help improve access to primary health care and prevention of high prevalence diseases in remote villages of the district of Goudomp. The general objective is to analyze the USAID Community Health program implementation at the Huts in the Health District of Goudomp.

## **II. MATERIALS AND METHODS**

### **1. Scope of the study**

The district of Goudomp is located in the Sédhiou region in the extreme south of Senegal and covers an area of 1756 km<sup>2</sup>. It is bounded in the north by the district of Sédhiou, south by Guinea Bissau, in the east by the district of Kolda and west by the district of Ziguinchor.

In 2008, the population of the health district of Goudomp was estimated at 152 669 inhabitants. The primary sector dominates the economic activities that revolve around agriculture, fishing and livestock. Due to insecurity in some areas, economic activities were slowed sharply for years. The secondary sector, very low in the district is represented only by the craft.

The road network is very poor. It consists of a defective and cracked road (national road number 6) connecting the city of Ziguinchor to that of Kolda. However, the district is crossed by tracks of productions that are impassable during the rainy season.

The health district has 2 building health centers, 1 mini health center, 13 health posts and 31 health Huts, 2 are not functional.

The district of Goudomp is characterized by a lack of qualified personnel. Because of the insecurity that prevailed for years, few health workers agree to stay in the district. [3]

### **2. Type of study:**

A cross-sectional study with a survey of knowledge and practices of mothers or guardians of children 0-59 months and an assessment on the quality of services in health huts of the areas targeted by the project was conducted from 2 to 5 May 2009 in the health district of Goudomp.

### **3. Study Population**

The target population consists of mothers or guardians of children aged 0 to 59 months living in neighborhoods or villages polarized by "Africare» Huts in the health district of Goudomp.

#### **Inclusion criteria**

Any mother or guardian of a child aged 0 to 59 months living for at least 6 months in neighborhoods or villages polarized by the "Africare" Huts of the Health District of Goudomp

#### **Exclusion criteria**

Any mother or guardian of missing children at the time of the survey or refusing to participate will be excluded.

### **4. Sampling**

#### **4.1. Calculating the sample size**

To calculate the size of our study population, the following formula was applied:

$$N = g (\epsilon^2 \alpha \cdot p \cdot q) / i^2$$

N: sample size

g = cluster effect assumed: 2

$\epsilon$  = 1.96: gap reduced to a confidence interval of 95%

$\alpha$  = the error of the first kind granted: 5%

p: probability of occurrence of the phenomenon studied (set by default to 50% in the absence of specific data)

q: supplement  $p = 1 - p$

i: accuracy desired (By convention, it is chosen between 5 and 10% For this study, we chose 8% of accuracy.)

$$N = 2 (1.962 * 0.5 * 0.5) / 0.08^2 = 300$$

For this study, we considered 30 clusters that were distributed in the area with 10 statistical units to include a minimum cluster.

#### **4.2. Method of survey**

The cluster sampling in two stages was conducted to select the statistical units. The first stage allowed to draw for a number of districts / villages of the study area, the second stage, concessions in the neighborhoods / villages selected.

For each neighborhood / village, the sociological center has been identified. From this point, a draw was taken using the method of the bottle to define randomly the direction of progress of the survey team. In this direction, the nearest first concession was identified based on his front door as a guide. The method step by step always taking the right was then used to determine the concessions to visit by investigators. In each concession visited were systematically included all mothers or guardians of children meeting the inclusion criteria of the study.

#### **5. Data collection tools**

Quantitative mother survey is based on a questionnaire that takes into account some socio-economic aspects, immunization, childbirth, the management of malaria, ARI and services offered at the Huts.

The evaluation of the quality of services was based on an observation grid in each Hut taking into account the cleanliness of the yard, premises and the practice of infection prevention.

#### **6. Data collected**

The survey has permitted to collect various information about:

- Some socio-economic conditions of people:
  - The level of education
  - The existence or absence of income generating activities
- The practice of childbirth
- Coverage by impregnated mosquito nets
- The management of ARI, malaria, diarrhea
- Feeding and Child Nutrition from 0 to 59 months
- Vaccination of children
- The level of knowledge of mothers or guardians of children on the services offered at the Huts

#### **7. Entry and Data Analysis**

The seizure and analysis of the survey results and practical knowledge of mothers of children aged 0-59 months on the services offered by Goudomp district health units is made on the Epi 2000 version 3.3.2 software.

### **III. RESULTS**

#### **1. Socio-economic characteristics of the mothers of children 0 to 59 months**

Three hundred mothers or guardians of children aged 0 to 59 months were surveyed at the household level. Of these, almost one third (32%) said they had no education and only 7.3% had reached high school. More than half of women surveyed (54%) were engaged in agriculture and 13.3% reported having no income generating activity.

#### **2. Knowledge by the mothers of the services offered at the Hut**

##### **2.1. Knowledge of the existence of a Hut**

Only two hundred and forty mothers or guardians of children (80%) said they knew the existence of a health Hut in their area.

**Table I** :Distribution of mothers by knowledge of the existence or not of the Hut

<b>Knowledge of Hut existence (N=300)</b>	<b>Number (n)</b>	<b>Percentage (%)</b>
Yes	240	80
No	60	20
Total	300	100

##### **2.2. Knowledge of Huts activities**

More than 2/3 (69%) of mothers or guardians are informed of the holding of monitoring of growth and 61% are aware of the fever care activities. The activities of diarrhea and cough care are known by less than half of the mothers.

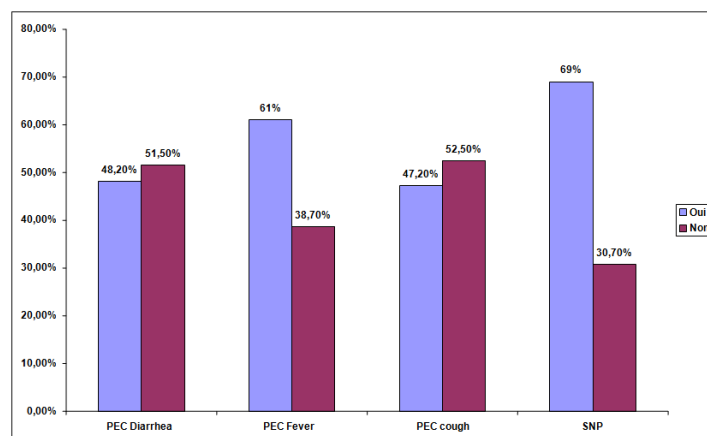


Figure 1: Distribution of mothers by knowledge of services in the Hut

### 3. Health Practices of mothers of children aged 0-59 months

#### 3.1. During childbirth

The home birth rate is 48.5% among those surveyed and 18.7% gave birth in the health Hut. On assistance to childbirth 26.4% of the women surveyed were assisted by a midwife or community health worker.

#### 3.2. Vaccination

81% of children had a vaccination card. Among these children, 213 were fully vaccinated 71% of the sample.

#### 3.3. Food and Child Nutrition

Breastfeeding was practiced by almost all women (97%). Of these, 47% said they put their child to breast within the first hour after delivery. However, 26.1% said they had given something to drink to their child during the first three days.

#### 3.4. Monitoring and promoting the growth of the child

80.3% of children were weighed every month for the last 3 months.

Most children older than 12 months were de-wormed during the last 6 months (92.1%). Among children aged over 6 months 89.9% were supplemented with vitamin A in the last 6 months.

Table II : Distribution of Children by regular weighing, de-worming and Vitamin A supplementation

Children weighed every month for the last three months (N=300)	Number (n)	Percentage (%)
Yes	241	80,3
No	59	19,7
Total	300	100
<b>Enfants de-wormed (N=277)</b>		
Yes	255	92,1
No	22	7,9
Total	277	100
<b>Enfants supplemented with Vit. A (N=297)</b>		
Yes	267	89,9
No	30	10,1
Total	297	100

#### 3.5. Support of IRA

42% of children have had an acute respiratory infection during the preceding 15 days of the survey. Among them 36.5% sought an appeal on the same day against 27% the next day, and 23% did not seek to recourse. The support was made in more than 1/3 of cases (36.5%) at the health Hut against 31.8% at the post or health Center.

Table III : Distribution of children by the existence of an ARI, according to the time of recourse for care and by place of care

Distribution of children by the existence of ARI (N=300)	Number (n)	Percentage (%)
Yes	126	42
No	173	57,7
Does not know	1	0,3
Total	300	100
<b>Time of recourse to care of ARI (N=126)</b>		
Same day	46	36,5
Next day	34	27

After 2 days	10	7,9
After 3 days or more	7	5,6
No recourse	29	23
Total	126	100
<b>Place of care of ARI (N=126)</b>		
Health Hut	46	36,5
Health Post or Health Center	40	31,8
Healer	6	4,8
Other	5	3,9
None	29	23
Total	126	100

### 3.6. Support of fever

Of the 300 mothers surveyed, 42.3% said they found fever in their children during the 15 days preceding the survey. Among them more than 1/3 (35.4%) sought treatment the same day and 22.8% the next day; just over a quarter (26.1%) do not have not sought treatment.

Among the 127 children who presented a fever, 1/3 (33.9%) were treated in a health Hut against the 1/4 (25.2%) in a post or health center and 22% did not go to any structure.

**Table IV:** Distribution of children according to the existence of a fever, the time of recourse to care and by place of care

Distribution of children by the presence of a fever (N=300)	Number(n)	Percentage (%)
Yes	127	42,3
No	173	57,7
Total	300	100
<b>Period of recourse to care (N=127)</b>		
Same day	45	35,4
Next day	29	22,8
After 2 days	15	11,8
After 3 days or more	5	3,9
No recourse	33	26,1
Total	127	100
<b>Place of care (N=127)</b>		
Hospital	9	7,1
Health Hut	43	33,9
Health Post or Health Center	32	25,2
Healer	5	3,9
Other	10	7,9
None	28	22
Total	127	100

### 4. Quality of services at the Hut

Of all the 19 huts visited, 13 have premises (consultation room, childbirth, care and waiting room) and a yard having been found fit. Infection control was practiced by 8 of the 19 Huts.

## IV. DISCUSSIONS

### 1. Health Practices and knowledge of mothers of children aged 0-59 months

The analysis of data on birth shows that the home birth rate is still very high (48.5%). This rate is as important as that found at the basic survey (43%). [4] Only 18.7% of surveyed women give birth at the health Hut and 15.7% at the health post. These rates are lower than those found by the basic survey that are 25% and 22% respectively.

The results found in this study are lower than those found by F. B. DIALLO who estimated that in Guinea 67.3% of women still give birth at home without assistance. [5] The reasons are among others the distance of structures, poverty, illiteracy, poor reception in health facilities and certain habits and customs. He also believes that all these factors are maintained by a lack of information and awareness. [5]

The improvement of the delivery rate at the health huts require the presence in each health Hut of a matron who will necessarily undergo training at least six weeks at the health center. The initiative "Badjénou Gokh" currently advocated by the ministry of health could help ensure active monitoring of pregnant women from the beginning of pregnancy until delivery. This initiative is a sponsorship strategy of targets of maternal and newborn health by women leaders. These women work in their community to help women of childbearing age in their choice of family planning, providing support to women sponsored for monitoring prenatal consultations, and assist in childbirth by ensuring that services be accessible. [6]

The results show that breastfeeding is widely practiced among these mothers of children 0 to 59 months (97%). However, it is clear that it is not exclusive, since 26.1% of them said they had given food supplements in the three days following the birth. It is the same for giving breast which is not premature because

only 47% gave breast within the first hour. These results are identical to those of the basic survey where only 45% of women practicing early breastfeeding and 46% exclusive breastfeeding. [4] Exclusive breastfeeding, recommended by WHO and the Ministry of Health for the first six months of life allows the child to acquire maternal antibodies and essential nutrients. In addition, breast milk, being sterile, can avoid diarrhea and other diseases. [7]

However, in order to improve and promote appropriate feeding practices among these mothers, special emphasis must be placed at these health huts to promote better feeding practices. Any meeting of the community health worker (CHW) or matron with a pregnant woman should be an opportunity to address the feeding of the newborn and especially breastfeeding. The CHW must always assess the experience of the mother, knowledge, desires to provide information on the modalities of implementation of breastfeeding. But this information alone, delivered individually or in groups, has a limited impact on the rate of exclusive breastfeeding and duration of breastfeeding. [8] However, women's participation in circles of solidarity discussions or care group on this theme could strengthen the practice of this AME.

Our study showed that 42% of children presented an ARI. Of these children, more than 2/3 have sought a remedy in a health facility. However this action is not immediate because only 36.5% of mothers with children have sought care the same day at the health center. These results are not very different from the basic survey here the prevalence of ARI was 40%. Thirty-eight percent (38%) had sought recourse within 24 hours against 43% in the following days. Forty-one percent (41%) of mothers had gone to the health Hut. In our study, the continuing low support for ARI at Community level could be explained by ignorance by the people in the supply of this service in the health Hut. This is corroborated by the survey data which show that only 47.2% of mothers knew that support of simple ARI cases was available at the health Hut. It should also be noted that among these children with an ARI, a significant proportion (23%) remained without care remedies. The use of traditional medicine, which was 9% at the basic survey, went to 4.76%.

The revitalization of the management of ARI at the Huts will necessarily involve continuous availability of cotrimoxazole because the latter was estimated at only 41% in the basic survey [4]. Likewise, supervision of health workers should be regular for strict control of the management of ARI even if a study in the health district of Sédhiou showed a performance of the CHW at 72% [9].

In our study, the prevalence of fever was 42.3% among children aged 0 to 59 months while it was 38% in the basic survey [4]. The use of a health facility on the same day is still low (35.4%). It is the same for the referral at the Hut (34.9%). This low score is all the more paradoxical that all CHWs have received training on the treatment of malaria. The posters on the support are also available in Huts. This low attendance seems to be reinforced by the low level of knowledge of the service offering at the Hut because 38% of women are unaware of the availability of this service at the Hut. To better revitalize the management of malaria, the CHW must be trained in the use of rapid diagnostic test. Also, the treatment of malaria at home (PECADOM) is a way to improve access to treatment in the community especially the remote areas, difficult to reach. [10]

## **2. Quality of services at the Hut**

As part of the offering services, aspects such as cleanliness of the yard, premises and infection prevention were assessed in this study.

In terms of the cleanliness of the yard and premises, additional efforts must be made because 13 of the 19 huts visited were found fit contrary to the basic survey where 20 of the 23 huts visited were found fit. It is also about the prevention of infections which is very low as practiced by 8 of the 19 huts visited. The most problems known are the lack of decontamination solution, no sorting of waste and sometimes the lack of equipment of the prevention of Infection (plastic bags, the existence of brush, sterilization equipment). Support should be provided by the health district for CHW training on infection prevention.

## **V. CONCLUSION**

Two years after the start of the revitalization program of health huts of the District of Goudomp, the implementation was evaluated through this quantitative study. The mid-term review has revealed the persistence of certain practices such as home births (48.5%), delay in treatment remedies for fever, ARI, diarrhea in children 0-59 months. All these practices are supported in part by the poor knowledge of the offering service in the Huts. Thus, the implementation of strategies involving women, youth will diminish these harmful practices for the health of the community.

However, it is necessary to continue the expansion of the project in all district health huts and revitalize community participation in the implementation of care group. Some associations like the GPF and youth groups must also be revitalized to enable greater involvement of populations. The success of this project will undoubtedly improve the reduction of maternal and child mortality.

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