

## Monitoring of Health Centers Under the Pcima Surge Approach

Authors: Samou Diarra, Yiriba Diarra, Moriba Goïta, Inhissa B. Bengaly, Awa Diallo, Seydou Doumbia, Bakary Sidibé, Singou Dembélé, Issa Goïta, Youssouf Kamaté, Arouna Dembélé, Thierno A. Dia, Youssouf Traoré, Djigui Sylla.

Author Correspondent: Samou DIARRA, Health Center of Reference of Kayes, Mali, Region of Kayes, Area: Lafiabougou: Tel: 75 16 60 07/62 30 55 22.

### Abstract

**Introduction:** PCIMA Surge is a new innovative approach applied in the management of acute malnutrition peaks in care centers. It was implemented for the first time in the Kayes health district in 2018. Monitoring of activities highlighted a difference between nutrition supervision in the surge centers and the usual one. It is in this context that this work intervenes to describe the mechanism for monitoring nutrition activities in the context of the implementation of the surge approach. **Methodology:** This is a retrospective cross-sectional study on the monitoring of 30 surge centers in the Kayes health district in 2019. **Results:** Two types of monitoring were developed as part of the approach (Remote monitoring and organization of supervision missions). Remote monitoring has been shown to be promising and applicable to various health programs. The process of supervising nutrition activities at the level of the surge centers was distinguished by the involvement of local officials, namely the sub-prefects and mayors. The observation on the implementation of activities was characterized by a favorable trend concerning performance indicators, community activities. The actors interviewed had favorable opinions on the PCIMA Surge approach. Also, the supervisors reported much strength. **Conclusion:** Monitoring nutrition activities as part of the surge approach differs from that usually carried out. Remote monitoring through telephone calls coupled with supervision missions served as an anchor to better monitor the implementation of the approach in the district. Regarding the importance of monitoring in the success of the implementation of the approach, vigorous efforts must be dedicated to it in order to achieve the objective of surge which is the strengthening of the health system.

### 1. Introduction

PCIMA Surge is a new approach applied in Mali to manage peaks of severe acute malnutrition. The Surge approach within the framework of the PCIMA makes it possible to increase the resilience of the health system so that it is able to provide quality services for the management of acute malnutrition at all times, especially during periods of high demand when the capacity to save lives must be greatest without compromising the capacity and responsibility of government health actors.

The need for this approach and a framework were first proposed in an article published in September 2010 in the Field Exchange, the authors of which are Peter Hailey and Daniel Tewoldeberha. The approach has been described as a way to avoid intermittent emergency support associated with ongoing "emergency" programs; by making it possible to use and rather

strengthen the ability of the health system to respond to recurrent problems of acute malnutrition. Under the leadership of an international non-governmental organization (NGO), Concern Worldwide; a number of tools have been developed to support this concept. Thus, a pilot project was launched in Kenya from May 2012 to the end of 2014. Fourteen health establishments in Marsabit county were involved. These efforts were extended to Kenya in 2014 and 2015 to three other counties (Wajir, Baringo and East Pokot) in 24 more health facilities, with support from Save the Children, Islamic Relief and World Vision. Concern also implemented the surge approach in the Karamoja region of Uganda in 2009 and 2012, in addition to carrying out preparatory work in Niger [1].

In Mali, the approach was implemented for the first time in Mopti in 2017 by the NGO Save The Children. In August 2018, training of trainers on the approach took place in Bamako. The Kayes district nutrition manager (RND) participated in this training.

Then, a series of activities were initiated in the district:

- An orientation workshop for administrative, health authorities and district partners on the approach in the presence of the prefect of the circle in September 2018;
- A training workshop for DTCs (Technical Director of the Center) and presidents of ASACO (Community Health Association) on the approach in which 30 DTCs, 30 presidents or members of ASACO, 2 URENI agents took part (recovery and intensive nutritional education unit) of the CSRéf (Reference Health Center). This workshop was held from September 27 to 30, 2018.
- A training workshop for district facilitators (12 participants) was held from November 6 to 8, 2018.
- A workshop to formalize commitments in favor of surge actions was held from January 21 to 22, 2019, in which 122 participants took part.
- The establishment of the PCIMA Surge coordination committee for the coordination of the implementation of the approach in the district in January 2019.

In addition, the district participated in the training workshop on local and communal resource mobilization techniques in order to support health actions, in particular the CMAM Surge response plans. This workshop was organized by "Save The Children International" with technical and financial support from certain NGOs (IRC, Tdh and COOPI). At this workshop, it was agreed to give the name "PCIMA Surge" to the approach in the Malian context [1]. In order to achieve the expected results of the approach, rigorous monitoring was necessary. The monitoring mechanism applied in the context of PCIMA Surge was different from that usually carried out. This work aims to describe this mechanism in order to highlight the specific additional activities in a surge context which must be taken into account in an effective application of the approach.

## **2. Objectives**

### **2.1 General objective**

Describe the mechanism for monitoring nutrition activities implemented as part of the PCIMA Surge approach in the Kayes health district in 2019.

### **2.2 Specific objectives**

- Describe the monitoring of remote health centers conducted by the district;
- Describe the process of supervising nutrition activities as part of the surge approach;
- Characterize the observations made through supervision.

## **3. METHOD**

**3.1 Study framework:** Kayes health district.

**3.2 Type of study:** It is a transversal, descriptive and retrospective study.

**3.3 Study period:** Between April and September 2019.

**3.4 Sample size:** The evaluation concerned 30 health centers which implemented surge.

### **3.5 Inclusion and non-inclusion criteria**

- Inclusion criteria: All of the health centers that implemented the approach were included.
- Non-inclusion criteria: The non-surge health centers and the URENI of the CSRéf.

### **3.6 Variables**

The variables used concerned:

- The display and filling of follow-up supports in the health centers that have implemented the surge approach called here surge centers (the calendar of seasonal events, the MAS admission curve, the long-term planning table);
- The resolution of the gaps in the services of the minimum package of activities (PMA) identified during the implementation of the approach at the surge centers;
- Difficulties related to resolving gaps;
- The thresholds of the surge phases reached during the supervised period;
- The adequacy of the surge phase thresholds with the capacity of the staff;
- The evaluation of certain sensitive activities of the normal phase (systematic passive screening for acute malnutrition at the center, quarterly active screening for acute malnutrition at the community level (at the level of the health area), monthly meeting of the " ASACO with community intermediaries, carrying out preventive surveillance of children (PES), carrying out

nutritional demonstration sessions, carrying out semi-annual monitoring of health center activities);

- The proportion of activities planned and carried out during the different surge phases;
- The financial participation of the actors (financial contribution of the ASACOs, of the town hall for the realization of the various planned activities);
- Interviews with stakeholders (DTC, ASACO members, mayors, sub-prefects);
- Performance indicators for the management of malnutrition (cure, drop-out and death rates), reproductive health (prenatal consultation rate (ANC) 1 and 4, assisted delivery rate), vaccination (BCG coverage, Pinta 3, VAR);
- The frequency of morbidities (ARA (Acute Respiratory Infection), malaria, diarrhea in children under 5 years of age during the period evaluated);
- Strengths, areas for improvement of the health center and recommendations according to the supervisors.

### **3.7 Supervision procedure**

Supervision in the surge centers took place in two phases. A first phase involved ten centers and the second involved twenty centers. Some centers were supervised over four months (10) and the others were supervised over seven months.

The supervision team was made up of the sub-prefect of the administrative district, the RND, and an agent from the partner NGO. The sub-prefects were informed by the prefect of the supervision missions, which in turn informed the mayors. The DTCs were informed by the RND, which also informed ASACO.

The actual supervision was carried out by filling in two frameworks: The national framework for supervising nutrition activities at the cscm level and the specially designed canvas at the district level to assess the activities of the surge approach.

The supports of the health center used were those usually taken into account in addition to the establishment report, a copy of which was given to the centers, town halls and sub-prefects.

After the supervision, the feedback was given to the participants with the commitment of the actors to remove the identified bottlenecks.

**3.8 Data entry and analysis:** Data was collected through the national framework for supervision of nutrition activities at the cscm level and that developed by the district as part of the surge approach. They were entered in Words 2007 software and analyzed by SPSS 21 software.

## 4. Results

**4.1 Remote monitoring mechanism:** After the implementation of the approach in the surge centers, remote monitoring was carried out through telephone calls to first observe the development and display of monitoring tools (Calendar of seasonal events, the morbidity curve of severe acute malnutrition, the long-term planning table). Secondly, the implementation of certain actions planned in the normal phase (systematic passive screening at the center, quarterly active screening at community level, nutritional demonstration, monthly meeting with relays, etc.).

The strategy consisted in calling the DTCs, the presidents of ASACO or other actors to follow or encourage the implementation of the planned activities. A monitoring grid was developed for this purpose and was completed for three months (from January to March). Three activities were taken into account: the display of monitoring materials, the carrying out of a nutritional demonstration and the development of an operational plan for the health center which takes into account surge actions. The observation was as follows:

### - Display of monitoring materials

- In January 2019, 8 surge centers out of 27 had posted monitoring materials. Or a display rate of 29.6%. Three centers did not answer phone calls and did not call back;
- In February 2019, 21 surge centers out of 29 had posted. Or a display rate of 72.4%. The situation was unknown for one center;
- In March 2019, 27 surge centers out of 29 had posted. Or a display rate of 93.1%. The situation was unknown for one center.

These results show that over three months of regular telephone calls, display rates increased from 29.6% to 93.1% (Figure 1).

### - Nutritional demonstration

- In January 2019, 3 out of 24 surge centers had carried out at least one nutritional demonstration. Or a completion rate of 12.5%. The situation was unknown for 6 centers;
- In February 2019, 8 surge centers out of 28 (i.e. 28.57%) had carried out a nutritional demonstration. The situation was unknown for two centers;
- In March 2019, it was the same observation as in February.

### - Realization of operational plan (P.O.)

- In January 2019, 4 out of 24 health centers had developed a P.O.
- In February 2019, 5 out of 21 centers (which answered the call) had developed it;
- In March 2019, the observations were the same as in February.

Analysis of this result shows that the completion of activities has increased with the frequency of calls. Also, we note that there is a difference in the pace of implementation depending on the frequency of the call periods depending on whether the activity is dependent solely on the staff

(display of monitoring tools) or mixed (realization of nutritional demonstration (involving the management committee for disbursement and staff for implementation)), realization of PO (involving staff, health managers, town hall, etc.).

The remote monitoring strategy appeared to be more effective and efficient given the limited resources mobilized to achieve the results obtained. However, the deficit in communication credit made calls very irregular after March and thus impacted the efficiency of the said mechanism and the intelligence of the database.

Supervision process of nutrition activities as part of the surge approach in the cscom

Usually, according to the national PCIMA protocol [2], the supervision of nutrition activities in the cscom is done through the national supervision grid adapted to this level. This grid takes into account the existence of supports for acute malnutrition, vaccination, prenatal consultation, PES, support for collecting iodine test data. She also questions about their filling methods. Certain other aspects are taken into account such as: the availability of materials and equipment, the mastery of the care protocol by the technician and its application, the monitoring of community activities, etc. Since this grid does not take into account very few aspects of the PCIMA Surge, a framework has been developed by the district for this purpose to fill the gap. The latter, like the national supervision grid, includes items and ratings. The items discussed related to the display and filling of monitoring tools (calendar of seasonal events, the MAS admission curve, the long-term planning table), the assessment of PMA gaps, difficulties related to the resolution of gaps, the surge phases reached, the adaptation of the thresholds of the different phases to the capacity of the staff, certain activities of the normal phase (systematic passive screening for acute malnutrition at the health center, active quarterly screening for acute malnutrition in the community, carrying out nutritional demonstration sessions, organizing monthly meetings, carrying out preventive surveillance of children, carrying out monitoring), the percentage of actions carried out on actions planned in the alert, serious and emergency phase. The surge framework developed brought together the financial contributions of the town halls and ASACO for the implementation of the planned activities. One of its sections was devoted to collecting opinions from DTCs, ASACO members, mayors and sub-prefects on the surge approach, as well as the difficulties linked to the management of malnutrition. The final parts of the outline dealt with indicators of FIPI, immunization, reproductive health, number of cases of ARI, malaria and diarrhea. Were also taken into account, the strengths and weaknesses of the surge centers according to the supervisors as well as their recommendations; corrections made during supervision.

Elsewhere, the surge canvas also assesses two indicators that help to determine the degree of implementation of surge activities. These are the center surge coefficient and the center surge status.

The surge coefficient is the quotient between the points obtained by the center over the total of achievable points multiplied by 100. It makes it possible to evaluate the surge status of the center.

The surge status is the interval within which the surge coefficient of a center is found. From 0 to 33%, the status is said to be low (the activities of the implementation report are weakly carried out). From 34 to 66%, the status is average (said activities are moderately carried out). From 67 to 100%, the status is said to be high (the activities are at a high level of execution).

During the supervision process, the surge canvas and the nutrition supervision grid were all filled in and the restitution took account of all the data collected.

The particularities retained from supervision as part of the surge approach were:

- The participation of the sub-prefects in the supervision

Their presence encouraged the other decision-makers (ASACO members, the mayor, the village chief, etc.) to be present at the return of the supervision. The meeting of the latter around the problems of the center promotes their resolutions. This involvement was very useful for the identification of the bottlenecks and their resolution. Usually, the supervision teams only faced a few people to make the restitution in the absence of any representative of the town hall and sometimes of ASACO. Whenever the sub-prefects were present, the presence of the latter was also noted.

The difficulty in adding the sub-prefect to the supervisory team was financial and it was found that the benefit far outweighs the said difficulty.

- Restitution of supervision as a framework for advocating for nutrition activities

Given the presence of the main decision-makers in community health, the supervisors always started the restitution by making a plea before addressing the findings. Systematically, they returned to the definition and types of malnutrition, its causes, its harmful consequences on the development of the village, the commune, the country. They also addressed the roles of the various actors in the fight against malnutrition (village chief, mayor, asaco, DTC, community relay, town criers, community associations, etc.). Knowing that the information is at the beginning and at the end of the stages of behavior change, these pleas have had the advantage of raising awareness of new targets, convincing decision-makers to invest in actions to fight malnutrition.

- The use of additional tools outside the usual grid

This aspect has already been dealt with.

- Duration of supervision

The duration of supervision under the surge approach seemed longer than usual and was 6 hours on average.

### **4.3 Findings**

Following the supervision of the 30 surge centers, the findings were as follows:

### **3.3.1 Surge centers**

Among the health centers included, 90% (27 out of 30 centers) were cscom, 10% (3 centers) were secondary health centers (CSS).

The cscom are health establishments created and managed by ASACOs by fulfilling the criteria for operating a cscom and having received approval from the competent authorities for this purpose.

CSS are health establishments that can carry out cscom activities but do not have status. The health orientation law does not mention a secondary health center. The CSS are created and managed by management committees generally in the pay of the village or of a village association officiating in a health area. They are local initiatives and generally not taken into account in state planning.

The health centers were managed by doctors in 46.7% of the cases, senior health technicians in 36.7% of the cases, a doctor specialized in Family Medicine / Community Medicine in 3.3% of the cases and by a health technician in 13.3% of cases.

The health centers were located in rural areas in 83.3% of cases and in urban areas in 16.7% of cases. Functional cscom represented 69.2% (18 cscom out of 26) and non-functional cscom represented 30.8% (8 cscom out of 26). Functionality data was not available for a cscom. The functionality of CSS is not assessed by health policy because it is not taken into account in state planning.

The coefficient of surge of the centers has evolved between 15 and 65%. The average surge coefficient was 45.25%.

The surge status was medium for 80% of the centers and low for 20%.

The majority of low surge status centers were run by doctors (4 out of 6 centers). However, a statistically significant link was not found between the rank of the centre's technical director and the surge status ( $\text{Khi}^2 = 1.916$  and  $P = 0.590$ ).

### **3.3.2 Monitoring materials**

Over 60% of the centers had displayed seasonal event calendars, MAS admission curves, long-term planning tables and only 10% had filled them out correctly.

### **3.3.3 Adaptation of the centre's capacity to the phase thresholds**

In total, 80% of the centers (24 centers) felt that the phase thresholds were adapted to their capacities and 16.7% or 5 centers found the opposite.

### **3.3.4 Addressing gaps**

Overall, 23.3% of the centers resolved 75 to 100% of their shortcomings; 30% (9 centers) were between 51 to 74%; 26, 7% of the centers (8) were between 26 to 50% and 20% or 6 centers were between 0 and 25%.



The difficulties cited by the actors linked to the resolution of the gaps were: Deficit in the planning of activities by the DTCs, the deficit in reminding the gaps to the competent authorities, the departure of certain DTCs trained in PCIMA Surge, financial difficulties, the communication deficit between the actors.

### **3.3.5 Phases reached by health centers**

In total, 90% of the health centers (27) remained in the normal phase during the supervised periods and 6.7% (2) reached the Alert phase. Information was not available for a health center.

### **3.3.6 Carrying out of activities**

#### **- Systematic passive screening**

In 60% of health centers, systematic passive screening was carried out. However, passive screening was not systematic in 30% of the centers (i.e. 9 centers) and 10% did not do passive screening or 3 centers.

#### **- Quarterly Active Screening (DAT)**

Of all the surge centers, 66.7% carried out at least quarterly active screening. In addition, others were around 5 DAT. However 33.3% (9) of the health centers had not performed any DAT during the supervised periods.

#### **- Monthly meetings between ASACOs and community relays**

During the supervised periods, 16.7% (5) of the health centers carried out the monthly meeting according to the planning (that is to say, one meeting per month). Also, 40% (12) of the centers held meetings without respecting the planning. And 43.3% (13) did not have any monthly meetings.

#### **- Preventive Child Surveillance (PES)**

In total, 63.4% or 19 health centers performed SPE and only 13.3% or 4 centers performed it on a regular basis. Also, 23.3% (7) of the centers did not perform an EPS.

#### **- Nutritional demonstration session**

For the periods supervised, 13.3% (4) of the health centers had carried out nutritional demonstration sessions according to the schedule (ie one nutritional demonstration session per week). And 76.7% (23) of the centers carried out nutritional demonstration sessions, but not as planned. And 10% (3) of the centers had not carried out any nutritional demonstration sessions.

### **3.3.7 Bi-annual monitoring of health center activities**

Only 10% (3) carried out the semi-annual monitoring of the activities of the health center.

### **3.3.8 Performance indicators**

#### **- Cure rate of severe acute malnutrition**

In 96.5% (28) of the centers, the cure rate was good (respecting the sphere standard). In 3.5% of cases, ie a health center, it did not meet the standard sphere. Also, data was not available for a center.

- Abandonment rate

For 93.1% (27) of the centers, it was within the sphere standard and for 6.9%, it was below the sphere standard.

- The Death rate:

It was good in 100% of the surge centers and was 0%.

### **3.3.9 Indirect coverage for severe acute malnutrition (SAM)**

The indirect SAM coverage rate ranges from 31 to 356%.

In 93.5% (28) of the centers, indirect coverage was greater than or equal to 50% (The standard is between 50 and 70%) [2].

### **3.3.10 Vaccination indicators**

- BCG coverage: it was good in 53.6% of cases (15 out of 28 centers);

- Penta 3 coverage: 46.4% (13 centers out of 28) of the centers had good coverage;

- VAR (measles vaccine) coverage: the VAR indicator was good in 60.7% of cases (17 out of 28 centers).

### **3.3.11 Reproductive health indicators**

Prenatal consultation (ANC): the rate of ANC 1 was good in 14.3% of the centers (4 centers out of 28). The ANC 4 rate was good in 7.1% of the centers (or 2 centers out of 28).

### **3.3.12 Morbidities**

The number of cases of ARI in surge centers fluctuated between 34 and 1271 during the supervised periods. The number of cases of malaria evolved between 0 and 532 and that of diarrhea evolved between 0 and 411 cases. IRA has been the most encountered pathology.

### **3.3.13 Financial contribution of surge players**

- ASACO contributions

For the performance of quarterly active screening: ASACOs contributed in 60% of the centers (18 centers);

For carrying out monthly meetings with community relays: ASACOs contributed in 43.3% of the centers (ie 13 centers);

For the realization of the nutritional demonstration sessions: the ASACOs financed this activity in 80% of the centers (ie 24 centers).

The nutritional demonstration was the most funded activity by community health associations. The total contributions of ASACOs (25 centers whose data were collected) during the supervision periods was 2,159,900 FCFA compared to 635,000 FCFA for town halls.

The total contributions from stakeholders (City Hall and ASACO) were 2,794,900 CFA francs for the periods supervised.

### **3.3.14 DTC opinions on the surge approach**

- The strong points have been summarized in these words:

- The surge approach strengthens screening for acute malnutrition; the admission rate for SAM is improved;
- We are satisfied with surge. It's a forecasting tool. Surge leads the implication of the actors of nutrition and allows the realization of sensitive actions;
- The surge approach allows knowing the capacity of the center, the communication with the community through the relays and ASC. Also, it significantly involves ASACO;
- The approach allows the mastery of MAS admission peaks;
- The surge approach is a tool adaptable to all health services;
- The surge approach helps anticipate problems;
- Surge helps prevent malnutrition;
- Surge is a good tool, which makes it easier to react to the measures taken. The supports (implementation reports) guide a lot. Surge helps to avoid surprises;
- Surge integrates other activities, acts on prevention, allows monitoring of indicators. The whatsapp surge group (a whatsapp group was created to network all the surge actors) was an important contribution to the implementation of the approach;
- Surge helps reduce the flow of acute malnutrition by screening, nutritional demonstration sessions;
- Surge allows hanging the provisions before, during and after the admission peaks;
- Surge ensures the sustainability of actions to combat malnutrition;
- Surge helps in the fight against malnutrition; helps control the phases and helps with input management;
- Surge allows you to have the objectives in view. The actors are at the same level of information. The surge approach improves the framework of health activities;
- Surge strengthens systematic passive screening. Monitoring of admissions is reinforced;

- Points to improve:

- Shyness in the funding of activities by certain ASACO;
- The delay in the provision of implementation reports in health centers;
- The surge approach is laborious;
- The costs of the activities are based on the community, which could cause delays;
- Deficit in carrying out actions;
- Lack of means for certain town halls and ASACO;
- Low involvement of certain town halls, weak motivation of the relays (transport);

- Poor monitoring of surge actions;
- Surge requires a lot of staff, non availability of MAM inputs permanently.

- Recommendations

- Ensure compliance with commitments by town halls and ASACOs;
- Have the CAM (mutual assistance agreement) signed between ASACO and the town hall;
- Support the DTC in the telephone communication (Grant of communication credit per month),
- Train staff in monitoring,
- Recruit staff;
- Train the new DTCs on the surge approach and support the financially deficient town halls and ASACO;
- Organize a surge monitoring workshop;
- Strengthen surge supervision;
- Execute the planned activities monthly, motivate the relays;
- Transform certain secondary health centers into units for the treatment of the malnourished;
- Make available the inputs for the management of moderate acute malnutrition.

### **3.3.15 Interview with ASACO**

The ASACO unanimously affirmed that the approach was a good mechanism, because they believed that it would: guide ASACO support, raise awareness, increase attendance at health centers, strengthen screening and taking care of the malnourished, of generating a strong implication of the ASACO, of bringing together the key actors (town hall, ASACO, staff, administration around the issue of nutrition), of strengthening collaboration with the DTC.

The majority of ASACO have highlighted the financial difficulty for surfing activities because the town halls contribute little.

The ASACO also recommended strengthening supervision, perpetuating activities, carrying out surge actions, raising community awareness, planning activities to be carried out by the DTC.

### **3.3.16 Interview with mayors**

Mayors felt that the surge approach was a good strategy, that it helped find solutions to problems, that it supported nutrition. Some believed that the approach was a school for mayors that it helped identifies gaps. Others have asserted that the PCIMA Surge helps to understand the management of malnutrition, to bring together the main players in nutrition. According to them, the surge approach would allow open and effective communication between the actors.

As difficulties, some mayors have indexed the difficulty in mobilizing financial resources, the absence of the contribution of the town hall, the low frequency of supervision. They recommended the sustainability of the approach, the realization of planned activities.

### 3.3.17 Interview with the sub-prefects

The sub-prefects considered that the surge approach allowed the effective management of the phases, the detection of cases of malnutrition, to adapt the response plans, to involve the administration and the town halls. They found as difficulties, the weak involvement of mayors, and the limitation of financial resources. The sub-prefects recommended ensuring the continuous training of actors for a better understanding of the approach, the expression of needs to mayors by the ASACOs, to specify the tasks of ASACO and the town hall, to strengthen the followed and "tighten the belt".

### 3.3.18 Supervisors' opinions

- The strong points:
  - Display and filling of supports;
  - Contribution of ASACO and City Hall (2 municipalities);
  - Important significant mobilization of financial resources by the local level (2,789,800 CFA francs);
  - Good indirect coverage of cases of severe acute malnutrition;
  - Carrying out quarterly active screening;
  - Realization of nutritional demonstration sessions;
  - Participation of sub-prefects, mayors or representatives in supervision;
  - Availability of MAS inputs during the period;
  - Rate of Healing, Abandonment and death in the sphere standards in most health centers;
  - Good BCG and VAR levels in most health centers.
  
- Points to improve
  - Lack of funding for surge activities in many municipalities (93.3%);
  - Insufficient staff trained in IYCF (infant and young child feeding);
  - Lack of IYCF protocol in some centers;
  - Deficit in carrying out monthly meetings according to planning in the majority of health centers (83.3% or 25 out of 30 centers);
  - Morbidities not taken into account in the long-term planning table;
  - Deficit in the implementation of annual operational plans by ASACO;
  - Lack of recruitment/motivation of nutrition officers in two surge centers;
  - No motorbike to carry out the advanced vaccination strategy in a center;
  - Lack of electricity and fridge in two centers;
  - Speculum deficit, blood pressure monitor, dressing materials, bedpan in some centers.
  
- The recommendations
  - Ensure the financial contribution of the municipalities for the implementation of activities;

- Train the adequate number of staff on IYCF;
- Provide health centers with ANJE protocol;
- Take morbidities into account when developing long-term planning;
- Ensure the development of operational plans for health centers;
- Ensure that monthly meetings are held with community relays as planned;
- Recruit or motivate nutrition officers in two surge centers;
- Pay attention to a local contribution to pay a motorbike for the center in order to correctly carry out the advanced vaccination strategies (NB: this recommendation has been implemented. Indeed, all the villages in the area, plus ASACO, the town hall, the association of young people and goodwill have subscribed to pay a motorcycle at 400,000 FCFA);
- Provide centers with deficits in speculum, blood pressure monitor, dressing materials, bed basin (The centers concerned were provided with these materials after supervision).

## **5. Discussion**

The evaluation concerned 30 health centers which implemented the surge approach. The limit of the study remains the supervised periods which were different for the two phases of supervision.

### **5.1 Remote monitoring mechanism**

The remote monitoring established by the health district through telephone calls has made it possible to improve the displays of monitoring supports in health centers, as well as the carrying out of nutritional demonstrations and the development of the operational plan. However, we note that the more the stakeholders for the realization of the activities are mixed (asaco for the financing, DTC for the realization; or the asaco, the town hall, the technical staff for the realization of the operational plan); plus monitoring focused on DTC (DTC call) struggles to advance activities. The duration of follow-up having been short (3 months). The strength of the findings remains weak for generalization. The process is still promising. The health district could apply it to the various programs (nutrition, reproductive health, vaccination, epidemiological surveillance, mass campaigns, etc.) to monitor the progress of activities and the recommendations arising from supervision missions. Remote monitoring of the implementation of activities was not covered by our discussion documents [3, 4].

### **5.2 Participation of the sub-prefects in supervision**

The sub-prefects are the administrators representing the State in the boroughs. Usually, the supervision of nutrition activities was carried out directly by health district officials, who usually worked with nutrition officers, DTPs and a few members of the asaco (who are not usually decision-makers). Consequently, the same recommendations made at the end of previous supervisions were rehashed by subsequent supervisions without experiencing any execution.

The participation of the sub-prefects had the effect of bringing together the mayors or their representatives, the members of ASACO (with constant participation of the chairman of the board of directors and that of the management board); sometimes village chiefs. Which was not the case before surge? With the presence of the decision makers, questions of different acuity

were raised such as the signing of the mutual assistance agreement which is the basis of the cooperation between the town hall and the ASACO; staff recruitment, etc. Also, it was noted during the supervisions that the presence alone of the sub-prefects conferred even more solemnity on the framework.

During the activity, all the sub-prefects remained from the beginning to the end of the supervision except for one who; although busy managing a crisis in a community; was present at the opening and closing of the activity.

Kayes administrators were therefore engaged and available. And the added value of their participations came down to bringing together health decision-makers, discussing the community's health problems, strengthening advocacy for nutrition, giving local stakeholders a sense of consideration. Because many welcomed the presence of the directors and felt considered by this act.

The participation of the sub-prefects in the supervision of nutrition activities has been a success story following the implementation of the surge approach. Nutrition managers at different levels and sectors could replicate this experience in order to strengthen the anchoring of the fight against malnutrition at community level.

### **5.3 Supervision tools**

The supports used within the framework of PCIMA Surge supervision concerned the national grid for supervision of nutrition activities at the cscom level and the local one developed to take into account specific parameters of the approach. As the national grid (national framework) was designed and validated outside the surge context, it did not include specific items to be taken into account in the nutrition supervision of a surge center. This is why, the testing of the local grid made it possible to identify the essential components of the approach.

The information of the two supports required more time from the supervisors and availability from the participants. As part of an integration of the approach into the national policy for the management of malnutrition, it will be desirable to merge in order to identify the management of malnutrition in a context of PCIMA Surge. A harmonization of quotations will also be useful.

In the framework of joint supervision bringing together the district, the general directorate of health and public hygiene and the NGO Save the Children, other evaluation materials were used. However, the one developed at the local level was more exhaustive and adapted than all the other grids used.

### **5.4 The PCIMA Surge supervision process**

The before, during and after the supervision in the framework of surge mobilized the main actors, allowed to evaluate the components of the PCIMA as well as the realization of the planned activities, to make a restitution in the presence of the decision makers matched problem identification and resolution. The duration of the surge supervision is relatively long (6 hours on average) and appeared more laborious than usual. This is due to the large number of variables to

be taken into account. It seems more holistic because it incorporates various indicators of the PMA. It meets the objectives of strengthening staff skills; support for suggestions regarding deviations; to advocate for nutrition.

### **5.5 Findings**

#### **- Surge health centers**

The centers included were mainly cscom (90%). However 10% of the centers included were CSS. No statistically significant relationship was found between the types of health center and their surge status (Chi-square: 0.326 P: 0.568). This observation challenges. Because the cscom being institutional and normally benefiting from regular support from the health district. And the town hall should have a strong (high) surge status. While CSS does not necessarily have this support. The explanation could come from the fact that the CSS included are at the same level of equality as the CSCoM included vis-à-vis the health district (management of a health area, benefiting from the support of the district). Another explanation could be the weakness of municipal funding to support surge activities.

#### **- The mobilization of local actors (decision makers)**

The presence of local decision-makers such as the sub-prefect, the mayor, the president of asaco, the president of the cscom management committee, the DTC during the supervision of nutrition activities remains a first in the history of activity monitoring of health in the circle. The gathering of such personalities is inclined to find solutions to the problems posed because the main stakeholders participate in the resolution process.

The participation of sub-prefects in supervision has several interests:

- Information of mayors for their participation in the activity;
- Show the various stakeholders that the issue of nutrition or the health of populations is of the utmost interest to the authorities;
- Reconciliation with citizens;
- Participation in the process of monitoring the development activities of the administrative district and in the problem-solving process;
- Encouraging actors to keep their commitments;
- Recall the legal provisions of the State if necessary;
- Possibility to discuss other subjects (negotiation, conciliation between members of the asaco);
- Monitoring of commitments through meetings of the SAP (Early Warning System);
- Mobilization of other actors (town hall, asaco, village chief) for the activity;
- Advocacy to raise awareness and mobilize stakeholders;
- Build the confidence of ASACO, the staff.



The participation of mayors in supervision has several interests:

- Awareness on the issue of nutrition;
- Information on the state of health of the population of the municipality or the health area;
- Reconciliation with citizens;
- Participation in the process of monitoring the health activities of the commune and in the problem-solving process;
- Information on the functioning of the joint committee (the joint committee brings together members of ASACO and city councilors to sit on their respective commitments contained in the CAM);
- Make clarifications regarding state subsidies for health;
- Commit to bear the costs inherent in solving a problem;
- Deepen more knowledge on the functioning of the health system and the roles of the actors involved;
- Monitor the implementation of P.O. (cscom operational plan);
- Build the confidence of ASACO, staff;

The participation of the various decision-makers (sub-prefects, mayors, members of ASACO) reinforced the quality of supervision and enabled decision-making to resolve sensitive problems in the centers (purchase of motorbikes for carrying out advanced vaccination strategies, purchase of care equipment (speculums, blood pressure monitors, thermometers, latrine renovation, installation of electricity in the center, etc.), financial support in the context of carrying out nutritional demonstration activities, active screening, monthly meetings.

If the mobilization of local nutrition actors was successful during the supervision, one may wonder what its impact was on the engagement of mayors. Indeed, the results of the implementation of the surge approach to the health district show a low financial contribution from mayors [5]. Analysis of this situation leads to the following questions: Is it due to a financial problem which mayors mentioned during their interviews; would it be a limitation of the number of joint monitoring in the field which would explain it; would it be a deficit of adhesion on their part?

In all cases, whatever the financial difficulty, it was suggested to the mayors to mobilize the goodwill of the municipality in order to overcome this difficulty (like the health area which mobilized the community to pay a motorbike for around three months at 400,000 Fcfa).

- Surge activities

The supervision could see the favorable state of the majority of the surge activities. In fact, more than 50% of the centers included had resolved 50 to 100% of their shortcomings, 90% of the centers were doing passive screening, 66.7% of them had carried out at least one DAT, 56.7% held monthly meetings. Also, more than 90% of the centers had carried out nutritional demonstrations. The three performance indicators (cure rate, dropout rate, and death rate) met the

standard in more than 93% of the centers supervised. Indirect coverage of malnutrition was good in 93.5% of the centers. BCG and VAR coverage was good in more than half of the centers. We should also note the financial contribution of asaco and town halls which was more than two million CFA francs.

If in general, the figures were glowing, however efforts are still required on several levels. Indeed, in 40% of the centers, passive screening was not systematic or it was not carried out; 33.3% of the centers did not carry out any DAT. Only 16.7% had scheduled monthly meetings and 43.3% had not performed any DAT. Also only 13.3% performed SPE on a regular basis; the same was true for the nutritional demonstration (13.3% did the activity according to the planning). The Pinta 3, CPN 1 and 4 covers remained weak.

The assessment of the implementation of the surge approach in the district shows a gradual improvement in the variables evaluated during supervision: the PCIMA indicators (recovery rate, abandonment, death) met the sphere standard in 97 % of centers against 93% during supervision. Financial contributions from the local level (asaco, town halls, and other contributions) amounted to 8,072,074 CFA francs compared to 2,794,900 CFA francs. The number of centers having made no DAT was 21.42% (43.3% during supervision) while the centers which carried out at least one DAT were 78.57% (66.7% during supervision). Indirect coverage was good in 97.6% of the centers (93.5% during supervision).

The recommendations

- Involve the sub-prefects and mayors in monitoring nutrition activities;
- Strengthen remote monitoring of the execution of activities;
- Extend the implementation of the surge approach to other health centers in the district;
- Use supervision as a framework for advocating for nutrition.

### **Conclusion**

The supervision of nutrition activities within the framework of the PCIMA Surge proved to be different from the usual supervision. The participation of the sub-prefects and mayors was decisive in the success of the activity. The use of a grid adapted to the context of the surge approach is necessary to take into account the essential parameters of the latter. The positive findings in the surge centers make it possible to maintain that the surge approach actively participates in strengthening the health system.

### **Bibliographies**

1. S. Diarra, B. Ouologuem, O. Touré, M. Doumbia, Y. Diarra, M. Cissé et all. Implementation of the PCIMA Surge Approach in Mali in 2019 Review of the Kayes Health District. IJM SHR. 2020 Juin No. 03, Vol. 4: 1-12.
2. Protocol for the integrated management of acute malnutrition in Mali. Version revised in 2017. p230.

3. Independent evaluation of the cmam model surge pilot. Concern Worldwide, Center for Humanitaria Change 2015. p60.
4. Ministry of Health. Surge approach for. Integrated management of acute malnutrition. Operational guidelines for health workers. Volume 1, August 2016. P73.
5. S. Diarra, M. Cissé, I. Dembele, M. Diabaté, I. Goïta, Y. Diarra et all. Process of Implementing the PCIMA Surge Approach in Health Centers. Kayes Experience. IJM SHR. 2020 Juin No. 03, Vol. 4: 67-85.

**Figure 1: Display rate of the follow-up supports according to the call periods**

