



# Case study on the mosquito net distribution campaign in Mali during the COVID-19 pandemic

## 1. BACKGROUND

Malaria is endemic in Mali, and its prevalence is 19% at national level, varying between the regions with, respectively, 30% in Sikasso Region and less than 1% in the Bamako district *(EDS-M, 2018)*.

In the context of prevention of malaria and management of resistance to insecticides, the National Malaria Control Programme (NMCP) organized a mass distribution campaign of long-lasting insecticide impregnated mosquito nets (LLIN) in Mopti Region (*1 to 8 June 2020*) and the Kayes, Koulikoro and Sikasso regions (*18 to 25 June 2020*). Two types of mosquito net, respectively standard mosquito nets and the new type of mosquito net, Interceptor G2 (IG2<sup>1</sup>), were distributed during this campaign (*see Figure 1*).

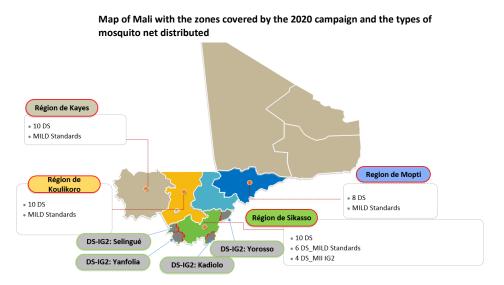


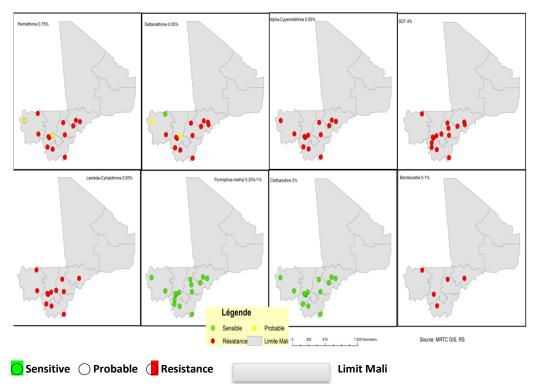
Figure 1 : Map of Mali with the zones covered by the 2020 campaign

<sup>&</sup>lt;sup>1</sup> <u>https://www.who.int/fr/news-room/q-a-detail/new-types-of-insecticide-treated-nets#</u>

This campaign was organized in a context where several regions of Mali showed evidence of resistance of mosquitoes to the insecticides used in the standard LLIN.

In the framework of the national malaria control programme (NMCP), four health districts (*Kadiolo, Selengué, Yanfolia and Yorosso*) in Sikasso<sup>2</sup> Region were chosen to receive a new type of mosquito net, the BASF Interceptor G2.

Sikasso Region was identified as one of the regions with the highest resistance to insecticides according to studies conducted by the Malaria Research and Training Centre (*MRTC*) and the Laboratory of Applied Molecular Biology (*LBMA*). Other studies during the last decade had already proved the high resistance of *Anopheles gambiae s.l.*, a major malaria vector, to various types of insecticide<sup>3</sup>, more particularly the class of pyrethrinoïds contained in standard LLIN.



**Figure 2:** Map of distribution of resistance of Anopheles gambiae s.l., a major vector of malaria, to various insecticides (2010-2019) in Mali

Thus, Mali was the second country, after Burkina Faso, to distribute, alongside standard LLIN, a new type of mosquito net, the Interceptor G2, which contains pyrethrinoïds and chlorphenapyr-based insecticides to

<sup>&</sup>lt;sup>2</sup> The Ségou was initially targeted in 2019 based on resistance to insecticides and the geographical proximity of the Burkina Faso Cascade region (Banfora) in which the resistance profile was aligned with the targets of the evaluation zone of the NNP project. Due to delays in the delivery of LLIN IG2 in Mali in 2020, Ségou was replaced by Sikasso for the 2020 distribution .

<sup>&</sup>lt;sup>3</sup> VectorLink – Mali ; Cissé et al, 2015 ; Cissé et al, 2017 ; Keita et al, 2016 ; A. S. Dao, 2020 (Pharmacy Thesis)

mitigate the effects of insecticide resistance of the vectors. It should also be noted that this campaign was organized in the context of the COVID-19 pandemic. Indeed, the first cases of COVID-19 were identified in the first quarter of 2020, just when the process of the LLIN mass distribution campaign was in the microplan preparation phase.

#### 2. IMPLEMENTATION

At the end of this multi-product campaign, some 7,479,747 LLIN had been distributed, of which 535,399 were IG 2. Mali carried out this campaign through a number of stages and essential actions as follows:

- ⇒ Coordination: The NMCP ensured that the key coordinating entities were in place at all levels and were operational with good collaboration and effective communication between the different levels (*National Technical Committee, Regional and local coordinating committees*), more particularly on aspects relating to the implementation of the allocation of LLIN and dissemination of the strategic changes introduced as a result of the COVID-19 context.
- ⇒ Clarity of roles and responsibilities: The various campaign documents contained a clear definition of the roles and responsibilities of the principal actors in the campaign, and at different organizational levels, which contributed enormously to effective coordination of the implementation phases of the campaign.
- ⇒ Adaptation of strategies to the COVID-19 context: With the context of the COVID-19 pandemic, the National Technical Committee (NTC), in collaboration with the various subcommittees, had to revise the strategies initially contained in the macroplanning documents to adapt the campaign to the context of the COVID-19 pandemic. Following the outbreak of the COVID-19 pandemic, two strategic approaches to the distribution of LLIN were adopted: door-to-door distribution of LLIN only in urban areas to avoid gathering of crowds around fixed distribution sites and the distribution of LLIN through fixed sites in rural areas, as the population there is less dense, which allows crowds to be organized with a guarantee of physical distancing. All the details of the revisions adopted were consolidated in in a document similar to a contingency plan, entitled "Operational Campaign Guidelines in the COVID-19 context".
- ⇒ Updating of the micro-planning framework: The microplans were finalized with the integration of the strategic revisions and the needs for inputs against COVID-19, which served as a reference for the acquisition of personal protection equipment (PPE) for all the campaign personnel and tricycles to allow the supply of LLIN by door-to-door distribution teams in urban areas.
- ⇒ Establishment of the timetable: Following the outbreak of the COVID-19 pandemic, the timetable was updated with the fixing of new dates for the campaign, respectively 1 to 8 June 2020 in Mopti Region and 18 to 25 June 2020 in Kayes, Koulikoro and Sikasso Regions.
- ⇒ Communication: Communication activities were adapted to take into account aspects related to the context of the COVID-19 pandemic, with revisions of the distribution strategy in terms of areas (*urban vs. rural*) and the allocation of five mosquito nets per household.

- ⇒ **Logistics:** "Last-mile logistics" with tricycles and carts was integrated in the microplans to ensure supplies to door-to-door distribution teams in urban areas.
- ⇒ Data collection system: the DHIS2 platform was used as a basis for the compilation and transfer of campaign data from community health centres (CHC) to higher levels (*district, region and central*). It should be noted that the DHIS2 platform has already been used in Mali's Health and Social Information System (SNISS) since 2013 and PSI Mali supported the extension of the parameters to adapt the platform.

# 3. THE MAJOR CHALLENGES FOR THIS CAMPAIGN

This campaign encountered considerable challenges, the most important of which were:

- ⇒ COVID-19: Organization of the LLIN distribution campaign in the context of the COVID-19 pandemic. The restrictions on travel and gatherings in the country affected the organization of many of the campaign activities. Thus:
  - The majority of preparatory meetings and workshops for the campaign were either reduced to the strict minimum of participants or changed to calls through the WhatsApp or Zoom platforms;
  - A large part of the campaign documents, tools and materials were revised to integrate the strategies adapted to the context of the COVID-19 pandemic;
  - The census of households and distribution of vouchers was cancelled and replaced with lists of households drawn up by village chiefs in collaboration with community health workers (CHW), which made the identification of households and the organization of distributions at fixed distribution sites more complex;
  - New activities emerged in the campaign process, such as quantification and acquisition of anti-COVID-19 supplies.
- ⇒ Delay in the arrival of IG2 mosquito nets in the country: the delivery of IG2 in the country was expected in 2019 and the region initially targeted for the IG2 was Ségou Region. These delays in the delivery of the IG2 in 2019 led to the decision to shift the deployment and distribution of IG2 from Ségou Region to four districts of Sikasso Region. This change of zones led to a significant quantity of IG2 being unused (*334,061 IG2*), and this remained in the central warehouse in Bamako after supplying the four districts (*Kadiolo, Selengué, Yanfolia and Yorosso*) with IG2 for the mass campaign;
- ⇒ Delay in the microplanning: the microplanning exercise was begun later than the original start date for the distribution of mosquito nets, which was envisaged in May 2020, and the COVID-19 pandemic further delayed the microplanning exercise;
- ⇒ Door-to-door distribution: The last-mile logistics proved a very complex task in certain parts of the urban areas of because the number of tricycles allocated was insufficient for the number of door-to-door distribution teams;
- ⇒ Lists of names of households instead of census-taking: It was much more complex to carry out the distribution at fixed sites by reference to lists of names of households provided by village chiefs , as in certain localities these lists did not account for all the households. The distribution of LLIN to

households which had not been included in the lists is the reason for certain high levels of household coverage (e.g. 159.64% in Koulikoro Region and 124.58% in Sikasso Region);

- ⇒ **The remaining stock after distribution**: A considerable stock of LLIN was left over after the distribution of some 190,497 LLIN, made up of 176,746 standard LLIN and 13,751 IG2 in the 4 regions (*Mopti, Koulikoro, Kayes and Sikasso*);
- ⇒ Waste management: The IG2 were delivered to households in packaging. However, in the key interpersonal communication messages (IPC), explanations concerning the management of packaging at household level were not taken on board. This lack of guidance on the management of individual LLIN plastic packaging in the community runs the risk, to varying degrees, that plastic waste or chemical residues from the LLIN will be scattered uncontrollably in the environment if the post-campaign communication does not take up this challenge;
- ⇒ Late payments: Cases of late or no payment of community health workers through the mobile payments system have been recorded and are largely linked to delays in the submission of supporting documents at community level.

## 4. IMPLEMENTATION, RESULTS AND LESSONS LEARNED

## 4.1. Coordination

The campaign was coordinated at national level by a National Coordinating Committee (NCC) through a National Technical Committee (NTC) and logistics, communication and monitoring and evaluation subcommittees. The subcommittees were responsible for drafting the macroplanning documents and monitoring the implementation of the various phases of the LLIN distribution campaign.

At regional and district level, regional organizing committees (ROC) and local organizing committees (LOC) were put in place, respectively, to coordinate and monitor the implementation at these levels under the supervision of the NTC.

The Regional Health and Public Health Department (DRS/HP), through the regional management team, is the technical body responsible for supporting the districts in the implementation of campaign operations by involving governors and prefects.

The health district, through the district management team, is the technical body responsible for involving the community health system (CSCom) in the implementation of the various campaign operations at district level in accordance with the guidelines set out in the campaign microplanning documents, by involving mayors, community health workers' leaders and village chiefs.

During the implementation of the campaign activities, the NMCP, PSI Mali, and regional and district management teams played a key technical role in the various campaign coordinating bodies.

The major challenges faced by the NCC and NTC were the restrictions on travel and gatherings in force in the country as a result of COVID-19, which affected the organization of a great many of the campaign coordination meetings and revisions of the campaign strategies. The utilization of new communication technologies (*Zoom between the central level and the regions*) and social networks (*WhatsApp between the health districts and*)

*the CSCom*) largely alleviated this situation, engendered as it was by the restrictions on gatherings related to the COVID-19 context.

The collaboration and communication between the National Technical Committee, ROC and LOC, especially aspects relating to the capping of the number of mosquito nets and the dissemination of the strategic changes introduced as a result of the COVID-19 pandemic.

**Lessons learned**: The context of the COVID-19 pandemic profoundly affected the coordinating capacities of the various campaign actors as a result of the restrictions on travel and gatherings, and led to the need to adapt classic campaign strategies with a view to limiting the spread of COVID-19 during the campaign activities.

The restrictions on travel and gatherings were a major obstacle to the coordination of the campaign at various levels. Thus, it would be important during the macroplanning stage to pay particular attention to the management and risk mitigation plan so that it is regularly updated to take account of the new challenges that might arise during the process of preparation of the campaign, such as those linked to the context of the COVID-19 pandemic.

The existence of a contingency plan to address these challenges in detail was a positive element of the coordination. In addition, as the country had previously organized LLIN distribution campaigns (4<sup>th</sup> LLIN mass destitution campaign), the macroplanning documents should address the aspects related to the management of LLIN users to provide households with clear instructions on the management of LLIN users.



Photo 1: Daily debriefing meeting during the campaign, Sikasso Region.

## 4.2. Microplanning

The microplanning exercise was conducted in a participative manner with the operational levels (districts). However, the process started later than the envisaged start of distribution of mosquito nets. The revisions of the distribution strategies required updating of microplans to integrate aspects concerning the adaptation related to COVID-19 (*quantification of PPE, updating of quantification of human resources, etc.*). It should ne noted that, as a result of the context of the COVID-19 pandemic, certain microplan frameworks were completed remotely.

**Lessons learned**: The bottom-up and participative approach to microplanning should be maintained, involving district level teams more. It should start as early as possible (*at least 3 to 4 months before distribution*) to prevent it upsetting the planned timetable for distribution of LLIN.

The process must keep needs and inputs in perspective with regard to the prevention of COVID-19.

When validating microplanning data, ensure that the data recorded on households and populations are correct and come from a credible source, and carry out triangulations with other sources of data (administration, forecasts of the General Household and Population Census – RGPH-, data from censuses in previous campaigns or data from the expanded programme on immunization - EPI)

## 4.3. Logistics

The logistics strategy comprised the identification and training of the principal stakeholders in the supply chain, the utilization of LLIN monitoring tools and a clear definition of the roles and responsibilities of the various personnel in the supply chain.

The purchase, tracking of orders and delivery of LLIN was coordinated by the NMCP, PSI and the Global Fund. At this level, the Mali Government demonstrated its commitment by granting an exemption from customs duties on campaign mosquito nets.

However, the delivery of IG2 to the country, which had been expected in 2019, was seriously delayed. This delay in the delivery of IG2 in 2019 led to the decision to shift the deployment and distribution of IG2 from Ségou Region to four districts of Sikasso Region, which showed a resistance to the pyrethrinoïd insecticides contained in standard LLIN.

With the COVID-19 pandemic, personal protective equipment was acquired for all the actors in the campaign (*masks, soap, hydroalcoholic gel*) then pre-positioned at district level.

As regards the transport of the mosquito nets, this was organized from central depots to district warehouses. Atlas Logistique made a contribution by providing free transport of LLIN to certain districts. From the district warehouses, a pre-positioning of LLIN was organized in the stores located in the Referral Health Centres (CSRF) and the Community Health Centre. Major involvement of village chiefs in the transport of LLIN between the CSCom and the villages was observed. It should be noted that in the urban areas, a "last-mile logistics" system was put in place to allow supplies to door-to-door distribution teams.

Table 1 shows the quantities of pre-positioned LLIN in the four regions at the end of the LLIN transport activities.

Table	1: Quantities of	of pre-positioned LLIN
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Total target populations	12,816,181 inhabitants				
Mopti Region	1,728,657 standard mosquito nets pre-positioned in 8 districts				
Kayes Region	1 646 200 standard mosquito nets pre-positioned in 10 districts				
Koulikoro Region	2,114,587 standard mosquito nets pre-positioned in 10 districts				
Sikasso Region	1,631,650 standard mosquito nets pre-positioned in 6 districts				
	549,850 IG2 mosquito nets pre-positioned in 4 districts (Kadiolo,				
	Selingué, Yanfolia and Yorosso) including a small quantity of 16,000				
	IG2 destined for routine distribution				
Total number of mosquito nets	7,670,244 mosquito nets pre-positioned in the 4 regions				

Quantity of pre-positioned LLIN in the 4 regions

# Lessons learned:

- Tracking of orders remains very important and any change in delivery dates of mosquito nets must be communicated in good time to stakeholders at all levels.
- The risk management and mitigation plan (*and the contingency plan, if any*) should contain back-up measures in the case of any delays in arrivals of mosquito nets in the country.
- Ensure from the microplanning stage that means of transport assigned to supply the doorto-door distribution teams are sufficient.



Photo 2: Loading trucks at the PSI-Mali warehouses en route to the districts/ Delivery of LLIN to the villages by cart

## 4.4. Social and behaviour change (SBC)

In the field of SBC, the principal interventions were centred on advocacy sessions at regional, district and community level, display of communication materials (*posters and banners*), social mobilization through town criers at community level and broadcasting of spots and organization of interactive programmes via community radio (*the collaboration with the Union of Free Radio and Television of Mali – URTEL contributed to good mass communication in outlying areas*).

With the revisions of the strategy in the context of the COVID-19 pandemic, all the messages were adapted to take account of both the LLIN distribution activities and the prevention measures in force against COVID-19.

Interpersonal communication (IPC) was also organized during the household visits for door-to-door distribution of LLIN (*urban areas*) and at fixed distribution sites (*rural areas*). This IPC focused especially on prevention of malaria with LLIN and the correct utilization of LLIN, on the one hand, and, on the other, respect for COVID-19 prevention barrier measures. The IPC messages delivered were well described in guidance notes provided to each distribution agent.

Although the LLIN were supplied in packaging, it should be noted that the key IPC messages envisaged did not address the question of packaging at household level. The potential risk associated with this situation is that the packaging is used in the household like other habitual packaging, although it could contain quantities of insecticide residues.

It should also be noted that, through all the communication activities, the NMCP had chosen not to inform households of the specific characteristics of the different types of mosquito net used in the campaign – standard LLIN and IG2.

Lastly, the microplanning documentation shows that aspects relating to the microplanning of communication activities remain perfunctory during the microplanning process.

## Lessons learned:

- Ensure that the aspects relating to SBC are properly addressed at both the macroplanning and microplanning stage and with an adequate budget;
- Ensure that a post-distribution communication strategy, with activities and a specific budget, are included in the communication plan. Specifically for campaigns where the LLIN come in individual packages, ensure that messages are delivered to households concerning management of the LLIN packaging in line with the campaign waste management guidelines;
- Whatever the option to communicate or otherwise concerning the multi-product aspect of the campaign, ensure that a plan to manage rumours is in place to address any rumours that may arise. This is all the more relevant with the multi-product aspect combined with the COVID-19 context.



Photo 3-4: Consultation and advocacy meeting with the political and administrative authorities in Mopti Region



Photo 5 : Town crier in the Massiricoro quarter, Sikasso District

# 4.5. Training

The various training courses on the campaign were organized in cascade. However, the context of the COVID-19 pandemic greatly affected the organization of training course. Thus:

 $\Rightarrow$  Training materials and modules were adapted to the COVID -19 context by incorporating messages on prevention and protection against COVID-19 during the campaign activities;

 $\Rightarrow$  The training of actors in the health districts and technical managers of the CSCom was adapted. Thus, the revised documents adapted to the COVID-19 context were shared by email and then short orientation sessions were provided from the central level, based on the documents sent. Handwashing facilities were in place at each entrance and physical distancing of the participants was respected;

 $\Rightarrow$  The training of distribution agents and town criers took place in short sessions and in groups of a maximum of 10 people, to comply with the measures restricting gatherings of more than 10 people;

 $\Rightarrow$  The participants in the training sessions all received PPE, and handwashing facilities with soap were installed at each training site;

At the end of the short orientation sessions, standard operating procedures (SOP) for the distribution strategy at fixed sites (*rural areas*) and SOP for the door-to door distribution strategy (*urban areas*) were provided to the trained distribution agents to offset any shortcomings linked to the simplification of the training.

## 4.6. Distribution of LLIN

In the COVID-19 context, the NTC made adjustments to the LLIN distribution phases. These adjustments consisted essentially of:

- ⇒ Adjusting the timetable relating to the distribution dates to allow the integration of COVID-19 prevention measures in the LLIN distribution activities and an increase in the number of distribution days from 5 to 8 days;
- $\Rightarrow$  Adopting a single phase door-to-door distribution strategy in urban areas, and:
  - ✓ Issuing each household with 5 LLIN (irrespective of the size of household) during door-to-door visits;
  - ✓ Setting the 5 LLIN on a surface and asking the recipient to take them without giving them to him hand to hand (respect for physical distancing measures) and marking the household visited with chalk;
  - ✓ Respecting all COVID-19 prevention and protection measures during interactions with members of households (*physical distancing, wearing a mask, disinfection of hands*);
  - ✓ Providing door-to-door distribution agents with guidance notes;
  - ✓ Delivering key interpersonal communication messages to members of the households visited.
- $\Rightarrow$  Adopting a strategy for fixed distribution sites in rural areas, and:
  - ✓ Installing a handwashing facility at each distribution site;
  - ✓ Respecting all COVID-19 prevention and protection measures during interactions with recipients at the site (*physical distancing*, *wearing a mask*, *disinfection of hands*);
  - ✓ Issue 5 LLIN to each representative of the head of household coming to the site;
  - ✓ Providing distribution agents at fixed distribution sites with guidance notes;
  - ✓ Delivering key interpersonal communication messages at the site.

However, the strategies to take account of internally displaced persons (IDP) were not clearly and adequately addressed, more particularly in the insecure zones (*Mopti Region*).

During the distribution, the allocation of 5 LLIN per household (based on the national average household size of 11 people) was not sufficient for some households and tiny communities where the size exceeds 11 people and where the proportion is not known.

It was also found that distributions based on nominative lists of households provided by village chiefs and based on LLIN stocks pre-positioned according to the microplanning database, proved much more complex, as some localities were left with huge remainders while others did not have enough LLIN to distribute.

**Table 2:** Summary of the results of LLIN distribution in the 4 regions (validated data)

Validated results of the distribution of LLIN in the 4 regions											
Region	Population microplan 2020	Number of households microplan	Quantity of LLIN microplan	Quantity of LLIN pre-positioned	Quantity of LLIN distributed	Households covered	Distribution rate	Household coverage rate	Remaining quantity		
Kayes	2,814,073	312,675	1,581,892	1,646,200	1,624,382	312,752	98.67	100.02	21,818		
Koulikoro	3,424,000	380,510	1,714,521	2,114,587	2,103,179	607,437	99.46	159.64	11,408		
Sikasso	3,737,496	415,207	1,966,053	2,180,800	2,162,438	517,264	99.16	124.58	18,362		
Mopti	2,840,612	339,112	1,646,238	1,728,657	1,589,748	317,950	91.96	93.76	138,909		
Total	12,816,181	1,447,504	6,908,704	7,670,244	7,479,747	1,755,403	97.52	121.27	190,497		

It should be noted that, after the distribution, there remained a residual stock of some 190,497 LLIN, including 176,746 standard LLIN and 13,751 IG2 across the four regions (*Mopti, Koulikoro, Kayes and Sikasso*).

## Lessons learned:

- If the option to use nominative lists drawn up by the village/district chiefs instead of a census of household is chosen, ensure that the key information on these lists (*number of households, size of household, etc.*) is used to ensure a sufficient supply of LLIN at the fixed sites;
- In the case of allocation of the same fixed amount of LLIN to all households irrespective of the size of the household, refer, if possible, to the average household size at "regional level" and even "district level;", and also consider as two households, cases of households where the size is more than double the national average, to eliminate as far as possible disparities that could be caused by reference only to a "national average" size household, and ensure that a large proportion of households will have enough LLIN for the needs of their household;
- IDP and other key populations should be identified during the microplanning at district level to ensure that they are registered and LLIN will be distributed to them.



Photo 6-7: Door-to-door distribution

/Organization of flows at fixed distribution site

## 4.7. Supervision, monitoring and evaluation/Management of data

The supervision was designed to support the various actors involved in the distribution of LLIN at all levels. It was carried out in cascade sequence by national, regional, district and local supervisors. Supervision tools were produced, then adapted to the COVID-19 context and used to ensure the deployment of LLIN in good order.

Thus, the supervision was organized at local, district, regional and central level.

The district, regional and central level supervisors also had the task of completing the rapid activity checklists to ensure their quality and geographical coverage of households.

The DHIS2 platform was used as a basis for the compilation and transfer of campaign data from community health centres (CSCom) to higher levels (*district, region and central*). The DHIS2 platform had already been deployed in Mali's Health System, but it was first used in the framework of a mass campaign in 2019 in the form of a pilot scheme, and then used of DHIS2 in the 2020 mass campaign represented an upscaling.

During the campaign, the platform provided daily data from the CSCom. Indeed, the DHIS2 platform was only accessible from the CSCom and the upstream stages of data collection were paper-based. Thus, the Centre Technical Directors (CTD) were responsible for the daily input of data into DHIS2 from paper media used at fixed distribution sites or during door-to-door distribution. A quality control of the data was in place at regional and national level, based on sample CSComs to ensure that the paper-based data and that recorded on DHIS2 were identical. For CSComs with poor Internet connection, the data transfer had to be done by daily calls or SMS to ensure that each district had daily campaign data. The DHIS2 also allowed the production of daily dashboards of key campaign indicators in the form of a histogram and data broken down by district and by region. These dashboards were accessible at all levels (*district, region and national NMCP*), which allowed taking operational measures based on the data.

The principal challenges that arose related to the completeness and timeliness of the data and bias in the transferred data. These challenges were largely linked to the fact that the data collection process was hybrid, part paper-based (*tally sheet and daily summary sheet*) and part on electronic media (*DHIS2*).

**Lessons learned**: In the case of use of DHIS2 during a mass campaign with upstream paper-based media:

- ⇒ The central level (*NMCP and SNISS*) must ensure that the campaign indicators are parameterized in DHIS2 so as to automatically reject aberrant data underlying most of the bias,
- $\Rightarrow$  The district level (SNISS Manager) must ensure that all the CSCom transfer data daily in DHIS2.



Photo 8: Reporting of campaign results: Sikasso, 3 December 2020

## 4.8. Community payment

For the campaign activities, mobile money mechanisms and bank transfers were put in place to ensure payment of the various actors involved in the campaign activities, especially distribution agents, minimizing interpersonal contacts.

Senior administrative and finance officers of PSI Mali and those of the NMCP are fully involved in the organization of mechanisms for paying campaign staff.

This experiment in payment was marked by delays in certain payments. Some community agents suffered delays concerning the submission of supporting documents to allow timely disbursement of money via Orange Money.

**Lessons learned**: The payment of campaign personnel is often compromised by various challenges, despite the commitment of the various stakeholders. The money transfer mechanism via Telecoms agencies cannot alone eliminate these challenges in the community payment

process. All the potential challenges, blockages/delays in the community payment process should be included and addressed in the risk mitigation analysis. The mitigation measures identified should be brought forward to ensure a more or less reliable community payment operation.

# 5. CONCLUSION

The 2020 campaign in Mali was a multi-product campaign in four regions with two types of mosquito net (standard and IG2).

Despite the outbreak of the COVID-19 pandemic and the restrictions on gatherings in place, the coordination structures put in place were strong and were able to ensure an optimal level of coordination of campaign activities.

The use of new technologies and social networks to maintain coordination despite the restrictions related to COVID-19 made it possible to keep the campaign process going up to the distribution of LLIN, the ultimate goal which the NMCP had assigned itself in collaboration with its partners. Mention should also be made of the capital role played by the DHIS2 platform in the collection and transfer of campaign data, thus limiting the storage of paper in data management. In addition, the use of the DHIS2, by making trends in the evolution of campaign data available in real time, served as an essential reference tool in decision-making at different levels.

For future campaigns, efforts must be made to draft campaign documents and produce microplans based on up-to-date population and household data. For that, collaboration with other entities (*EPI, administrations, statistics departments*) will be necessary to compile up-to-date population and household data.

Lastly, it is important to note that the challenges and lessons identified are not specific to the multi-product character of the campaign.