Haiti

Strategies for Strengthening Vaccination Programs in Poor Urban Settings: Lessons Learned and Recommendations from Cité Soleil



























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ACRONYMS

CCHW Comprehensive Community Health Worker

DEPI Directorate of the Expanded Program on Immunization

DSO Department of Health of the West Region

Interagency Coordinating Committee

IEC Information Education Communication

LOA Lot Quality Assurance

MPHP Ministry of Public Health and Population

WHO World Health Organization

NGO Non-Governmental Organization

PAHO Pan American Health Organization

HSS Health System Strengthening

I. EXECUTIVE SUMMARY

The Cité Soleil health zone is a very poor urban commune located within Haiti's Port au Prince metropolitan city. Based on data collected from a situational analysis of Cité Soleil (see Appendix I: Situational Analysis of Vaccination for more information), the commune's vaccination system faces several significant challenges specific to or exacerbated by the urban environment. Vaccination coverage is very low, primarily related to the problems with the organization of immunization services, such as:

- the inadequate and irregular supply of vaccines resulting in frequent vaccine stock-outs and the cancellation of immunization sessions;
- long waiting lines for mothers bringing their child for vaccination, leaving them with a poor experience, an unvaccinated child, and unwilling to come back;
- the unavailability of exhaustive data for planning;
- the lack of knowledge on the target population;
- the insecurity and fear for partners to go to Cité Soleil to provide health services and capacity building visits;

Based on the findings from the situational analysis, strategies tailored to strengthening vaccination programs in urban environments were discussed with partners through a participatory and elaborate process. A number of strategies and activities were designed, and an implementation plan and budget were developed and approved in order to pilot the implementation of these strategies in Cité Soleil.

Unfortunately, among the challenges faced in testing the model, the most important was the difficultly in accessing funds for implementation that had been provided by Gavi, the Vaccine Alliance and allocated to the World Health Organization (WHO) / PAHO to manage in coordination with the Directorate of the Expanded Program on Immunization (DEPI). This long delay in access to the funding affected not only the implementation of the model in Cité Soleil, but also several other activities of the DEPI.

However, activities and interventions that could be implemented with few resources had already been identified. We had initially worked with the DEPI and the Communal Office to implement them. Despite funding constraints, these relatively successful activities included:

- 1. Weekly monitoring of vaccine stocks available, early detection of stock levels, and securing timely resupply in the facilities,
- 2. Establishment of a fast line for people coming for vaccination,
- 3. Clear indication of the space reserved for vaccination services,
- 4. Setting up of a specific vaccination space in health facilities (in which the presentation of health area vaccination data such as health area mapping, population table, data on vaccination coverage and dropout, vaccination coverage and dropout curve, etc. should be displayed).

As part of testing the model, there was a focus on building the capacity of lower level DEPI managers by using a 'learning by doing' approach. Due to these initial interventions, some results have shown some improvements in data availability and completeness, and an overall improvement in data quality. An increase in the number of children vaccinated for almost all antigens when compared to the same period last year was also observed. For the first time in years, Cité Soleil has reached a DPT3 coverage rate of 45%. Vaccine supply and their availability also improved, as well as stock management, with reduced stock-outs and a better estimate of vaccine need and the timeliness of resupply.

Some lessons learned:

- Even in the absence of a consistent budget for funding planned activities, the situation can be improved with the flexibility of the DEPI team along with the implementation committee, and the identification of certain critical activities at low or no cost (e.g. a triage system, clear identification of immunization schedules displayed in the facilities, reorganization of services in health facilities, early monitoring of sufficient vaccine supply, and use of data), , as shown by the 2017 data compared to 2016 (see Figure 2);
- Considering that best practices for immunization, such as proper vaccine logistics management (accurate estimate of needs, weekly monitoring of stocks, etc.) are critical to improve coverage, they must be in place for the successful implementation of other strategies;
- The availability of baseline data (through the setting up of a vaccination space) plays an important role in monitoring performance;
- When opening hours for vaccination are difficult to change due to the unavailability of additional staff, some other activities can nevertheless be conducted, such as regular supervisory visits; telephone calls to check the availability of vaccines; and information requests on the monthly report;
- It is essential to ensure that the funds for implementing the strategies are available. Failure to access these funds may create a significant implementation challenge that affects ongoing work or tasks.

Overall, the model and the strategies identified effectively respond to the urban context of Cité Soleil. Some interventions implemented show that coverage is beginning to improve. However, the remaining components of the model will have to be implemented as designed to achieve the intended goals.

II. INTRODUCTION

The Directorate of the Expanded Program on Immunization (DEPI), an arm within Haiti's Ministry of Public Health and Population (MPHP) in charge of vaccination activities, after having noticed the low rate of vaccination coverage in recent years in some cities, particularly in Cité Soleil, solicited and received Gavi's support for the development of an urban model to be piloted so as to increase vaccination coverage in Haiti. The model development was comprised of five phases:

- gies, the opinions of parents and community leaders on vaccination and the causes of non-vaccination of children, and their perception of vaccination services.
- The second phase included the presentation of the results of the situational and root-cause analyses to the officials of the relevant facilities, the stakeholders, the representatives of the municipal-



Since each city's population is unique and diverse, specific strategies and targeted interventions for Cité Soleil were developed with stakeholders. In order to better understand the specific realities of the Cité Soleil health zone, the process included a situational analysis of vaccination data, cold chain equipment in health facilities, supply and management of vaccines, human resources (number, training in vaccination, and interpersonal skills), community members, and the organization of vaccination services. Then a root cause analysis and a social mapping of Cité Soleil were conducted. Collaboration with existing facilities within the municipality is the key factor for involving communities. The process included the prioritization and coordination of areas by the MPHP and local representatives to ensure the allocation of human, financial, and logistical resources to implement the strategy. At each stage the process and updates were provided to the technical committee and partners for their inputs and guidance.

The first phase consisted in a **situational analysis and a root-cause analysis** in order to better understand the area, identify available resources, estimate the coverage rate, and identify the reasons for low coverage. During this phase, data was collected on vaccination, vaccination coverage for the past five years, the input supply system, vaccination staff, the cold chain, vaccination strate-

ity, and other respective partners. The main problems were identified and reviewed with all of the parties who took ownership of them, and each stakeholder contributed to the development of applicable solutions in their areas.

- 3. The third phase included the **development of the strategy**, taking into account inputs from stakeholders, including the best practices known to produce results in urban areas in particular and respond to the challenges identified by the analysis. The Interagency Coordinating Committee (ICC) was also engaged to provide support and updates for the strategy.
- 4. The fourth phase included the **implementation of planned activities**¹ from the strategy, such as:
 - Staff training
 - Supply of vaccines and inputs
 - Use of registers and other management tools
 - The use of a census of children and pregnant women in each neighborhood
 - Daily vaccination campaigns
 - Communication activities encouraging vaccination within the municipality (social mobilization / sensitization of the community)

¹ These activities were proposed for the implementation of the model; unfortunately, not all the proposed activities were carried out during the demonstration because of the lack of accessibility of the resources made available by Gavi; however, there were some very encouraging results.

- Organization of institutional immunization and meeting stations
- Organization of catch-up vaccination sessions after the review of the register
- Supervision visits (check-ups and monitoring)
- Monthly follow-up meetings to review the results of the previous month
- Validation of data
- Monthly feedback (to community leaders, elected officials, and the community)
- Use of data for action
- 5. The fifth phase concerned the **monitoring of activities** carried out by the DEPI and its partners to follow-up the implementation of activities, the documentation of data and the provision of guidance. It consisted of supervision visits to facilities, organization of follow-up meetings and exchange visits, a workshop in another urban setting in order to test the model replicability the development of a feedback report, and the documentation of the lessons learned.

These steps were designed to ensure that the strategy developed takes into account the proposals presented by stakeholders and that it is context-specific, which will also allow for replication.

III. OBSERVATIONS AND LESSONS LEARNED FROM THE STRATEGY DEVELOPMENT PROCESS

The strategy development process consisted of a situational analysis, followed by a root cause analysis. The results of these analyses were presented by JSI in collaboration with the Director of DEPI to the partners and officials of Cité Soleil facilities. The strategy was developed through a collaborative process and presented to the Technical Committee of the DEPI, which approved it on 18 April 2017.

Identification of the challenges/situational analysis and root causes

The situational analysis, complemented by a review of the data, the organization of immunization services, and information provided by service providers and parents, made it possible to identify the reasons and social components for non/under-vaccination of children in Cité Soleil. Key observations included:

- In Cité Soleil, there are twelve health facilities two hospitals (one
 public and one private), one public maternity ward, and nine health
 centers of which only one is public and the others private. Not all facilities are recorded on the Ministry's list of facilities. In addition, no
 supervision visits were conducted by the district or communal office.
 Reasons given included the fear of going to an area where there are
 problems of insecurity, and/or lack of means;
- The facilities monthly reports are sent regularly to the municipal office, which transfers them to the departmental directorate. As evidenced by the monthly reports, there was a shortage of BCG vaccines in Cité Soleil for more than three months, without the situation being addressed:
- Vaccination coverage data for the last five years show that the coverage of all antigens does not exceed 30%;
- In Cité Soleil, the facilities are supplied with vaccines from the communal warehouse located in Delmas - a different town. This has an impact on the availability of vaccines in Cité Soleil;
- The warehouse experienced several stock-outs of BCG vaccine in November 2016:
- Out of the ten facilities in Cité Soleil, nine have vaccination services, and four have certified Sibir refrigerators. One center without a refrigerator stores its vaccines in refrigerated boxes;
- A lack of basic tools was observed, such as vaccination cards, monitoring charts on vaccine coverage, inadequate filling or inability

- to fill certain tools (such as monthly reports and vaccine coverage monitoring charts) by health facility staff, was observed;
- The facilities regularly submit monthly reports, but they are neither checked nor used immediately for decision-making. For example, many facilities reported no BCG vaccination for several months, yet, as noted previously, no action was taken;
- The space in the vaccination rooms for displaying the evolution of vaccination planning on a wallboard were not upgraded;
- Waiting periods for mothers who come for immunization services at Cité Soleil are often too long.

The root cause analysis is a very important step in the development of the model, as it helps us to better understand the low frequency of attendance in health centers, and how people perceive the treatment they received in the facilities.

Observations/lessons learned from the strategy development process:

- The DEPI experienced three leadership changes from December 2016 to date:
- The flexibility in the timetable for adjusting the national schedule may be affected by other activities in the country;
- A permanent engagement and advocacy with the new leaders of the DEPI is essential:
- Work and focus on the mid-level MHPH / DEPI managers will be most effective, as they are less likely to change and can maintain focus and expertise for interventions:
- The designation of a DEPI focal point to move the process forward is important;
- Stakeholder involvement from the beginning is the key to ownership and collective action;
- Ensuring the pathways taken by service providers, the community and others working in the municipality is as important as the DEPI and its partners taking ownership of the review and decision-making process:
- Permanent efforts must be made to strengthen the managerial capacity and coordination of the DEPI to provide guidance for activities. The coaching approach was good considering the time and effort it took.

IV. OBSERVATIONS AND LESSONS LEARNED FROM THE DEMONSTRATION IMPLEMENTATION PROCESS

The following phases were planned and/or the following conditions were applied for the implementation of the strategy:

- The creation of a committee and its organization this committee should be responsible for the implementation and would be composed of DEPI/MPHP, the members of the Department of Health of the West Region (DSO), members of partner organizations, community leaders and officials of the Cité Soleil City Hall;
- The commitment of the leaders of Cité Soleil through their participation in the committee:
- The constant presence of the baseline components for vaccination must be available at all times;
- The availability of funds for the implementation of planned activities

Unfortunately, due to the change of the EPI Manager and the time dedicated to train the new one, the committee was only formed in early August 2017, leaving little time for implementation before the month of September 2017 (the original deadline of the Implementation Plan).

Observations and lessons learned from the demonstration implementation process:

- The situational analysis highlighted the lack of planning and supervision:
- The micro planning exercise included only four facilities in Cité Soleil, and the plans developed were not followed. The proposed activities have not been implemented;
- The model was approved on 18 April 2017 and budget and activities have been adjusted regularly since then. They were finally submitted to the partners for approval on 12 August 2017, but were not yet approved as of the writing of this report;
- The process for obtaining funding for implementation does not seem to be clear for the DEPI. It would appear that the delay in justification of advances received previously has delayed the release of funds for the financing of ongoing activities. The unavailability of funds has consequently delayed the implementation of the model. The process for obtaining said funds should be known in advance and managed by the activity facilitator(s);
- The creation of an implementation committee with the participation of community members is a key element for the implementation and success of the strategy. It should be created very early on.

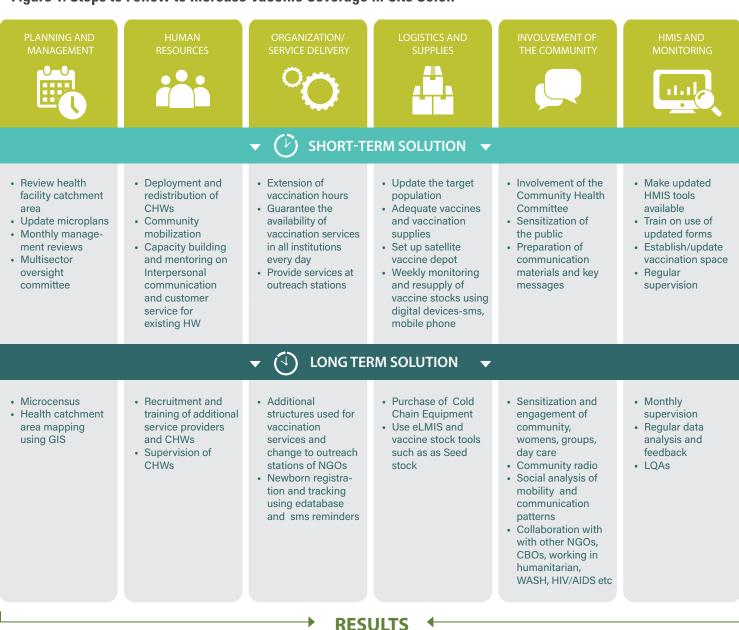
V. OBSERVATIONS AND LESSONS LEARNED FROM THE IMPLEMENTATION OF SERVICE STRATEGIES

The strategy developed for Cité Soleil is based on the results of the situational analysis, the root-cause analysis, and contributions from stakeholders.

Implementation Approach: This strategy is comprised of six pillars or themes:

- Governance
- Human resources
- Organization / Service Delivery
- Logistics and Supply of Vaccines
- Community Engagement
- Health Information System and Monitoring

Figure 1: Steps to Follow to Increase Vaccine Coverage in Cité Soleil





Members of the Implementation Committee

A. GOVERNANCE

The implementation committee was finally set up in August 2017. The terms of reference, action plan and guidance was shared with committee members, who were charged with following-up the implementation of the plane. The committee members were very interested and willing to make every effort for the successful implementation of the planned activities.

Observations and lessons learned from the implementation of service strategies (Governance):

- It is recommended that community leaders participate in the planning of vaccination activities;
- The creation of a committee must be accompanied by clear terms of reference, known and approved by members who must commit themselves to the well-being of the population;
- Committee members must attend an orientation session to organize themselves and clearly understand their role;
- The DEPI leadership is critical for establishing and strengthening the committee;
- Multi-sectorial involvement and representation including the office of the City Hall as well as from the community strengthen the Committee and make it responsible:
- The established committee must have the necessary means to be operational in order to implement the activities planned and to follow them; minimum resources are required for meetings and monitoring.

B. ORGANIZATION OF SERVICES

The provision of services had to take into account the existing structure and opportunities to increase access to services, as well as the use of services. The following key strategies were identified to implement the activities:

- Improving the capacity of facilities to provide immunization services;
- Exploring the possibility of adding additional vaccination sites with State officials or private individuals;

- Comprehensive Community Health Workers (CCHWs) should be deployed to provide essential health services, including immunization, to remote populations;
- Considering the possibility of changing vaccination sessions' opening hours, and even of working later on certain days or on certain weekends so that working parents can access immunization services;
- Implementing a triage system/fast line to prevent mothers or caregivers who come only for vaccination services from wasting time, and ensuring an efficient flow of patients.;
- Clearly identifying vaccination space and schedules, schedules in the facility;
- Special attention should be paid to reducing missed opportunities.
 Key messages about the importance of immunization should be communicated at the same time as antenatal visits;
- Providers should be trained with an additional module on interpersonal communication and customer service:
- Follow-up training, reinforcement of learning, application of learned techniques, and advice should be sent every week or covered during the supervision visits;
- Every facility should develop an action plan and update its micro-plan. High performing facilities should be honored each month by the committee;
- For close follow-up of activities conducted in the facilities, after training, a mentor should be assigned by the EPI Directorate. The mentor's mission would be to maintain weekly contact with the facility, either through meetings or by telephone, to learn about the implementation of activities from the action plan and the security situation, and build capacity to help solve problems identified during the supervision visits;
- Each month, a supervision visit should be conducted in each facility providing immunization services;
- The Municipal Health Committee should meet with the facilities every month to review the activities conducted, the progress made, and provide feedback on the quality of services provided.

It is possible to conduct some of these activities at low or no cost. The following table summarizes the activities planned and those implemented.

In St. Francis, the health worker reported that "the activities gave more credit to the facility (because the attendance was low in this facility previously), where vaccines are received quicker. Thanks to the supervision visits, the facility was able to better organize the waiting room by separating children who come for the vaccination so that they can be vaccinated more quickly and waste less time."

Table 1: Summary of planned and conducted activities, Cité Soleil, since August 2017



Creation of a fast line for those who come for vaccination (after triage)



Clearly indicate and arrange the designated space specifically for vaccination in facilities



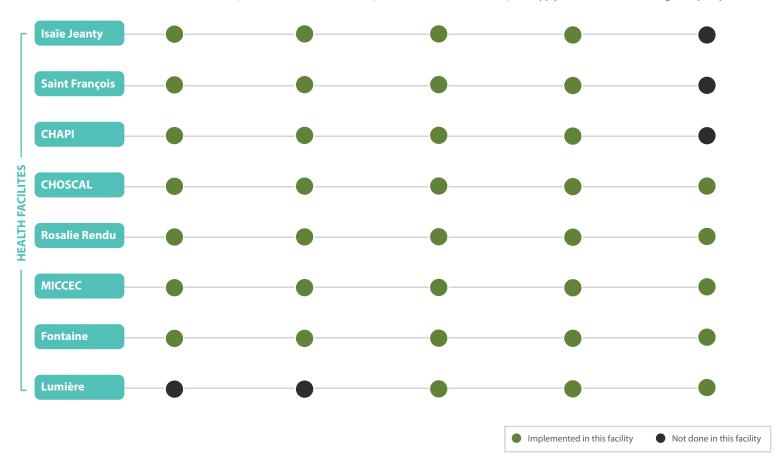
Ensure that facilities offering immunization services are clearly indicated to the public



Weekly monitoring of vaccine stocks available, early detection of stock levels, and securing timely resupply in the facilities



Evaluation of the situation of the cold chain in order to put a more efficient refrigerator with higher capacity



Access to immunization services in Cité Soleil has improved as demonstrated through the increase of in 2017 of BCG vaccination rate to 58%, compared to 24% in 2016 and of DPT1 to 52%, compared to 35% for 2016. The following figure shows an increase in the immunization coverage by antigen in Cité Soleil, from 2016 to 2017, during the first nine months of the year.

Observations and lessons learned from the implementation of service strategies (Organization of services):

Some low/no-cost activities were conducted despite no -deployment
of additional CCHWs or unchanged hours for vaccination (the staff
in charge of vaccination indicated that it was not possible to change
the opening hours without the presence of additional staff):

- Regular supervision visits;
- Telephone calls to check the availability of vaccines;
- Requests for the monthly report;
- Reorganization of immunization services in health facilities;
- Early monitoring of vaccine supply; and
- The use of data.
- Simple and inexpensive measures, if applied, can lead to positive changes in the results recorded by the facilities;
- A triage system was implemented in some facilities where immunization activities are carried out in fairly large areas;
- Vaccination spaces are generally clearly identified and vaccination schedules are clearly displayed within the institution (internally and externally);

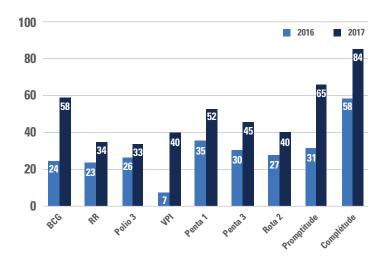
Four facilities have developed micro-plans but they are not implemented:

An increase in vaccination coverage has already been observed following initial activities. They also illustrate the need to implement all the components of the strategy in order to ensure increased coverage in Cité Soleil. The remaining activities should contribute to improve coverage further.

Recommendations for the next steps:

- Ensure the release of funds from Gavi to implement the strategy and the full implementation of the model, as designed in the HSS Plan.
 The precise source of funding necessary to implement the model must be available for any process developed;
- In order to satisfy the population's demand to change the opening hours of vaccination services in health facilities, a compensation system should be planned to organize the services later in the day and on weekends.

Figure 2: Comparison of Vaccination data in Cité Soleil



C. HUMAN RESOURCES

The number of staff members to train, to recruit, and to re-evaluate was calculated. During the monthly meeting with the DEPI, the progress on the implementation of activities was presented before the DEPI Technical Committee.

Observations and lessons learned from the implementation of service strategies (Human Resources):

- The supervision and face-to-face learning by a Technical Advisor and DEPI staff in health facilities has yielded some results in terms of capacity building, even though funding for a comprehensive training was not available:
- The use of CCHWs to expand activities at the community level is necessary, but is quite complicated for a number of reasons. Some flexible solutions are necessary, and additional services could be provided by NGOs or private sector organizations operating in Cité Soleil.

Recommendations for the next steps:

- The distribution of CCHWs should be reviewed to ensure that they work in places with the highest number of unvaccinated children;
- Staff training needs and systematic capacity building planning should be document during supervision visits, and trainings conducted as soon as possible;

D. COMMUNITY ENGAGEMENT

Community engagement is an essential element at every stage. Segmentation of the public was planned, and the channels to reach different segments of the population needed to be studied. Unfortunately, this segmentation did not take place and no messages were developed for the population, (which is particularly needed for young women and women who move a lot).

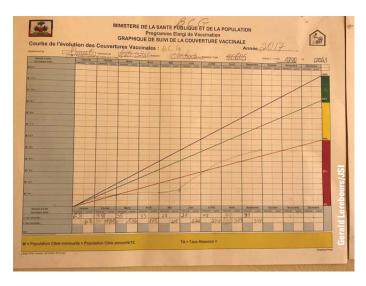




Caregivers of children waiting for immunization — as they are waiting in the designated area for vaccination



Clearly marked vaccination space



Monitoring chart visibly seen in the vaccination space

At Rosalie Rendu, the health worker reported that parents are now more motivated since vaccines are available, and the services have improved. Mothers reported being satisfied with the services, because the vaccines are available and there is a special line for vaccination in the room.

Observations and lessons learned from the implementation of service strategies (Community Engagement):

- The municipal committee responsible for implementing planning activities and evaluation of progress should include representatives from the community;
- The presence of leaders in the Committee should make it possible, through a better knowledge of the vaccination situation in Cité Soleil, to give more precise information to families, and encourage them to fully vaccinate their children;
- Community leaders are very keen on participating in activities, and a special commitment to full immunization of children should be sought.

Recommendations for the next steps:

- The funding for these activities should be released as soon as possible to enable timely implementation of activities;
- All community resources should be used, including the Boukman radio station, broadcasting in Cité Soleil, which should engage in spreading the message about the importance and benefits of complete vaccination and reassuring the population on any possible reactions:
- Community leaders will also have to be engaged in the implementation of immunization activities.

E. LOGISTICS AND SUPPLY OF VACCINES AND COLD CHAIN

In recognition of the fact that health facilities had not received the quantity of vaccines proportional to the population covered, stockouts were frequent in Cité Soleil, especially since the warehouse that supplies the municipal facilities has a low storage capacity. To address this situation, the creation of a satellite warehouse for vaccines was proposed. It was also planned to ensure that all facilities had a refrigerator in good working order at all times and, in order to avoid stockouts, a regular review of monthly reports and delivery sheets should be made in addition of visits and telephone contacts to respond quickly to vaccine needs.

In CHAPI, the health worker reported an improvement in vaccine supply - her refrigerator is now functional and she has the vaccines.

Observations and lessons learned from the implementation of service strategies (Logistics / Supply / Cold Chain):

- Health facilities received weekly calls to inquire about the status
 of their vaccine stocks and when they were due to receive the new
 vaccine stocks. Therefore, they did not experience any stock-out of
 vaccines:
- Stock supplies improved in Cité Soleil, as shown in the figure below:
- An analysis was conducted to equip facilities with solar refrigerators and to set up a satellite warehouse to serve the town's facilities;

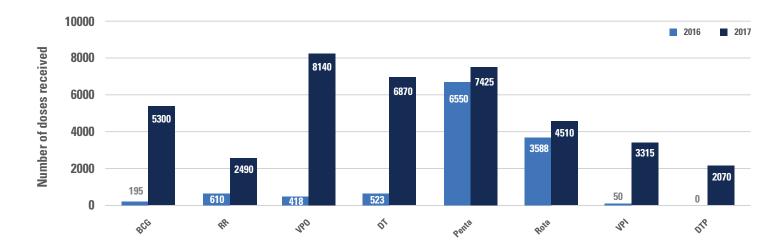


Figure 3: Supply of Vaccines, Cité Soleil, Jan-Sept, 2016-2017

Recommendations for the next steps:

- It is recommended to continue weekly calls to health facilities in Cité Soleil (follow-up of vaccine stocks, early detection of the minimum stock and resupply); they help to avoid stock outs and do not cost much;
- It is recommended to implement a system whereby mobile technology can be used to report and monitor the levels of vaccine stocks;
- The installation of solar refrigerators should continue in order for health facilities to have a rapid access to vaccine stocks.

F. HMIS AND MONITORING

In recognition of the non-utilization of vaccination data for decision making, a Lot Quality Assessment Survey (LQAS) was planned every six months, as well as the use of data produced to study the performance of facilities. Over time and with the continual changes fin forms, staff had problems filling in the forms. It was therefore planned that staff should be trained on the filling of forms, as well as on the preparation and maintenance of the vaccination space.

Observations and lessons learned from the implementation of service strategies (HMIS and Monitoring):

- Vaccination spaces were upgraded in two facilities only. It was observed that training sessions were needed;
- All of the DEPI management tools were made available in sufficient quantities, and no stock-outs were observed;
- Monthly reports were regularly analyzed and a new form used since June 2017;
- Staff has a preference for formal training sessions instead of on-thejob during supervision visits;
- A vaccine coverage survey was planned, but was not conducted due to the lack of funds:
- The training of staff on the use of forms was not conducted.
 Recommendations:
- Every effort should be made so that all tools are available in sufficient quantity and monthly reports can be regularly analyzed, and used for decision-making at the institutional, municipal and departmental levels;
- The availability of the implementation funds will enable the conduct of the vaccine coverage survey. Train staff on the use of forms and on the organization and maintenance of the vaccination space;
- Continue monthly supervision visits and telephone calls.

VI. SUMMARY OF THE WORKSHOP ON THE REPLICATION OF THE MODEL OF CITÉ SOLEIL, CASE STUDY IN GONAÏVES

In order to test the replication of the vaccination model developed for poor urban settings (Cité Soleil), a workshop on model replication was organized by the representatives of the DEPI and JSI, in the Artibonite health district (DSA) in the commune of Gonaïves. Gonaïves is another urban setting with low vaccination coverage and was selected for possible replication.

A. Methodology used for the replication process in Gonaïves

- Presentation of the urban model proposed and implemented in Cité Soleil, the process used for the development of the strategy and its implementation;
- Discussion on the situation of EPI with DSA, in particular in the Municipality of Gonaïves (plenary presentation, group work, and site visits):
- Presentation and discussion of the lessons learned / successes in Cité Soleil, and the potential use of the model in Gonaïves;
- Use of the replicability tools to adapt the model taking into account the realities of Gonaïves
- Visits to health centers and key data collectors;
- Identifying steps to test the viability / replicability of the model developed for Cité Soleil in another urban setting in Haiti.

B. Situation of vaccination in Artibonite

- Artibonite, one of the 12 departments of Haiti, remains one
 of the most populated health districts (DDS) in the country. Its
 population was estimated at 1, 841, 856 inhabitants in 2017,
 with 49,362 children under 1 year of age (2.62%). Out of the 124
 health facilities, 96 provide immunization services;
- Artibonite comprises 15 municipalities among which is the Municipality of Gonaïves;
- Penta 3 coverage for the first eight months of 2017 was estimated at 44% (low).

C. Municipality of Gonaïves

Among the 15 municipalities of the health district, Gonaïves is the most populated, with an estimated population of 379,906 inhabitants in 2017 (20.6% of the population of the whole health district).

- The Municipality of Gonaïves includes eight health facilities. For the first eight months of 2017, the Penta 3 coverage in Gonaïves was estimated at 60%, divided as follows: 2 facilities reported a coverage of 83% to 91%, 3 facilities a coverage of 50% to 79%, and 3 facilities a coverage ranging from 44 % to 48%;
- Taking into account the target population of the health district and its Penta3 coverage, the population not reached with the three doses of Penta amounts to 27,149 children;

- Regarding the municipality of Gonaïves, the children not reached with three doses of Penta represent 4,073 children;
- This shows that 15% of the health district children who are not reached with all 3 Penta doses live in the Gonaïves municipality.

D. Field visits

The health district authorities selected four health facilities for a field visit. Participants used a checklist in Cité Soleil for a baseline assessment. The synthesis following this visit showed the following results:

- Lack of micro plans for planned activities in the four facilities visited;
- Daily sessions of organized vaccination except on Saturdays;
- Opening hours for vaccination reported by the facilities officials between 8:00 14:00 and 9:00 16:00. One facility reported a schedule from 7:30 14:00:
- Three-fourths of facilities stated that they are using a triage system for mothers and children who come only for vaccination;
- The waiting time for parents ranges from 30 minutes to 1.5 hours;
- Half of the facilities reported holding a monthly performance review meeting;
- Two out of four facilities have one (1) refrigerator (Sibir), one did not answer the question, and one has a non-functional refrigerator;
- All facilities have insulated boxes and in some of them, the boxes no longer have handles or pads;
- The availability of vaccines is a challenge for all the facilities visited.
 The facilities do not receive the quantity of vaccines needed to vaccinate their target population;
- The majority of staff is not trained;
- The vaccination records (for mothers and children) are available; and the vaccination space is upgraded, but it is unclear whether it is used for decision-making;
- The monthly report for the current month was found in three out of four facilities:
- Some facilities do not have CCHWs, and when they do, CCHWs are nearing the end of their employment contract.

Recommendations

Taking into account the results of the vaccination situation, observations from the field visits and the knowledge of participants' background, compared to the situation in Cité Soleil, Cité Soleil urban vaccination model should be replicated in Gonaives, while considering the specificities of this region (see the replication checklist in the Appendix II).

VII. CONCLUSION, NEXT STEPS AND RECOMMENDATIONS FOR SCALING-UP

The analysis of immunization coverage data from January to September 2016 compared to 2017 highlights an increase in the percentage of children who were administered BCG, RR, Polio3, IPVI, Penta1, Penta3 and Rotavirus vaccines. The reporting rate has also improved considerably, - timeliness increased from 31% in 2016 to 65% in 2017, and completeness from 58% to 84%. The technical work carried out with the facilities, namely regular telephone contacts, monthly visits, and supervisions, can explain this improvement.

The dropout rate for Penta1 to Penta3 slightly decreased between January — September 2016 and January — September 2017, from 14.3% to 13.5%. The observation of drop-out rates shows that there was no change as expected (drop-out rate below 10%) at this stage of the start of the project implementation, as the involvement of CCHWs was not funded and the link with the community for the follow-up described in the model was not implemented. However, the key components on service provision began to show an increase in the numbers of vaccinated children and in the coverage. The access increased, as testified by the improvement of BCG coverage of 58% in 2017 compared to 24% in 2016.

These results encourage us to recommend the application of the strategy and all its components in Cité Soleil and other urban municipalities of Haiti facing similar problems (low coverage). In addition, it will be useful to present these findings and lessons learned in the Health System Strengthening (HSS) proposal due to be submitted to Gavi in January 2018, when the country will consider the resources needed for the implementation of strategies aiming at increasing coverage in other urban communes in Haiti.

The model is replicable as demonstrated during discussions at the Gonaives workshop. The key elements that should be considered are the early engagement of all stakeholders in the problem identification, the analysis of the situation for each urban environment to identify the problems specific to this context, stratifying the actual practices and promoting local solutions.

In the Isaie Jeanty Maternity, nurses report an improvement, no stock-outs, faster resupply. They try to vaccinate all the children who are born in the maternity before they leave the facility. Mothers report they are satisfied because they always find the vaccines.

The results observed for the first nine months of 2017 compared to those of 2016 reveal significant progress. This confirms that focusing on effective interventions that prioritize low coverage areas, gathering the majority of stakeholders around the table to implement management actions for improved service delivery, building credibility with quality technical assistance, and coaching health professionals can result in a strong momentum in favor of a strong routine immunization system. However, many of the issues remain, and funding is needed in order to ensure that all components of the model are implemented.

These results should encourage the officials of the DEPI, in collaboration with those of Cité Soleil, to implement all the components of the proposed model and suggest its replication in other poor urban communes with low coverage, and to make every effort to ensure that all health facilities always have the necessary supplies to fully vaccinate children. However, the preliminary results obtained in Cité Soleil demonstrate the effective minimal role of the actions carried out that can reach the communities not yet served and address the problems of equity, in particular in urban areas.

APPENDIX I: SITUATIONAL ANALYSIS OF VACCINATION IN CITÉ SOLEIL

Introduction

En Haïti, des enfants meurent chaque année à cause des maladies évitables par les vaccins. La couverture vaccinale est faible, D'après les dernières données de l'enquête EMMUS V, le taux de mortalité infantile est très élevé soit 59 pour mille et seulement 45 enfants sur 100 ont reçu toutes les doses de vaccins. La couverture vaccinale est très faible dans les villes. La Direction du Projet élargi de Vaccination (DPEV) du Ministère de la Santé publique et de la Population (MSPP) dans le but d'augmenter la couverture en Haïti a demandé à GAVI de l'aider à conduire une analyse de la situation vaccinale dans la Commune de Cité Soleil de l'aire métropolitaine de Port-au-Prince et de proposer un modèle qui pourra servir dans les autres communes d'Haïti.

Cité Soleil

La Cité Soleil a été créée en 1958 sous le nom de Cité Simone (en référence au prénom de la première dame d'alors, Simone Ovide Duvalier), comme une cité ouvrière. Au départ des Duvalier en 1986, la population a changé le nom en Cité Soleil.

Cité Soleil a été élevée au rang de commune par la loi du 26 mars 2002, elle est divisée en deux sections communales : Varreux 1 et Varreux 2.

La commune n'a pas été officiellement délimitée par un texte de loi et les limites connues ne sont pas acceptées par les communes limitrophes, ce qui crée parfois des problèmes avec les communes de Port-au-Prince, de Delmas, de Tabarre et de Croix des Bouquets.

Sa population d'après l'Institut haïtien des statistiques et d'informatique (IHSI) était estimée à 265 072 habitants en 2015. Pour l'Unité Études et Plan (UEP) du MSPP, la population est estimée à 278 500 personnes en 2017, tandis que pour la DPEV elle est estimée à 308 550 habitants, soit 8022 enfants âgés de moins d'un an et 8484 femmes enceintes à vacciner

En 1974, le Dr Carlo Boulons a créé le Centre Haitiano-Arabe dans la cité avec son siège social à Cite Soleil dénommée alors Cité Simone. Le Centre Haïtiano-Arabe a mis en place un réseau d'établissements de santé et un programme de santé communautaire avec des agents dénommés COLVOL (Collaborateurs Volontaires) pour soigner la population et prévenir des maladies dans quarante mille familles. La Cité était divisée en secteurs avec un COLVOL responsable de chaque secteur de 2000 habitants. Il y avait cent quarante-six (146) COLVOLS encadrés par neuf superviseurs dans les neuf zones reparties en cent soixante-sept secteurs. Le COLVOL comptabilisait les familles, remplissait une fiche de tous les membres du ménage dont la mère était référente, et maintenait le registre à jour au cours des séances de vaccination, soit dans l'établissement, soit dans le poste de rassemblement.

En 1989, le Centre Haïtiano-Arabe prit la dénomination de Centre pour le développement et la santé (CDS) et a commencé à reproduire le modèle de la Cite Soleil à la Fossette au Cap Haïtien, à Raboteau aux Gonaïves, à Fort-Liberté, à Ouanaminthe et à Mont Organisé.

Le 31 décembre 1995, les CDS se sont retirés de la Cite Soleil.

Objectifs

Cette consultation a pour objectif de :

- De proposer un modèle réplicable, de stratégies de prestations de services efficaces et adaptées à la réalité sociale, culturelle et infrastructurelle des bidonvilles, adaptable aux réalités locales
- Compter avec les autorités locales et les organisations de la société civile
- Le modèle doit permettre le suivi efficace des personnes vaccinées et non-vaccinées afin de réduire les taux d'abandon et d'accroitre la couverture vaccinale

Méthodologie

Pour comprendre la raison de la faible couverture vaccinale à la Cité Soleil, les démarches suivantes ont été faites :

- une revue de la littérature
- l'étude de
 - la gouvernance du PEV
 - les établissements de santé opérant dans la Cité
 - la couverture vaccinale
 - la chaine de froid
 - les agents de santé
 - les ONG
 - les dirigeants, dont le maire
- L'organisation de groupes de discussion avec des mères, des dirigeants, des agents de santé pour avoir leur opinion sur l'organisation de la vaccination, et les raisons de la vaccination des enfants et des femmes

Résultats

Revue de la littérature

La revue de la littérature concernait la lecture des documents sur la vaccination dans les pays où JSI a travaillé. Dans ces pays, afin d'effectuer l'analyse de la situation, les mères ont expliqué les causes de non vaccination des enfants et des mères, en plus de l'examen des établissements de santé, des entretiens avec les dirigeants locaux, les pères, etc.,

Par ailleurs, les documents clés du MSPP ont été examinés, dont « Le Paquet essentiel des services » dans lequel le ministère décrit le modèle proposé pour la prise en charge communautaire.

Gouvernance du PEV

En Haïti, la gouvernance du PEV est assurée par la Direction du Programme élargi de vaccination, qui est une direction centrale du MSPP chargée de :

- définir les normes et procédures de vaccination, les socialiser et veiller à leur mise en application,
- contribuer à la mise en œuvre des engagements relatifs aux objectifs régionaux et internationaux;
- établir conjointement avec les directions concernées les indicateurs nationaux dans le domaine de la vaccination et en faire le suivi.
- fournir une assistance technique aux directions départementales dans l'élaboration de leurs plans d'action en matière de vaccination,
- organiser la coordination intra sectorielle et extra sectorielle relative aux activités de vaccination
- veiller à l'introduction de nouveaux vaccins en fonction du profil épidémiologique du pays.

Pour remplir sa mission, les nouveaux responsables de cette direction tentent actuellement de s'organiser afin de mieux planifier, exécuter, suivre, superviser et veiller au contrôle de la qualité des données, les utiliser et donner une rétroaction aux fournisseurs de soins et aux directions départementales.

La DPEV bénéficié de l'appui de trois comités dont les termes de référence ont été validés en décembre 2016 : le Comité de coordination interagences des activités de vaccination (CCIA), le Comité technique du PEV (CT/PEV) et le Comité consultatif pour la vaccination en Haïti (GTCV/Haïti) ont été validés.

Les grandes orientations et les objectifs du programme national de vaccination sont définis par le Comité de coordination interagences des activités de vaccination (CCIA) qui est composé

- du Ministre de la Sante Publique et de la Population,
- du Directeur général,
- du Directeur du PEV.
- des directeurs de l'épidémiologie, de la DOSS, de l'UADS, de la Pharmacie, de la Promotion de la santé de la famille,
- de représentants du ministère des Finances, du ministère des Affaires sociales, du ministère de la Condition féminine
- de représentants de l'OPS-OMS, de l'UNICEF, du FNUAP, des CDC, des coopérations bilatérales, de la société haïtienne de pédiatrie, de la société haïtienne d'obstétrique et de gynécologie, de la Croix rouge Haïtienne, et du Rotary International.

Le CCIA se réunit en session ordinaire tous les six mois. La dernière réunion a eu lieu en décembre 2016.

La DPEV est appuyée par le Comité technique du PEV (CT-PEV) pour l'élaboration des plans pluriannuels, l'élaboration des rapports périodiques de suivi et d'évaluation, et la gestion des ressources mises à la disposition du programme.

Les activités de terrain sont planifiées et suivies par les directions départementales et les UCS/UAS. La Cité Soleil n'a pas reçu de visites de supervision du département ou du bureau communal. Les raisons évoquées sont la crainte de se rendre dans une zone ou régnaient jadis des problèmes d'insécurité et le manque de moyens.

Liste des établissements de santé

ÉTABLISSEMENT DE SANTÉ	ТҮРЕ	RÉFRIGÉRATEUR	POPULATION DESSERVIE	ENFANTS ÂGÉS DE Moins d'un an	VACCINATION
CHOSCAL : Centre hospitalier Sainte Catherine Labouré	Public	Homologué Fonctionnel	104 884	2 726	Oui
CHAPI	Public	Homologué Non fonctionnel	52 406	1 363	Oui
Maternité Isaïe Jeanty	Public	Homologué Fonctionnel	?	?	Oui
MICECC : Mission communautaire de l'Église chrétienne des Cités	Privé	Homologué Non fonctionnel	?	?	Oui
Centre hospitalier Fontaine	Privé	Fonctionnel	80 000	2 080	Oui
Centre de santé le Pèlerin	Privé	Non	?	?	Oui
Centre de santé Lumière	Privé	Non	13 000	338	Oui
Klinik Sen Franswa	Privé	Non homologué, fonctionnel	12 369	321	Oui
Hôpital Sainte Marie	Privé	non	?	?	Non
Rosalie Rendu	Privé	Homologué Fonctionnel	50 000	1 300	Oui
Hands Together	Privé	Non	?	?	Non

Les rapports mensuels de la Cité Soleil sont régulièrement remis au bureau communal qui les transmet à la Direction départementale pour analyse.

Couverture vaccinale

Les données de couverture vaccinale pour les cinq dernières années montrent que la couverture ne dépasse pas 30% pour tous les antigènes. L'établissement qui vaccine le plus est le Centre Rosalie Rendu. Pendant plus de trois mois, un manque de BCG à la Cité Soleil, signalé par les rapports mensuels, n'a pas alerté ceux qui ont reçu les rapports.

Approvisionnement en vaccins

Les établissements de la Cité Soleil s'approvisionnent en vaccins au dépôt communal situé à Delmas.

Le dépôt a subi des ruptures de stock de BCG en novembre 2016.

Dix établissements de santé sont recensés à la Cite Soleil.

Chaîne du froid

Sur les dix établissements de la Cité Soleil, neuf proposent des services de vaccination et quatre disposent de réfrigérateurs homologués de la marque Sibir. Le Centre de santé Lumière ne disposant de réfrigérateur conserve ses vaccins dans des boites réfrigérées.

Le réfrigérateur Sibir de CHAPI et de MICCEC n'est pas fonctionnel.

Système d'information du PEV

Afin de permettre un suivi approprié des activités de vaccination, un ensemble d'outils ont été conçus pour faciliter la planification, le suivi, la détection précoce des problèmes de fonctionnement et les obstacles s'opposant à la réalisation des objectifs.

L'absence de certains outils de base a été observée, comme les cartes de vaccination, le graphique de suivi de la couverture vaccinale, le mauvais remplissage ou l'incapacité à remplir certains instruments par le personnel des établissements de santé de la Cité Soleil, comme le rapport mensuel, le graphique de suivi de la couverture vaccinale.

Les établissements ont remis régulièrement des rapports mensuels qui ne sont pas contrôlés et qui ne servent à une prise de décision immédiate. Par exemple, plusieurs établissements n'ont signalé aucune vaccination par le BCG sans qu'une action ne soit prise.

Dans le passé, les établissements étaient tenus de suivre l'évolution de la planification de la vaccination sur un tableau mural avec plusieurs formes dénommé « Salle de situation ». Actuellement aucune salle de situation n'est à jour.

Agents de santé communautaire polyvalents

La Cité Soleil dispose de 108 ASCP qui sont repartis dans des établissements de santé et supervisés par une infirmière. Ils ne sont pas payés régulièrement, ce qui a entraîné des manifestations devant le bureau départemental au cours des mois de janvier et de février 2017. Ils ne bénéficient actuellement d'aucun contrat de travail, malgré le fait qu'un contrat est prévu pour la période couvrant mai à décembre 2017. Ils ont été formés à l'ours du mois de mars en vaccination. Ils pourront dorénavant administrer les vaccins. Ils devraient également mettre à jour le

FORCES

- L'augmentation de la couverture vaccinale est une des priorités du MSPP
- Les partenaires appuient la vaccination
- Le Programme répond à un besoin identifié par la DPEV
- La Cité Soleil est très calme
- L'activité est intégrée au sein de la DPEV

EVIBLEGGEG

- La gouvernance du PEV (DPEV, DSO et Bureau communal) n'est pas encore bien organisée pour une bonne organisation des services de vaccination : un Plan National a été élaboré en février 2017 et la Cité Soleil ne bénéficie pas de microplan
- L'approvisionnement en vaccins est insuffisant
- Formation du personnel
- Faible performance de plus de la moitié des établissements

OPPORTUNITÉS

- Intérêt mondial pour la vaccination dans les villes
- Intérêt de la mairie
- Le MSPP souhaite une augmentation nationale des couvertures vaccinales
- Le contrat de travail des ASCP de mai à décembre 2017
- Mesures prises pour éviter des ruptures de stock des intrants

MENACES

- Peur continue du personnel du Bureau Communal et de la DSO de se rendre à la Cité

dossier de la population de leur secteur et pourront ainsi augmenter la couverture vaccinale grâce à leurs actions.

Analyse des forces et des faiblesses

L'identification des forces et des faiblesses est un élément déterminant dans l'analyse de la situation vaccinale de la Cité Soleil. Les forces et faiblesses mentionnées dans le tableau ci-après ont été répertoriées suite à des conversations avec le personnel de la DPEV et des responsables du bureau communal.

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APPENDIX II: REPLICABILITY CHECKLIST

Checklist of criteria for replication - adapted for the vaccination model of the urban shanty town of Cité-Soleil (System A) and for the vaccination model of the urban shanty town of Artibonite (System B)

Will the model be efficient here?

This is one of the most crucial and difficult questions that is confronted through an evaluation. It is a vital issue, because practitioners usually really want to know. Innovations often come in waves. Sometimes it is a question of deciding whether to follow the current trends. Sometimes the first trials and pilot studies of a new initiative emerge with very promising results. At this stage, donors and local professionals are starting to wonder if the new model would work here.

Methodologically, it is not a very difficult question. Repetitive success does not come only from a servile imitation of a program applied on a day to day basis. We must consider the whole intervention constituted by the context - the mechanisms - the results. Gomm (2000) has developed a very useful checklist that politicians and practitioners can use while considering creating their own version of the model. It is adapted in the following table, with column A referring to a successful program, and column B for a potential lease, and a third column for relevant questions on differences.

This tool should be used with the following persons:

- Key informants: EPI Director, Artibonite Health District Director, Hospital Director, representatives of the City Town Hall, pediatricians in the city, partners who work on vaccination
- Focus Groups- with health services providers, CCHWs, community leaders

Study on the perception of vaccination in urban areas:

- Does vaccination in poor urban areas represent a challenge? Why?
- What do you think should be done?

Results for Gonaïves:

SYSTEM A SYSTEM B OPPORTUNITY AND / OR FEASIBILITY OF **CHANGING PRACTICES, PROCEDURES AND VACCINATION MODEL IN URBAN** REPLICATION OF THE VACCINATION MODEL IN **CONTEXT OF VACCINATION OF URBAN AREAS** THE URBAN AREA OF ARTIBONITE OF ARTIBONITE TO MATCH THOSE USED IN THE AREAS: CITÉ SOLEIL MODEL OF IMMUNIZATION IN CITÉ SOLEIL The model What are the main characteristics What are the main characteristics of the When there is an incompatibility, could and should Artibonite adopt the same innovations of the vaccination model of urban vaccination model of urban areas as it is areas as it is currently used in the expected to be used in Gonaïves? as the ones used by Cité Soleil? urban model of Cité Soleil? Model: Even if some questions are incompatible, Components of the model: • Public (5) and private (3) facilities avail-Gonaives would like to adopt the model of Cité · Facilities with or without cold able in Gonaïves Soleil taking into account its specificities. chain equipment (public, private, SSQH ensured the salary of CCHWs faith-based) in Cité Soleil; involved in immunization, and is the only **Engagement of all stakeholders** partner who was involved, but the project (communities, NGOs, SCOs, will end by December 2017 WHO and UNICEF support advanced stratvolunteers, etc.); **Community engagement (CCHWs** egies by December 2017 Service provision (1 to 2 staff members per not yet operational); Facility staff (trained or not) facility), 5/8 trained staff; 7/8 salaried staff Cold chain equipment, supply and members availability of vaccines and other Vaccination is administered daily in 6/8 facilities, from 8:00am -4:00pm needs: Partners coordination: Supply of vaccines every two months (limited storage capacity). Quantity of Production and reporting of vaccination data (management tools vaccines received always lower than we and vaccination space) is required · 4 operational refrigerators, 1 old refrigerator certified, 1 refrigerator out of order and 2 facilities without refrigerators Resources What were the resources used to What are the available resources for Arti-Does Artibonite have the necessary resources achieve the results obtained (staff to reproduce what was done at Cité Soleil? If time, funds, space, etc.) in Cité not, will it be possible or advisable for Artibonite to find or redeploy resources for design Soleil? The following resources were recorded for and implementation? • An EPI provider for 7 facilities Resources used; • The Project Coordinator (Gérald) CCHW: Ka-Soleil (9), Raboteau (7), Pont Needed elements to replicate the model in analyzed and followed up the Gaudin (9), Mandrin (1). These CCHWS are Gonaïves: paid by SSQH until December 2017 • One provider for Eben Ezer activities): Health professionals in Cité • 4 refrigerators in good working order: • Funding for CCHWs already in place (HPG, Trou Sable, Pont Gaudin, Mandrin) Soleil; 11 CCHWs (4 HPG, 2 Trou Sable, 2 Eben Ezer, Leaders (community, municipal-8 insulated boxes 2 Tharasse, 1 Mandrin) ity, religious groups, etc.) who • 79 thermos bottles, including 30 without • 2 refrigerators for Ka-Soleil and Raboteau raised awareness in the populahandles • 2 cold boxes (1 for Tharasse and 1 additional box for Raboteau) DSO, DEPI, members of the Tech- 30 thermos bottles nical Committee • Pads for the thermos bottles Monitoring of vaccine stocks Prepaid telephone card for each one of the 8 facilities and DDSA) · Filling of at least 12 gas cylinders per month • EPI management tools 2 megaphones for each of the 8 facilities **Batteries for the megaphones** Vaccines and inputs

	SYSTEM A VACCINATION MODEL IN URBAN AREAS: CITÉ SOLEIL	SYSTEM B REPLICATION OF THE VACCINATION MODEL IN THE URBAN AREA OF ARTIBONITE	OPPORTUNITY AND / OR FEASIBILITY OF CHANGING PRACTICES, PROCEDURES AND CONTEXT OF VACCINATION OF URBAN AREAS OF ARTIBONITE TO MATCH THOSE USED IN THE MODEL OF IMMUNIZATION IN CITÉ SOLEIL
Populations	What are the main characteristics of the key players in the Cité Soleil system in terms of expertise, experience, commitment, etc.? • Actors committed and available to participate in this effort but many are limited by level of knowledge; • Difficulty in mobilizing resources to finance activities; • Some partners are not available lack of time	What are the key actors' main characteristics in Artibonite? Actors' main characteristics: DDSA, BUAS, IS, CCHWs, community leaders on site Population mobilization for EPI	In so far as there is an incompatibility, would it be desirable or possible to recruit different employees, invest in training, conduct team building activities, etc.? In Gonaïves, we shall proceed as follows: Supervision Training Key messages, announcements, handbook with pictures
Institutional factors	Do the results depend on the organizational / departmental structure, organizational culture, etc.? (For example). Number of health facilities, management model and staff Presence of NGOs and of the private sector, and their roles The results depended on: Number of health facilities (those who propose vaccination services, those who have cold chain equipment, Facilities with trained staff; Number of supporting NGOs, private CSOs in Cité Soleil and their roles in the organization of vaccination activities in Cité Soleil.	To what extent does the organizational and / or cultural structure of Artibonite determine the practice? Number of health facilities, management model and staff Presence of NGOs and of the private sector, and their roles • Number of facilities in Gonaïves City (8), but not all of them vaccinate on a daily basis; • Organization structure recommended to reach the objectives: DEPI -> DDS -> CDAI -> Facility -> CCHWs • Staff and cold chain equipment are lacking in the facilities • Repeated stock outs of vaccines and inputs in facilities • Irregular working hours (vaccination) • All facilities do not vaccinate on a daily basis. How many?	In so far as there are differences, would it be possible or advisable to change the institutional or cultural structures of Artibonite? Fill the identified gaps with the collaboration of the DEPI and its partners
Environmental factors	To what extent do results depend on specific environmental factors (e.g., policies, legislation, etc.)? • Will of municipal and community leaders? • Real engagement?	Is the external environment in Artibonite comparable to the one in Cité Soleil? Sometimes, political assets prevent the smooth running of activities (imposition of unskilled personnel, strikes or protest block the supply of facilities, poor logistics, vaccines quota received less than the expected quotas, funding of the State still unavailable (instability of partners)	In so far as there are differences, would it be possible or advisable to change the external environment in Artibonite?
The Community	Role of the community in Cité Soleil	What is the community structure in Artibo- nite? Do you think the community can play a	Is it advisable? Is it possible to work with the community? If yes, how so?

- The community was involved in disseminating information on the reasons for non-vaccination of children;
- Community members were willing to participate in children's immunization efforts

role? IF so, which role does the community

- The use of the existing community structure can contribute to reach the objectives: Delegation \rightarrow City Hall \rightarrow PNH -> Leader local -> OCB;
- The role of the community is to mobilize, to sensitize, to inform, and to motivate the population to use the services

In Gonaïves, it is better to work with the community in decision-making and the implementation of activities, the establishment of the Health Committees, the empowerment of local leaders, the recruitment of community staff for capacity-building, the census of households to avoid an over/ underestimation of target populations, the endowment of cold chain equipment in facilities, full and regular supply of the Input Supply Centre (CDAI), the supervision / monitoring of facilities, and the use of micro-plans at the institutional level.

SYSTÈME A SYSTÈME B OPPORTUNITÉ ET/OU DE LA FAISABILITÉ DE L'ÉVOLUTION DES PRATIQUES, DE PROCÉDURES **MODÈLE DE VACCINATION EN ZONE** RÉPLICATION DE MODÈLE DE VACCINATION EN ET DE CONTEXTE DE VACCINATION DE ZONES **ZONE URBAINE DE L'ARTIBONITE URBAINES DE L'ARTIBONITE POUR CORRESPON-URBAINE: CITE SOLEIL** DRE À CELLES DU MODÈLE DE L'IMMUNISATION **DE LA CITÉ SOLEIL** Measures What reference study, what pro-Did Artibonite use the same measures? Would it be advisable or possible for Artibocess, what results, and what other nite to change the method for measuring and • EPI monitoring recording the data? measures were used to evaluate success? Upgrade of institutional vaccination In Gonaïves, we shall proceed as follows: spaces Document review, FGDs, institution- Stocks follow-up of vaccines and other Validation of reports al visits, interviews with mothers inputs from EPI · Local level supervision and the community: . Monthly follow-up meeting Quarterly evaluation Vaccination coverage at the beginning and presently? Availability of vaccines before The model will probably operate with a regular and presently? supply of vaccines and other inputs from EPI Availability of vaccines before and the promotion of vaccination through and presently? vaccination by the dissemination of messages **Community engagement before** in the media and now? Monthly reports **Procedures** What has been done exactly in Is the situation the same in Artibonite? In so far as there are differences, would it be Cité Soleil that led to the reported advisable or feasible for Artibonite to change results? Some reasons explaining the low level of its activities? coverage observed are: • Frequent stock-outs of vaccines . Insufficient supply in relation to the needs Adoption of the procedures implemented in combined a poor organization of of the population, Cité Soleil (weekly monitoring of vaccine services could explain the low Limited storage capacity for vaccines stocks by mobile phone, triage of people who (problems with the cold chain) level of vaccine coverage. come for vaccination only, etc.). Lack of staff (CCHWs), lack of refresher training for professionals, other untrained staff **Results** What were the main results, for What are the results found in Artibonite? In so far as the results are different, to what what, at what costs and to what are these differences attributable? Are there are they attributable to (see the Are they obtained for the same actors such some results that Artibonite should achieve previous lines)? What was the cost as in Cité Soleil? Which results obtained in that were not achieved? per positive result? Artibonite have not been achieved in Cité Soleil? What are those results attributable Is it possible to achieve the same results at a lower cost? Should Artibonite give up some • Reduction in stock outs of vacto? What is the cost for Artibonite? cines in facilities thanks to the current results to achieve the same results as weekly follow-up of stocks Reporting of data: (good completeness at Cité Soleil? Improvement of Penta 3 coverage 100% and good timeliness at 95%); from 38% to 52% 2/8 facilities with Penta 3 coverage >80% In order to reach better results the following Setting up of a fast line for those • 3/8 facilities with Penta 3 between 50%points should be reinforced all year round who come for vaccination 79% - the availability of vaccines and inputs • 3/8 facilities < 50% - mobilization for EPI