Burkina Faso EOP Report

November 2017 – June 2019

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Maternal and Child Survival Program

The Maternal and Child Survival Program (MCSP) is a global, United States Agency for International Development (USAID) Cooperative Agreement to introduce and support high-impact health interventions in USAID's 25 maternal and child health priority countries, as well as other countries to help prevent child and maternal deaths. The Program is focused on ensuring that all women, newborns and children most in need have equitable access to quality health care services to save lives. MCSP supports programming in maternal, newborn and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment.

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We would also like to recognize the staff from the following USAID-funded projects and organizations that were central to the realization of MCSP: MEASURE Evaluation, nongovernmental including Jhpiego, African Epidemiology Network, other technical partners including UNICEF, and Centers for Disease Control and Prevention, and community leaders from Baskuy, Sig-Noghin, Pouytenga, Zabré, and Manni districts for their support, collaboration, and shared commitment to improving maternal and child health care in Burkina Faso.

MCSP would also like to acknowledge and thank our talented and hardworking staff in Burkina Faso and in Washington for their dedication and service to the program.

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Acronyms and Abbreviations

CBS	Community-based surveillance
DMT	District management teams
DPSP	Division for the Protection of Population Health
DQSA	Data quality self-assessments
EBS	Events-based surveillance
EPI	Expanded Program on Immunization
GHSA	Global Health Security Agenda
IDSR	Integrated Disease Surveillance and Response
MOH	Ministry of Health
Nm	Neisseria meningitides
PCV3	Pneumococcal conjugate third dose
RI	Routine immunization
RED	Reaching Every District
REC	Reaching Every Community
WAHO	West African Health Organization

List of Tables and Figures

Country Summary

Geographic Implementation Areas

Regions
- 3 MCSP-supported/13 total (23%) – Center, Center-Est, and Est

Districts
- 5 MCSP-supported/70 total (7.14%) – Baskuy, Sig-Noghin, Pouytenga, Zabré, Pama[1] and Manni

Facilities
- 85 MCSP-supported/2,287 (3.72%)

Population

Country

20,870,060

MCSP-supported areas
- 1,287,364

Technical Areas

Program Dates

November 2017-June 2019

Cumulative Spending through Life of Project

$1,000,000 (GHSA funds)

Demographic and Health Indicators

Indicator	# or %
% of children between 12-23 months completely vaccinated	81%
IMR (per 1,000 live births)	66
U5MR (per 1,000 live births)	102
MMR (per 100,000 live births)	341

Sources: DHS-MICS IV, 2012

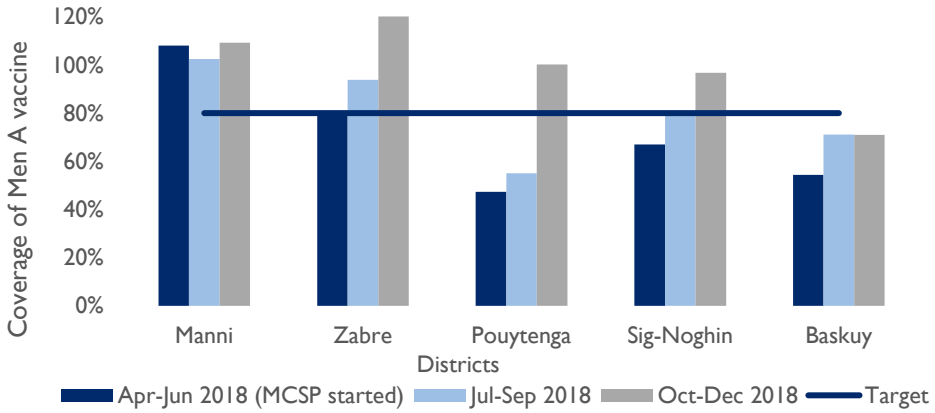
Strategic Objectives through the Life of Project

- Scale-up and strengthen case-based and community-based surveillance to improve meningitis detection and confirmation.
- Improve preparedness and response mechanisms for future meningitis outbreaks.
- Improve MenA, PCV3, and Penta3 immunization coverage through strengthening the overall routine immunization system in low-performing districts and maintaining high coverage in well-performing districts.
- Improve surveillance, coordination, communication, and case management for ongoing and future dengue fever outbreaks.

Highlights through the Life of Project

- Updated MOH RED/REC training materials and improved health worker capacity to deliver immunization services in five districts.
- Supported MOH staff in implementation of immunization data quality self-assessments in five districts.
- Trained 166 health staff in epidemiologic surveillance in five districts resulting in increased preparedness for disease detection and strategic response to outbreaks.
- Scaled up and supported an inter-ministerial pilot of the event-based surveillance system using the One Health Approach in Pouytenga district.
- Supported MOH dengue, measles, and meningitis outbreak responses.

Figure 1. Coverage of meningitis A vaccine increased in four of the five MCSP-supported districts



Data Source: Ministry of Health Routine Immunization Database

[1] MCSP also provided technical support in Pama District for 6 months until the program had to withdraw due to security reasons.

Executive Summary

Burkina Faso's routine immunization and surveillance systems face significant challenges related to vaccine transportation and distribution; cold chain equipment; vaccine storage capacity; supportive supervision; communication strategies for routine immunization (RI); community involvement for RI; vaccine waste management and elimination; data management; data quality; regional disparities in immunization coverage, and high risk of disease outbreaks, including meningitis, dengue fever, and measles.

In November 2017, the USAID Mission in Burkina Faso requested one year of assistance from the Maternal and Child Survival Program (MCSP), using Global Health Security Agenda (GHSA) funds, to prevent epidemics by strengthening surveillance and routine immunization in Burkina Faso.

MCSP's goal was to support the Ministry of Health to strengthen routine immunization and epidemiological surveillance systems, with a focus on meningitis and dengue prevention, preparedness for potential outbreaks, and response to outbreaks. MCSP's interventions targeted five health districts Baskuy and Sig-Noghin, (in Centre region), Pouytenga and Zabre (in Centre-East region), and Manni (in East region).

Key achievements included:

- Healthcare workers oriented with revised Integrated Disease Surveillance and Response (IDSR) guidelines and case-based surveillance in the five supported districts,
- Community-based surveillance (CBS) for unusual event scaled-up and aligned with the One Health approach in Pouytenga District,
- Meningitis preparedness and response mechanisms strengthened at the national level and in MCSP-supported regions and districts,
- Timely finance and technical assistance provided for meningitis outbreak vaccination reactive campaign in Diapaga (East region),
- Reaching Every District, Reaching Every Child in Community (RED/REC) approach strengthened in the five supported districts,
- Immunization data quality assessed in the five supported districts to contribute to data use for decision-making,
- Improved surveillance, coordination, communication and case-management for dengue fever outbreak.

Among other challenges, the project's implementation was interrupted by security issues in the East region, leading to MCSP withdrawing support in Pama District. Due to a shortened implementation period of approximately six months and limited resources, some outcomes of MCSP support are not yet fully reported; however, critical groundwork has been laid to continue to strengthen routine immunization and close the equity gaps. The Ministry of Health, through the Expanded Program on Immunization (EPI) and the regions and health districts where MCSP intervened, have all committed to sustaining the achievements of MCSP, but will need further support to realize all commitments.

Introduction

Burkina Faso is a landlocked country in West Africa with an estimated population of 20.9 million people (2019). In spite of high immunization coverage, infant mortality and under-five mortality remain high at 66 deaths per 1,000 live births and 102 deaths per 1,000 live births respectively. Data from the latest household survey, conducted in 2010-2011, show that 81% of children between 12-23 months were fully vaccinated. However, these national figures masked regional and district-level disparities and pockets of low coverage. In addition, Burkina Faso is the only country that lies entirely within the meningitis belt, and is at continually high risk of meningitis epidemics. Since 2016, the country has nearly had annual meningitis outbreaks mostly caused by S. Pneumoniae, Neisseria meningitidis (Nm) W or Nm C in some health districts. Due to outbreaks in neighboring countries of Togo, Niger, Ghana, and Benin, cross border activities and epidemiological trends, the threat of an epidemic is constant. In 2010, the country carried out a catch-up mass immunization campaign (targeting children 1 – 29 years of age) using MenAfrivac Vaccine. Since then, surveillance data indicates that the number of meningitis cases due to serotype A (NmA) has dramatically reduced with only six confirmed NmA cases reported from 2011-2015 out of a total 20,389 suspected meningitis cases. However, there are other subtypes including, by order of importance, Sp, NmW, NmX, and smaller numbers of cases reported with serotypes C and Y.

Burkina Faso's routine immunization and surveillance systems face significant challenges. The Expanded Program on Immunization (EPI) experiences gaps in vaccine transportation and distribution; cold chain equipment; vaccine storage capacity; supportive supervision; communication strategies for routine immunization; community involvement in RI; vaccine waste management and elimination; data management; data quality; and regional disparities in immunization coverage. Burkina Faso's meningitis surveillance system is strong and serves as a model for neighboring countries. Its electronic surveillance system, implemented since 2009, facilitates real-time reporting as part of case-by-case surveillance for meningitis. With the support of the MenAfriNet partners like CDC, WHO, Agence de Médecine Préventive (AMP) etc., this surveillance was reinforced in 2014 by the quality control of the laboratories, the improvement of the transport of the samples, the confirmation of the cases at the level of the laboratories and, data management monitoring. However, data quality, sample transport, and community-based surveillance (CBS) need improvement and support. Further, surveillance systems for diseases other than meningitis are nascent.

In November 2017, the USAID Mission in Burkina Faso requested one year of assistance from the Maternal and Child Survival Program (MCSP), using Global Health Security Agenda (GHSA) funds, to prevent epidemics by strengthening surveillance and routine immunization. MCSP is a global, USAID Cooperative Agreement to introduce and support high-impact health interventions with a focus on 25 high-priority countries to help prevent child and maternal deaths. The Program focuses on ensuring that all women, newborns and children most in need have equitable access to quality health care services to save lives. MCSP supports programming in maternal, newborn and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment. While the initial program description focused on meningitis immunization and surveillance, a revised version integrated dengue fever outbreak response and surveillance to address urgent needs related to the country's 2017-2018 dengue epidemic. At the USAID Mission's request, MCSP quickly mobilized resources to support the Division for the Protection of Population Health (DPSP) to carry out a dengue communication and sensitization campaign in late November-early December 2017, train providers on dengue case management and, improve data quality for surveillance.

After discussions with the USAID Mission and USAID in Washington, in December 2017, MCSP conducted a two-week scoping visit in Burkina Faso to meet with key partners and stakeholders, gather critical information regarding immunization and surveillance, follow up on MCSP-supported dengue response activities, and initiate workplan development.

In Burkina Faso, MCSP supported the Ministry of Health to strengthen routine immunization systems and surveillance, with a focus on meningitis and dengue prevention, preparedness for potential outbreaks, and response. Specifically, the project aimed to achieve the following:

- Scale-up and strengthen case-based and community-based surveillance to improve meningitis detection and confirmation;
- Improve preparedness and response mechanisms for future meningitis outbreaks;
- Improve Meningitis A, PCV3, and Penta3 immunization coverage through strengthening overall routine immunization system in low-performing districts and maintaining high coverage in well-performing districts;
- Improve surveillance, coordination, communication, and case management for ongoing and future dengue fever outbreaks.

MCSP's technical approach was based on tested and proven interventions that were aligned with the One Health approach[2] and GHSA's action packages for immunization and real-time surveillance. MCSP also took into consideration the local context and the presence of other complementary activities by partners such as WHO, UNICEF, CDC, MEASURE Evaluation, Davycas, and Agence de Médecine Préventive (AMP). It also ensured National programs' interventions are adapted to suit each target district to achieve and maintain high immunization coverage and prevent disease outbreaks, such as meningitis, while ensuring that all levels are prepared and able to respond rapidly to outbreaks. MCSP's approach to epidemic preparedness and response is focused on scaling up community-based surveillance, strengthening effective communication and supervision, and building healthcare worker capacity on integrated disease surveillance and response (IDSR). MCSP worked as well to strengthen the management of immunization services, promote utilization, and tailor immunization-strengthening approaches to the country context using the Reaching Every District/Reaching Every Child (RED/REC) approach and the revised AFRO RED Guidelines. MCSP proposed approaches that improved the quality of microplanning and catchment area mapping using available data. MCSP extended data quality assessments and approaches that improved the quality and use of data closer to the points where they were generated.

MCSP intervened at central, district, facility and community levels. First, by joining working groups and key technical committees, MCSP provided support to program coordination at the central level. Then, to facilitate linkages between MCSP's routine immunization and surveillance work, MCSP, in consultation with the EPI, selected three low-coverage districts to provide technical assistance, Baskuy in the Centre region, Pouytenga in the Centre-East region, and Pama in the East region on the basis of meningitis A and measles 2 coverage (2017). MCSP chose three high-performing districts including Sig-Noghin in the Centre, Zabre in the Centre-East region, and Manni in the East were chosen based on their respective Penta3, PCV3, meningitis A, and measles 2 coverage (2017).

[2] The One Health approach to disease control recognizes that human, animal and environmental health are connected. It is a multidisciplinary approach to prevent, detect and respond to emerging and re-emerging infectious diseases.

Major Accomplishments

Over the life of project, MCSP provided technical assistance to the Ministry of Health to strengthen routine immunization and surveillance systems, with a focus on meningitis and dengue prevention, preparedness for potential outbreak, and response to outbreaks. MCSP's major accomplishments are highlighted in the section below.

Scaled-up and strengthened case-based and community-based surveillance to improve meningitis detection and confirmation

Burkina Faso's meningitis surveillance system is robust; however, gaps remain in rolling out community-based surveillance. In the last few years, the country regularly faced meningitis outbreaks mostly caused by *S. Pneumoniae*, *Neisseria meningitidis* (Nm) W, X or Nm C. These epidemiological trends persisted because of trans-border population movements, climate change, and socioeconomic and cultural conditions. These factors make it critical for the country to be able to rapidly detect cases, confirm cases, and respond appropriately. In support of the government's response, MCSP improved case detection and confirmation in the five supported districts implementing the following interventions:

- Scaled-up events-based surveillance (EBS) in Pouytenga district
- Enhanced surveillance communication strategies
- Trained healthcare workers using the revised IDSR and case-based surveillance guidelines
- Improved the meningitis sample transport system

In March 2019, with USAID/GHSA funding and MCSP's technical support, the Ministries of Health (MOH), Animal Resources and Environment conducted an EBS activity in Pouytenga district. Prior to EBS, the MOH, supported by CDC and Davycas International, piloted a CBS model in three districts (Houndé, Boussé and Kongoussi) in July 2017. In 2018, the Ministries of Health, Animal Resources and Environment, MCSP and partners revised the initial approach to incorporate a One Health approach that included animal and ecosystem health issues. MCSP then led the cascading of EBS One Health training to nearly 300 people, 36% of who were women, from Pouytenga District in Centre-East Region.

MCSP's EBS Highlights:

- ✓ Introduced community-based surveillance in Pouytenga, with community-based agents and actors actively monitoring and managing human health threats
- ✓ Implemented One Health approach which fostered inter-sectoral information-sharing, coordination, and monitoring between the health, forestry, and veterinary departments
- ✓ Built capacity for identification, early detection, and notification of "unusual events" (see box) that may threaten human, animal, and/or environmental health
- ✓ Contributed to improved preparedness to address future disease outbreaks
- ✓ Post-training follow-up and joint supervision visits ensured that surveillance staff were able to implement the One Health Approach EBS effectively in the field.

Table 1. Trained health workers in EBS One Health by affiliation and system level

System Level	Ministry of Health	Ministry of Animal Resources	Ministry of Environment	TOTAL
Region	3	1	1	**5**
Province/District	3	2	2	**7**
Point of Service (Health Facility, Veterinary Post, Forestry Post)	47	6	3	**56**
Community (Community Health Workers, Village Veterinary Volunteers, Ecoguards)	175	31	23	**229**
TOTAL	**228**	**40**	**29**	**297**

The EBS One Health training focused on orienting participants on the newly revised tools, and identification, early detection, and notification of "unusual events" that may threaten human, animal, and/or environmental health. MCSP provided the three ministries' local representatives with awareness and sensitization tools and other job aids for unusual event collection and reporting (notification form, supervision matrix) to use post-training. MCSP also supported the ministries in conducting post-training follow-up and joint supervision visits throughout the district, to ensure that surveillance staff were able to implement the One Health Approach EBS effectively in the field.

As the beneficiaries have testified, the key achievements were: (1) enhancement of community participation in the collection, monitoring and evaluation of information obtained on health-related events, (2) strengthened communication channels, and (3) better collaboration between the three government sectors to improve the detection and reporting of unusual events and threats to public health in Pouytenga district.

"The One Health Approach Event-Based Surveillance system has changed how we monitor and manage threats to human health by integrating the community and other sector partners (into our efforts) in a holistic way."

- Dr. Kalmogo Ousmane N°2, Pouytenga Chief Medical Officer

"EBS One Health is a good plan that promotes collaboration among designated stakeholders to effectively prevent population health issues. It enables community agents and actors to be effective in detecting unusual events and solving health problems. The difference with EBS One Health is especially the involvement of community stakeholders and the collaboration between officials from other sectors of the government to prevent population health issues."

- Mr. Tiendrebeogo Issoufou, Kouritenga Provincial Director of Environment, Green Economy and Climate Change

Enhanced communication strategies for surveillance

In coordination with the three ministerial directorates, Division for Prevention through Vaccinations (for routine immunization), the Direction of Protection for Population Health (for community-based surveillance of meningitis and unusual events) and the Directorate of Health Promotion and Education (for the production of communication media, MCSP completed a desk review of communication reference documents. In the baseline rapid assessment, MCSP also reviewed communication media at health facilities; interpersonal communication between health providers and caregivers at immunization sessions; and the involvement of key actors in promoting surveillance. These reviews and assessment helped MCSP and the MOH to identify gaps and priority areas to prioritize in order to enhance communication strategies for surveillance. They also formed the basis for a draft communication plan for strengthening routine immunization and surveillance that the MOH will carry forward.

Trained healthcare workers in revised IDSR and case-based surveillance guidelines

In the 1990s, WHO established an aggregate case reporting framework for meningitis surveillance in the region based upon the Integrated Disease Surveillance and Response (IDSR) platform. Partners have supported these activities and their rollout in several countries across the meningitis belt. The WHO Inter-Country Support Team for West Africa, located in Burkina Faso, coordinates all meningitis surveillance and response activities in the region. In 2015, these surveillance guidelines were updated by the MenAfriNet consortium based on the experiences of Burkina Faso, Mali, and Niger. In October 2018, the MOH, with the support of The West African Health Organization (WAHO), conducted a training for trainers' session using the revised IDSR guidelines. In November and December 2018, district management teams and health facility officers from the five MCSP-supported districts were trained at the operational level using the revised guidelines. The intent of trainings was to strengthen health staff ability to detect diseases, analyze and interpret data on disease, conditions and priority events, as well as to adopt strategic approaches when faced with an epidemic. Overall, 166 health district team members and health facility workers including doctors,

pharmacists, nurses, and midwives were trained on IDSR. Of these trainees, 39 were female (23%). The trainings strengthened participants' knowledge on IDSR, with a significant increase in scores between pre-test and post-test. WHO also committed to supporting the MOH to train the remaining districts using the revised IDSR guidelines.

In April 2019, with MCSP support, the MOH conducted IDSR post-training follow up and supportive supervision visits. Findings revealed that health staff demonstrated good knowledge of the diseases under surveillance. However, weaknesses were noted in relation to difficulties in completing the data collection tools, non-preparation of epidemic-prone diseases surveillance charts, and low reporting of suspected cases of diseases. MCSP and the MOH counterparts used the opportunity of these supervisions to provide coaching, correct errors, and refresh the district team's knowledge on IDSR.

Improved meningitis sample transport system

In January 2018, with support from CDC and Davycas, the DPSP implemented an electronic sample-tracking system to enable meningitis sample tracking in real time and remove bottlenecks that contribute to delays in laboratory confirmation cases. This computerized data management system at the laboratory level, first called *STeLab* then renamed *e-Meningitis*, was integrated to the routine activities of the epidemiological surveillance unit at Districts and Hospitals levels. To facilitate effective rollout of STeLab to other epidemic-prone diseases, the DPSP commissioned the Muraz Center, a reference research center, to conduct an evaluation and assess the system before scaling up. Building on the findings, MCSP joined a Technical Working Group tasked to draft an extension plan for the biological sample transport system. The plan proposed a transition to 161 sites including 140 health facilities (CSPS). For each selected site, all samples for disease under surveillance were to be considered, except the stool samples for AFP surveillance for which the current system will be maintained. MCSP provided technical support and validated inputs into the new extension plan. At the close of MCSP, DPSP was still securing partners and financial support to fully operationalize the new system.

Improved preparedness and response mechanisms for future meningitis outbreaks

Due to the high risk of meningitis outbreaks in Burkina Faso, it was important for the MOH to build the capacity of health workers for case management, to facilitate rapid detection, confirmation and appropriate response to outbreaks. MCSP established collaborative relationships with key departments of the Ministry of Health and partners including WHO, UNICEF, CDC, Davycas, and AMP who all committed to strengthening disease surveillance and routine immunization. MCSP leveraged its expertise by advising key working groups and technical committees to better manage and coordinate national-level activities. These include the National Epidemic Management Committee, the Technical Working Group on Data Quality, ~~and~~ the Follow-up Group for Recommendations of the Joint External Evaluation of the International Health Regulations, the One Health Group, the Inter-Agency Coordination Committee for Immunization, and the EPI Technical Support Committee.

In October 2018, MCSP participated with Burkina Faso MOH counterparts in the 15th Annual Meeting on Surveillance, Preparedness and Response to Meningitis Outbreaks in Africa and the 5th Annual Meeting of MenAfriNet Partners. As a new partner of the MOH in strengthening epidemiological surveillance, representation at the meeting was important. Participants reviewed the meningitis epidemiological situation, the surveillance and the response to meningitis outbreaks in Africa in 2018. Partners discussed country-specific meningitis response plans for 2019, assessed progress and defined a way forward for the introduction of the MenAfriVac.

In January 2019, the country reported a meningitis outbreak case in Eastern Region (Health District Diapaga) and South-West Region (HD of Gaoua and Dano). At Epidemiological Week 10, ending on March 10, 2019, 818 suspected cases were reported nationwide with 49 deaths and a case fatality rate (CFR) of 6%. Following unexplained deaths in Botou Commune (HD Diapaga), an investigation revealed an epidemic of meningitis caused by *Neisseria meningitidis* (Nm) C in Botou and Kantchari communes in Epidemiological Surveillance

Zone I. In response, from 8th to 13th February 2019, MCSP helped to organize suspected case and reactive case vaccination campaigns with the tetravalent meningococcal vaccine in the Botou and Kantchari communes and a health facility in Diapaga commune (Tapoa Djerma). MCSP also facilitated supplemental supportive supervision, data collection and transmission, and participation on the epidemics management committee in Central East Regional Health Directorate.

Improved Meningitis A, PCV3, and Penta3 immunization coverage through strengthening overall routine immunization system in low-performing districts and maintaining high coverage in well-performing districts

Despite high national administrative coverage rates, the MOH EPI still faced gaps related to vaccine service delivery; supportive supervision; data management and quality; and addressing regional disparities in immunization coverage. To maximize support in a short period, the MOH and MCSP conducted a rapid assessment in the five districts to assess RED/REC implementation to help determine priority areas for improvement. At the baseline (August 2018), 49 out of 85 MCSP facilities had developed microplans. By April 2019, after receiving support from MCSP, 55 out of 85 MCSP facilities had developed microplans .MCSP focused on supporting districts and health facilities develop more annual microplans, reaching hard-to-reach populations, operationalizing RED/REC, and improving data quality and use by supporting regular supervision visits and conducting data quality self-assessments (DQSA).

The MOH EPI with MCSP's support, developed a strategy to build the skills of staff responsible for planning, implementing, and monitoring the EPI in MCSP-supported regions, districts, and health facilities. The strategy included: 1) updating national RED/REC training materials; 2) conducting updated RED/REC training for regional/district-level trainers and cascading updated training down to health workers; and 3) providing technical and financial support for supportive supervision. Skills-building focused on improving participants' ability to: effectively organize and deliver routine immunization services in their catchment areas; optimize use of available EPI resources; and ensure equitable and sustainable immunization access for target beneficiaries in all communities.

In January 2019, the MOH and MCSP organized a workshop to review RED/REC training tools developed in 2013 by the EPI. With MCSP technical assistance and inputs from EPI planning specialist, data manager, and communication specialist, the EPI updated the national RED/REC training materials to include:

- Background on RED/REC's development in the early 2000s;
- Clear descriptions of the RED/REC approach;
- A detailed presentation of updated RED/REC's five operational components: (1) planning and resource management; (2) reaching all eligible populations; (3) community engagement; (4) supportive supervision; and (5) program monitoring and use of data for action.

MCSP helped to train regional, district, and health facility teams to better organize routine immunization services. Using the newly updated training materials, the MOH and MCSP organized a series of RED/REC trainings for regional, district, and health facility staff who manage and deliver routine immunization services in the five districts. Central-level trainers trained regional and district immunization focal points, district surveillance focal points, and Chief Medical Officers who in turn conducted cascade training to all technical members of district management teams (DMT) and heads of health facilities in the five health districts. One hundred forty-six people improved their knowledge of RED/REC with MCSP support, including three EPI focal points and two EPI deputies in Center, Center-East, and East Regions; 43 DMT members in Baskuy, Sig-Noghin, Pouytenga, Zabré, and Manni districts; and 98 chiefs of public and private health facilities.

A specific area of focus for capacity-building during trainings was development of district and health facility microplans. A microplanning template was developed to aid participants in: district/health facility catchment area map preparation and updating; identification of health centers and location of priority communities; identification of client barriers in accessing and using immunization services; identification of solutions to

overcome challenges; preparation of work plans and plans for immunization sessions, including strategies for improving vaccination in the second year of life.

"This (RED/REC) training took into account all five components of the RED/REC approach and allowed the participants to understand the importance of EPI management whose impact is the reduction of the morbidity and mortality due to vaccine-preventable diseases."

- Mr. Sawadogo André, Sig-Noghin EPI Focal Point

MCSP also assisted the MOH to review and adapt national EPI supervision tools. Supervisors now have revised tools to effectively monitor implementation of the five RED/REC components. MCSP supported central and regional-level supervisors to conduct post-training follow-up visits and on-site supportive supervision visits at the district and health facility levels. Major supervision findings included: (1) lack of knowledge of the RED/REC approach and its five components, (2) health facilities without 2019 EPI microplans developed, and (3) lack of monitoring of vaccine coverage and dropout rates.

At the time of writing this report, 65% of health facilities in the five assessed districts had developed a microplan in 2019. All health facilities in Pouytenga district produced microplans while less than half in Sig-Noghin district. Note that data shown in Table 2 are **partial data**. Districts/health facilities were still developing 2019 microplans as of the writing of this report.

Table 2. Number and proportion of health facilities that developed REC microplans in 2018 and 2019 (partial), by district

District	# of health facilities that developed REC microplan in 2018	% (2018)	# of health facilities that developed REC microplans as of April 2019	% (as of April 2019)
Baskuy	17/17	100%	10/14	71%
Sig-Noghin	22/22	100%	10/24	42%
Pouytenga	0/18	0%	19/19	100%
Zabre	10/14	71%	7/14	50%
Manni	0/14	0%	9/14	64%
Total	**49/85**	**58%**	**55/85**	**65%**

2018 data source: MCSP baseline rapid assessment. 2019 data source: DPV/MCSP supervision/RED-REC post-training follow-up visits (as of April 2019).

To enhance the quality of RI data; MCSP supported capacity building and implementation of DQS. Using the World Health Organization's standardized tools for assessing RI data quality, the MOH and MCSP trained regional and district EPI managers to conduct DQS. These managers then worked with their corresponding regional EPI focal points to implement further DQS in all vaccine-providing health facilities in the MCSP-supported districts. DQS activities assessed the quality of EPI reporting/archiving, monitoring, supervision, microplanning, vaccine and cold chain management, and staff practices data as well as the accuracy of select EPI data. The latter focused on agreement between (1) Penta 3 data reported in tally sheets/vaccination registers and health facility monthly reports and (2) between Penta 3 monthly reports to the districts and reports aggregated at district level).

All 85 health facilities from the five supported districts conducted DQS sessions. DQS findings indicated significant data quality and accuracy issues across health facilities including data inconsistencies between data reporting tools (e.g., tally sheets not conforming to monthly reports), incomplete EPI reporting (e.g., un-updated vaccine coverage monitoring charts), and missing microplans shown in Table 3. Baskuy district had an average data quality score of 82% and the highest proportion of health facilities with data quality scores above 80%, at 62%. Health facilities within the other four districts had very low data quality scores, with the lowest score from Pouytenga at 52%. All health facilities in Zabré and Pouytenga scored less than 80% while in Sig-Noghin and Manni, only 23% and 29% of health facilities, respectively, scored more than 80%. Health facilities across all five districts were found to be performing poorly in terms of data accuracy, with the percent of health facilities with discrepancies in reported Penta 3 data ranging from 62-93%. Additionally, there continue to be gaps in reporting, archiving and monitoring of immunization data. This has implications for the accuracy and reliability of immunization coverage figures as is reflected in the discrepancy between administrative data on vaccine coverage and the joint WHO-UNICEF estimates: administrative data are often very high (sometimes more than 100%), whereas the annual joint WHO-UNICEF estimates show variances of around ten percentage points for all antigens. The lack of control of denominators (target population figures based on projections of non-updated census data) as well as shortcomings in data quality assessments and supervisions also contribute to these challenges.

Photo: MCSP/Dr. Abdoul Aziz Gbaya

Table 3. DQS summary results in MCSP-supported districts (March-April 2019)

	Baskuy	Sig-Noghin	Pouytenga	Zabré	Manni
# Health Facilities Assessed	16	22	19	14	14
Data Quality					
Reporting/Archiving	95%	75%	58%	52%	66%
Monitoring	49%	57%	56%	35%	76%
Supervision	94%	70%	15%	96%	93%
Microplanning	74%	51%	45%	56%	70%
Vaccine Management/Cold Chain	84%	67%	75%	60%	77%
Staff Knowledge/Action	96%	72%	66%	56%	58%
HF Average Quality Score	82%	65%	52%	59%	73%
HFs with Quality Score ≥ 80%	62%	23%	0%	0%	29%
Data Accuracy					
HFs with Penta 3 dose discrepancies	62%	64%	89%	93%	93%

To help address these findings, MCSP supported the districts to hold DQS meetings for all health facility managers to share results and develop plans to address the data quality problems. In addition, during joint supervision visits held in April/May 2019, the MOH and MCSP focused additional technical support on strengthening the capacity of health facility staff to complete data collection tools and reporting forms correctly. However, results of these interventions could not be fully assessed before the end of the project.

Improved surveillance, coordination, communication and case-management for on-going and future dengue fever outbreaks

In September 2017, Burkina Faso reported a Grade 1 emergency dengue fever outbreak. Through the end of 2017, a total of 15,096 suspected cases, 8,804 likely cases and 30 deaths (0.2%) were reported at the national level. In the first month of 2018, a total of 543 suspected cases, 317 likely cases, and two deaths were reported at the national level, a sign that the outbreak was waning. In the Centre Region where the epidemic was concentrated, 9,505 suspected cases, 5,202 likely cases and 25 deaths were reported through the end of 2017. In response to the epidemic, the MOH activated the National Epidemic Management Committee and five dengue sub-committees; strengthened daily and weekly surveillance notifications; provided free medical care and treatment for all severe cases; disseminated awareness messages through radio and television; and implemented vector control measures. MCSP responded by rapidly participating in the National Epidemic Management Committee meetings to improve coordination and dengue case management, provide technical input into communication strategies, and keep USAID abreast of key developments in a quickly evolving epidemic response.

As part of the country's vector control efforts, elimination of mosquito breeding sites was carried out by community volunteers across the 55 sectors of Ouagadougou. As part of a collaborative plan of support by partners, MCSP financially supported 2,500 of 5,500 total community health workers to carry out household visits to inform them about the campaign. MCSP also supported supervisors who were disseminating posters and brochures used during the campaign in December 2017.

MCSP supported refresher training and updates for over 1,500 providers using the 2016 WHO revised dengue case management guidelines for Burkina Faso in 7 (Centre-Ouest, Centre-Est, Centre-Nord, Nord, Sahel, Hauts-Bassins, and Boucle du Mouhoun) of the 8 regions most affected by the dengue outbreak. The one-day training covered dengue epidemiology, clinical aspects and classifications, biological diagnoses, and the newly revised case management procedures and protocols, and protective measures. The multi-disciplinary training teams included a public health physician, a clinician, and a pharmacist.

Cross-Cutting and Global Learning Themes

In Burkina Faso, MCSP has been rooted in strengthening the health system through the human capacity development of health workers and staff. This strategic decision was based on the baseline rapid assessment findings that revealed many shortcomings and lack of skills in EPI management and epidemiological surveillance in the intervention districts. With most zoonotic diseases capable of spreading between animals and humans, global security frameworks, including the GHSA, recommends that countries strengthen their surveillance capacity by applying a One Health approach that includes human, animal and environmental health ministries and other relevant sectors. This informed MCSP's use of the One Health approach in all of its interventions and activities, which helped to strengthen ownership by stakeholders at all levels.

MCSP also engendered community action for health through implementation of the RED/REC approach and the introduction of community-based surveillance in a pilot district. MCSP supported districts to mentor health facility staff to build capacity of and engage/involve communities in immunization, either directly or through community representatives as part of the REC/RED micro-planning process. The extension of community-based surveillance of unusual events in one of the project districts allowed MCSP to work directly with community actors of human, animal and environmental health, involving them in the early detection of health threats. This enhanced community participation in the collection, monitoring and evaluation of health surveillance data, and by extension, the country's surveillance program.

MCSP helped strengthen measurement and data use through capacity building and the implementation of Data Quality Self-Assessment (DQSA). This helped health workers to harmonize and validate data, and to regularly share and review their data during staff meetings as a means of understanding their performance, identifying problem areas, and generating ideas to improve them. In fact, following the poor results obtained

during the MCSP-supported DQS sessions, all the district medical doctors made the commitment to continue efforts to improve the quality of the EPI data in their area of responsibility.

Recommendations and Way Forward

Within less than one year of full implementation and amid ongoing security issues in some areas, MCSP successfully supported the response to dengue and meningitis outbreaks in Burkina Faso, while building district, health facility and community capacities for surveillance and routine immunization. MCSP oriented healthcare workers on revised Integrated Disease Surveillance and Response (IDSR) guidelines and case-based surveillance in the five supported districts; introduced community-based surveillance (CBS) for unusual event, aligned with the One Health approach, in Pouytenga District; strengthened meningitis preparedness and response mechanisms at the national level and in MCSP-supported regions and districts; provided timely financial and technical assistance for meningitis outbreak vaccination reactive campaigns in Diapaga (East region); strengthened Reaching Every District, Reaching Every Child in Community (RED/REC) approach in the five supported districts; built capacity for improved immunization data quality and data use for decision-making; and improved surveillance, coordination, communication and case-management for dengue fever outbreak. However, these are initial investments, and need ongoing support for institutionalization, especially in the following areas:

1. **Strengthen RED/REC implementation for strengthening routine immunizatio**n: Capitalizing on investments made in training of regional EPI and Surveillance focal points, District Management Team members, health facility managers, and vaccinators on the RED/REC approach, additional efforts is needed to support MOH staff to institutionalize the practices. At the close of MCSP, micro-planning aimed at reaching all targets was still ongoing: it needs partner support to ensure completion and an additional full cycle of planning, to help staff fully understand and use the tools. Beyond the planning exercise, districts and health facilities need to be financially and logistically supported to implement immunization activities (including pre- and post-winter acceleration sessions and outreach sessions) especially for children who need to receive the antigens of the second year of life (Men A and Measles 2nd dose). This platform of the second year of life is also an opportunity to catch up on all other antigens they have missed.

2. **Increased focus on DQS to improve quality and use of data**: The pervasive deficiencies in data quality and use throughout the program's focus districts make a compelling argument for ongoing investment in this area. While MCSP initiated DQSA as a mechanism for self-assessment, joint review, and planning to address the data quality problems, the success of these efforts are still unfolding, since data collection was interrupted by close-out of the program. The MOH is encouraged to use opportunities for training, supervision and technical assistance to continue bolstering health workers and managers skills in data entry and use.

3. **Continue roll out of EBS** – MCSP and the MOH successfully implemented community-based EBS in Pouytenga (Centre-East), with excellent collaboration between the ministries of health environment and animal resources, under the One Health approach. However, the District of Pouytenga still needs support for follow up monitoring and supportive supervision. USAID may consider extending support for EBS through another USAID partner to help consolidate on MCSP's achievements.

Appendix A: PMP

Result Area/IR	Indicator	Definition/Calculation	Numerator	Denominator	Baseline & Targets Q3-18(Apr-Jun,18)/Q4-18(Jul-Sep,18) Baseline	EOP target	LOP Result (May 2018-May 2019)
Objective 1: Scale-up and strengthen case-based and community-based surveillance to improve meningitis detection and confirmation							
1.1	Number of community health workers trained on identifying meningitis as per protocol (Disaggregated by district and sex)	This refers to counting the number of community health workers that are trained in the MCSP districts with MCSP's support following the protocol. The indicator should be disaggregated by district and sex. This refers to GHSA's Indicator and event-based surveillance systems.	Total number of community health workers who received training with MCSP support	N/A	Pama:80/Unk/Unk Pouytenga: 0/0/0 Baskuy: 0/0/0	Pama: 80 Pouytenga:129 Baskuy:35	Pama: N/A Pouytenga: 175/88m/87w Baskuy: N/A
1.3	Number of trainers of trained on revised IDSR and case based surveillance (Disaggregated by district and sex)	This refers to counting of the number of trainers who would receive training on revised IDSR case based surveillance guideline who will then conduct trainings for the health workers.	Total number of trainers who received training on IDSR and case based surveillance with MCSP's support	N/A	Manni: 0/0m/0w	Manni: 4	Manni: 0
					Pama: 0/0m/0w	Pama: 4	Pama:NA
					Zabre: 0/0m/0w	Zabre: 4	Zabre: 0
					Pouytenga: 0/0m/0w	Pouytenga: 4	Pouytenga: 0
					Sig-Noghin: 0/0m/0w	Sig-Noghin: 4	Sig-Noghin: 0
					Baskuy: 0/0m/0w	Baskuy: 4	Baskuy: 0
1.3	Number of HWs that are trained on revised IDSR and case based surveillance (Disaggregated by districts, type level of HWs and sex)	This refers to counting of HWs who received trainings on IDSR and case based surveillance from the trainers	Total number of health workers trained on IDSR and case based surveillance	N/A	Manni: 1/1m/0w	Manni: 28	Manni: 23/20m/3w
					Pama: 0/0/0	Pama: 24	Pama:NA
					Zabre: 1/1m/0w	Zabre: 28	Zabre: 29/27m/2w
					Pouytenga: 0/0/0	Pouytenga: 36	Pouytenga: 40/29m/11w
					Sig-Noghin: 0/0/0	Sig-Noghin: 44	Sig-Noghin: 41/34m/7w
					Baskuy: 11/11m/0w	Baskuy: 34	Baskuy: 33/17m/16w

Result Area/IR	Indicator	Definition/Calculation	Numerator	Denominator	Baseline & Targets	EOP target	LOP Result (May 2018-May 2019)
					Q3-18(Apr-Jun,18)/Q4-18(Jul-Sep,18) Baseline		
1.2/1.3	Number of suspected cases of meningitis that have been referred by community health workers in last quarter.	This indicator refers to identification of cases by the community health worker as per case definition. Each CHW will report the number of cases they suspected as meningitis in his/her community. The indicator will aggregate the number of cases reported by all trained CHWs in the district. This refers to GHSA's Indicator and event-based surveillance systems.	Number of suspected meningitis cases referred by the community health workers	N/A	Manni: 0/0/0	Manni: 100% of total cases	Manni: N/A
					Pama: 0/0/0	Pama: 100% of total cases	Pama: N/A
					Zabre: 0/0/0	Zabre: 100% of total cases	Zabre: N/A
					Pouytenga: 0/0/0	Pouytenga: 100% of total cases	Pouytenga:N/A
					Sig-Noghin: 0/0/0	Sig-Noghin: 100% of total cases	Sig-Noghin: N/A
					Baskuy: 0/0/0	Baskuy: 100% of total cases	Baskuy: N/A
Objective 2: Improve Preparedness and response mechanisms for future meningitis outbreaks							
2.1/2.2	Number of meetings attended by MCSP on meningitis outbreak management at the national level	This indicator refers MCSP's engagement in meningitis outbreak management at the national level. Reporting the number of meetings attended by MCSP with the MOH and partners.	Number of meetings on meningitis outbreaks attended by MCSP	N/A	0	N/A	5
Objective 3: Improve Men A, PCV3, and Penta3 immunization coverage through strengthening overall routine immunization system in low-performing districts and maintaining high coverage in well-performing districts							
3.1	Proportion of HFs with micro-plans developed/ updated	This indicators refers to planning of routine immunization at the health facilities leading to identifying sessions numbers, resources etc.	# of HFs with microplans developed or updated in the previous quarter.	Total number of HFs in the district. Reported by district	Manni: 0/14(0%)	Manni: 100%	Manni: 9/14 (64%)
					Zabre: 10/14(71.43%)	Zabre: 100%	Zabre: 7/14 (50%)
					Pouytenga: 0/18(0%)	Pouytenga: 100%	Pouytenga: 19/19 (100%)
					Sig-Noghin: 22/22(100%)	Sig-Noghin: 100%	Sig-Noghin: 10/24 (42%)
					Baskuy: 17/17(100%)	Baskuy: 100%	Baskuy: 10/14 (71%)

Result Area/IR	Indicator	Definition/Calculation	Numerator	Denominator	Baseline & Targets	EOP target	LOP Result (May 2018-May 2019)
					Q3-18(Apr-Jun,18)/Q4-18(Jul-Sep,18) Baseline		
3.1	Proportion of HFs that received supportive supervision incorporating immunization in last quarter	This indicator refers to supporting supervision that each health facilities should receive from the district level	Number of HFs that received a SS integrating immunization.	Total number of HFs. Reported by district	Manni: 0/14/(0%)	Manni: 100%	Manni: 9/14/ (64%)
					Zabre: 10/14/(71.43%)	Zabre: 100%	Zabre: 9/14/ (64%)
					Pouytenga: Unk/18/(Unk)	Pouytenga: 100%	Pouytenga: 9/18/ (50%)
					Sig-Noghin: 22/22/100%	Sig-Noghin: 100%	Sig-Noghin: 9/24/ (41%)
					Baskuy: 13/17/(76.47%)	Baskuy: 100%	Baskuy: 9/14/ (64%)
All of 3	Percentage of children under 12 months of age who received Penta3	This is a coverage indicator and will be disaggregated by districts. The quarterly numerator is measured by adding the total number of doses in three months within the quarter. The quarterly denominator is measured dividing the yearly target by 4. (disaggregated by district)	Number of children 0-11 months of age who received Penta3	Total number of children from 0-11 months	Manni: 2,445/2,117 (115.49%)	Manni: 90%	Manni: 2483/2117 (117%)
					Zabre: 1,792/1,557 (115.07%)	Zabre: 90%	Zabre: 1772/1557(114%)
					Pouytenga: 1,744/2,357 (74.01%)	Pouytenga: 90%	Pouytenga: 2424/2357(103%)
					Sig-Noghin: 3,582/2,728 (131.30%)	Sig-Noghin: 90%	Sig-Noghin: 3551/2728(130%)
					Baskuy: 1,709/1,811 (94.37%)	Baskuy: 90%	Baskuy: 1719/1811(95%)
3.1	Percentage of children under 12 months of age who received PCV3	This is a coverage indicator and will be disaggregated by districts. The quarterly numerator is measured by adding the total number of doses in three months within the quarter. The quarterly denominator is measured dividing the yearly target by 4. (disaggregated by district)	Number of children 0-11 months of age who received PCV3	Total number of children from 0-11 months	Manni: 1,547/2,117 (73.07%)	Manni: 90%	Manni: 2405/2117(113%)
					Zabre: 1,792/1,557 (115.07%)	Zabre: 90%	Zabre: 1772/1557(114%)
					Pouytenga: 1,744/2,357 (74.01%)	Pouytenga: 90%	Pouytenga: 2424/2357(103%)
					Sig-Noghin: 2,157/2,728 (79.07%)	Sig-Noghin: 90%	Sig-Noghin: 3551/2728(130%)
					Baskuy: 1,667/1,811 (92.05%)	Baskuy: 90%	Baskuy: 1719/1811(95%)
All of 3	Proportion of children who received MCV1	This is a coverage indicator. The indicator and will be disaggregated by districts. The quarterly numerator is	Number of children who received MCV1.	Total number of children from 0-11 months	Manni: (2,768/2,117 (130.75%)	Manni: 90%	Manni: 2327/2117(110%)
					Zabre: 1,518/1,557(97.49%)	Zabre: 90%	Zabre: 1878/1557(121%)

Result Area/IR	Indicator	Definition/Calculation	Numerator	Denominator	Baseline & Targets	EOP target	LOP Result (May 2018-May 2019)
		measured by adding the total number of doses in three months within the quarter. The quarterly denominator is measured dividing the yearly target by 4.This indicator refers to GHSA's Vaccine coverage (measles) as part of national program indicator.			Pouytenga: 1,707/2,357 (72.42%)	Pouytenga:90%	Pouytenga:2281/2357(97%)
					Sig-Noghin: 3,424/2,728 (125.51%)	Sig-Noghin: 90%	Sig-Noghin:3313/2728(121%)
					Baskuy: 1,616/1,811 (89.23%)	Baskuy: 90%	Baskuy:1519/1811(83%)
All of 3	Proportion of children who received MCV2	This is a coverage indicator. The indicator and will be disaggregated by districts. The quarterly numerator is measured by adding the total number of doses in three months within the quarter. The quarterly denominator is measured dividing the yearly target by 4. This indicator refers to GHSA's Vaccine coverage (measles) as part of national program indicator.	Number of children who received MCV2.	Number of children from 0-11 months of the previous year who survived	Manni: 2,228/2,077 (107.27%)	Manni: 90%	Manni:2270/2077(109%)
					Pama: 1,049/1,350 (77.69%)		
					Zabre: 1,223/1,528(80.06%)	Zabre :90%	Zabre:1848/1528 (121%)
					Pouytenga: 1,095/2,313 (47.35%)	Pouytenga: 90%	Pouytenga:2319/2313 (100%)
					Sig-Noghin: 1,781/2,656 (67.06%)	Sig-Noghin: 90%	Sig-Noghin: 2570/2656(97%)
					Baskuy: 1,078/1,764 (61.10%)	Baskuy: 90%	Baskuy:1251/1764(71%)
All of 3	Proportion of children who received MenA	This is a coverage indicator. The indicator and will be disaggregated by districts. The quarterly numerator is measured by adding the total number of doses in three months within the quarter. The quarterly denominator is measured dividing the yearly target by 4.	Number of children who received MenA.	Number of children from 0-11 months of the previous year who survived	Manni: 2,245/2,077 (108.09%)	Manni: 90%	Manni:2270/2077(109%)
					Zabre: 1,235/1,528 (80.85%)	Zabre: 90%	Zabre:1848/1528 (121%)
					Pouytenga: 1,095/2,313 (47.35%)	Pouytenga: 90%	Pouytenga:2319/2313(100%)
					Sig-Noghin: 1,779/2,656 (66.99%)	Sig-Noghin: 90%	Sig-Noghin:2570/2656 (97%)
					Baskuy: 959/1,764 (54.36%)	Baskuy: 90%	Baskuy:1251/1764(71%)

Result Area/IR	Indicator	Definition/Calculation	Numerator	Denominator	Baseline & Targets	EOP target	LOP Result (May 2018-May 2019)
					Q3-18(Apr-Jun,18)/Q4-18(Jul-Sep,18) Baseline		
All of 3	Dropout rate (DOR) of Penta1-Penta3	This is a coverage indicator which shows continuity of children receiving subsequent doses of vaccines.	Number of children 0-11 months of age who received Penta1- Number of children under 0-11 months of age who received Penta3	Number of children 0-11 months of age who receive Penta1.	Manni: (2,486-2,445)/2,486= (1.65%)	Manni: 0-5%	Manni: 8%
					Pama: (1,544-1,450)/, 1544= (6.09%)		
					Zabre: (1,671-1,792)/1,671= (-7.24%)	Zabre: 0-5%	Zabre:9%
					Pouytenga: (2,026-1,744)/2,026= (13.92%)	Pouytenga: 0-5%	Pouytenga:2%
					Sig-Noghin: (3,526-3,582)/3,526= (-1.59%)	Sig-Noghin: 0-5%	Sig-Noghin: 23%
					Baskuy: (1,420-1709)/1,420= (-20.35%)	Baskuy: 0-5%	Baskuy: 17%
All of 3	DOR of BCG-Penta3	This is a coverage indicator, which shows continuity of children receiving subsequent doses vaccines.	Number of children 0-11 months of age who received BCG- Number of children 0-11 months of age who received Penta3	Number of children 0-11 months of age who received BCG.	Manni: (3,033-2,445)/3,033= (19.39%)	Manni: 0-5%	Manni: 9%
					Zabre: (1,933-1,792)/1,933= (7.29%)	Zabre: 0-5%	Zabre: 16%
					Pouytenga: (2,356-1,744)/2,356= (25.98%)	Pouytenga: 0-5%	Pouytenga: 28%
					Sig-Noghin: (4,183-3,582)/4,183= (14.37%)	Sig-Noghin: 0-5%	Sig-Noghin: 34%
					Baskuy: (1,964-1,709)/1,964= (12.98%)	Baskuy: 0-5%	Baskuy: 39%
All of 3	DOR of Measles1-Measles 2	This is a coverage indicator, which shows continuity of children receiving subsequent doses vaccines.	# of children who received measles1(MR1)-# of children who received measles2(MR2)	Denominator: # total number of children who received measles 1(MR1)	Manni: (2,768-2,228)/2,768= (19.51%)	Manni: 0-5%	Manni: 2%
					Zabre: (1,518-1,223)/1,452= (19.43%)	Zabre: 0-5%	Zabre: 1%
					Pouytenga: (1,707-1,095)/1,707= (35.85%)	Pouytenga: 0-5%	Pouytenga: 0
					Sig-Noghin: (3,424-1,781)/3,424= (47.98%)	Sig-Noghin: 0-5%	Sig-Noghin:22%
					Baskuy: (1,616-1,078)/1,616= (33.29%)	Baskuy: 0-5%	Baskuy:18%

Result Area/IR	Indicator	Definition/Calculation	Numerator	Denominator	Baseline & Targets	EOP target	LOP Result (May 2018-May 2019)
					Q3-18(Apr-Jun,18)/Q4-18(Jul-Sep,18) Baseline		
3.2	Number of health workers/data managers/M&E officers trained on DQSA at district level	This is a count of health workers who received training on conducting DQSA with MCSP's support.	Number of health workers trained in each districts to conduct DQSA	N/A	Manni: 1	Manni: 2	
					Pama: 0	Pama: 2	Pama: NA
					Zabre: 0	Zabre: 2	Zabre: 3/3m/0f
					Pouytenga: 0	Pouytenga: 2	Pouytenga:3/3m/0f
					Sig-Noghin: 0	Sig-Noghin: 2	Sig-Noghin: 3/2m/1f
					Baskuy: 0	Baskuy: 2	Baskuy: 3/3m/0f
3.3/3.4	Number of health workers trained in RED/REC) (Disaggregated by district and sex)	This refers to counting the number of health workers that are trained in the MCSP districts with MCSP's support following the protocol. The indicator should be disaggregated by district and sex	Total number of health workers who received training with MCSP support	N/A	Manni: 0/0m/0f[3]	Manni: 20	Manni: 24/19m/5f
					Pama: 0/0m/0f	Pama: NA	Pama:NA
					Zabre: 0/0m/0f	Zabre: 25	Zabre: 23/20m/3f
					Pouytenga: 0/0m/0f	Pouytenga: 35	Pouytenga: 31/29m/2f
					Sig-Noghin: 0/0m/0f	Sig-Noghin: 35	Sig-Noghin:37/28m/9f
					Baskuy: 0/0m/0f	Baskuy: 30	Baskuy:28/15m/13f
Objective 4: Improve surveillance, coordination, communication and case-management for on-going and future dengue fever outbreaks							
4.4	Number of healthcare workers trained on dengue case management (disaggregated by sex and type of worker)	This refers to counting the number of community health workers that are trained in the MCSP districts with MCSP's support following the protocol on dengue case management. The indicator should be disaggregated by district and sex	Number of community health workers who have received training in with MCSP's support	1	1,529 (by sex and type of worker unknown)	N/A	N/A

[3] "m" stands for male; "f" stands for female

Appendix B: Success Stories

SUCCESS STORY

BURKINA FASO

Photo: MCSP/Dr. Abdoul Aziz Gbaya

NAME

Dr. Kalmogo Ousmane N°2

ROLE

Chief Medical Officer

LOCATION

Pouytenga, Burkina Faso

SUMMARY

The Burkina Faso Ministries of Health, Animal Resources, and Environment received support from USAID through the MCSP project to implement the One Health Approach-enhanced Event-Based Surveillance system in Pouytenga District of Centre-East Region.

With MCSP's support, the three ministries equipped technicians and community workers with high-quality tools and training on community surveillance activities. A key player in this multi-sectoral collaboration, Dr. Kalmogo Ousmane N°2, Chief Medical Officer of Pouytenga District, shares his experience here.

Promoting the One Health Approach for Event-Based Surveillance (EBS) in Pouytenga District

Effective disease surveillance systems are critical for continuously monitoring for potential threats to human health and alerting authorities of threats so that timely action can take place. In Burkina Faso, the Ministry of Health (MOH) has been piloting several innovations in the past few years in an effort to strengthen its disease surveillance systems. For example, in July 2017, the MOH began piloting an event-based surveillance (EBS) system in three districts (Houndé, Kongoussi, and Boussé) and in 2018, the MOH joined with the Ministry of Animal Resources, the Ministry of Environment, and development partners to integrate a multi-sectoral "One Health Approach to disease control" within the EBS. The impetus for this inter-ministerial "One Health" effort was the recognition that human, animal, and ecosystem health are interconnected and that multidisciplinary approaches to preventing, detecting, and responding to emerging/re-emerging infectious disease threats are more effective than uncoordinated, standalone responses. In December 2018, the three ministries, with support from the USAID-funded MEASURE Evaluation project, implemented EBS One Health activities in Po health district, Centre-South region. Three months later, in March 2019, the three ministries extended EBS One Health activities to Pouytenga health district in Kouritenga province, Centre-East Region, this time with support from the USAID-funded Maternal and Child Survival Program (MSCP).

Why Pouytenga district?

Pouytenga health district is comprised of a mix of rural areas where agriculture is the main activity and a populous urban district headquarter where an international market (including one of Burkina Faso's largest cattle markets) welcomes traders from Nigeria, Ghana, Benin, Togo, and Côte d'Ivoire. Given the cross-border nature of the district's communities and commercial activities and the high population density (and weak hygiene and sanitation systems) within its urban areas, health authorities recognize the critical need for strong surveillance systems to detect and prevent against spread of arboviruses, Ebola, cholera, and other diseases in this district.

"The One Health Approach Event-Based Surveillance system has changed how we monitor and manage threats to human health by integrating the community and other sector partners (into our efforts) in a holistic way." - *Dr. Kalmogo Ousmane N°2, Pouytenga Chief Medical Officer*

Prior to MCSP support for introduction of the One Health Approach, the MOH alone conducted the event-based surveillance in Pouytenga district, and without collaboration or coordination with other relevant ministries. Ministry staff were poorly trained in managing and overseeing disease surveillance tasks, community workers were not effectively engaged in surveillance activities, and opportunities for inter-ministerial resource/information sharing and synergies were missed. In response to this situation, MCSP, with funding from the Global Health Security Agenda (GHSA) helped the three ministries to capitalize on the newly available One Health Approach EBS training materials and tools and build capacity of nearly 300 district health facility staff, forestry staff, veterinary staff, and community workers in the new integrated surveillance system. Participants were trained in identification, early detection, and notification of "unusual events" (see box) that may threaten human, animal, and/or environmental health and were provided job aids (e.g., awareness registry, notification forms, supervision matrix) to use post-training. MCSP also supported the ministries in conducting post-training follow-up and joint supervision visits throughout the district, to ensure that surveillance staff were able to implement the One Health Approach EBS effectively in the field.

Signs that the surveillance system in Pouytenga has improved include:

- Inter-sectoral information-sharing, coordination, and monitoring are now occurring: the heads of district health, forestry, and veterinary departments recently met to share information on rabies and sanitary inspections and stakeholders from the three provincial departments have planned a joint monitoring meeting for the second half of 2019.
- Surveillance staff from all three ministries are now notified of "unusual event" reports: once an event report is confirmed, notification forms are sent within the appropriate ministerial reporting chain as well as out to district officers from the other ministries for multi-sectoral investigation.
- There is greater community involvement in surveillance: Ministry staff are conducting communication, awareness-raising, and sensitization activities and home visits. Community-initiated surveillance is taking place whereas surveillance was previously initiated mostly at the health facility level.

What is an "unusual surveillance event"?
Unusual events indicate a possible threat to public health and trigger a mandatory surveillance system response. They include:

1. Unexplained death of a health officer, animal resources or environment agent, community health worker, veterinary village volunteer, eco guard, tracker, or traditional healer.
2. Two or more unexplained deaths in the same week among a group of people.
3. Two or more people becoming sick after taking part in a funeral.
4. Death or illness of a person less than a week after arriving from outside of the country.
5. Death of several birds and/or other animals in the same village/wildlife area and in the same week or illness of several animals returning from grazing.
6. One or more deaths caused by a respiratory infection in persons in contact with animals.
7. Two or more people with fever and severe cough in the same school, family, or environment in the same week (absenteeism or hospitalization).
8. Two or more people from the same environment with the same signs requiring them to be bedridden or hospitalized.
9. Any medical condition atypical in frequency and/or clinical presentation, including congenital malformations.
10. Any health event creating a worry or a psychosis in the community.

"EBS One Health is a good plan that promotes collaboration among designated stakeholders to effectively prevent population health issues. It enables community agents and actors to be effective in detecting unusual events and solving health problems. The difference with EBS One Health is especially the involvement of community stakeholders and the collaboration between officials from other sectors of the government to prevent population health issues."

- Mr. Tiendrebeogo Issoufou, Kouritenga Provincial Director of Environment, Green Economy and Climate Change

By: Dr Abdoul Aziz Gbaya, Technical Director, MCSP – Burkina Faso

Appendix C: List of Materials and Tools Developed or Adapted by the Program

#	Material or Tool Name	Technical Area
1	Revised RED/REC guidelines	Immunization
2	Immunization supervision matrix (focusing on RED/REC approach components)	Immunization