
HC3 Landscaping Report on Zika Communication and Coordination: El Salvador, April 4 - 8, 2016



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TABLE OF CONTENTS

ACRONYMS	4
I. INTRODUCTION	5
II. BACKGROUND	6
COUNTRY BACKGROUND	6
OVERVIEW OF DENGUE, CHIKUNGUNYA AND ZIKA	6
Dengue and Chikungunya	6
Zika Epidemic in El Salvador	7
Zika Risk Perception	8
III. NATIONAL ZIKA RESPONSE	8
MOH Surveillance Program	8
MOH Vector Control Program	10
MOH Risk Communication Program	10
MOH Reproductive Health Program	11
MOH Zika Response Coordination	11
Civil Protection Agency	12
UN Agencies: UNICEF, PAHO and UNFPA	12
Non-Governmental Organizations	13
The Media	13
IV. CHALLENGES	14
Infrastructure Challenges	14
Vector Control Challenges	15
Reproductive Health and Family Planning Challenges	15
Laboratory Challenges	16
Security Challenges	16
V. RECOMMENDATIONS	16
Communication Strategies	16
Formative Research and Monitoring and Evaluation	17
Message Fine Tuning and Communication Platforms	18
Stakeholder Coordination	20
EL SALVADOR CONTACTS LIST	21

ACRONYMS

ARPAS	La Asociación de Radios y Programas Participativos de El Salvador
CCP	Johns Hopkins Center for Communication Programs
CDC	Centers for Disease Control and Prevention
COMISCA	Council of Ministers of Health of Central America and Dominican Republic
CP	Civil Protection Agency
GBS	Guillain-Barre Syndrome
HC3	Health Communication Capacity Collaborative
ISSS	El Salvador Social Security Health System
MOE	Ministry of Education
MOH	Ministry of Health (El Ministerio de Salud – MINSa)
NGO	Non-Governmental Organizations
PAHO	Pan American Health Organization
SBCC	Social and Behavior Change Communication
SICA	Central American Integration System
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Emergency Fund
UN	United Nations
USAID	United States Agency for International Development
WHO	World Health Organization
WV	World Vision

I. INTRODUCTION

Zika is a communicable disease transmitted by the *Aedes aegypti* species of mosquito, which is native to Latin and Central American countries and also transmits the dengue and chikungunya viruses. The female *Aedes* mosquito bites mostly during the day and breeds in “clean” or standing water often found in containers in and around people’s homes. While the Zika virus is not a new virus, the current outbreak is the largest ever reported and it continues to spread rapidly throughout the Americas. Eighty percent of people infected with Zika are asymptomatic. The remaining 20 percent experience mild symptoms in the form of a fever, rash, joint pain and conjunctivitis (pink eye).

The Zika outbreak has also coincided with a rise in reported cases of Guillain-Barre syndrome (GBS) and microcephaly, two severe neurological conditions. Based on research to date, there is scientific consensus that Zika virus is a cause of microcephaly and GBS¹. No cure or vaccine exists for Zika, so preventative measures focus on vector control and awareness of risk and risk reduction for at-risk populations.

In response to a United States Agency for International Development (USAID) request, the Health Communication Capacity Collaborative (HC3) – based at the Johns Hopkins Center for Communication Programs (CCP) – conducted a social and behavior change communication (SBCC) landscape exercise for Zika in El Salvador on April 4-8, 2016. Due to the urgent nature of Zika, HC3 moved quickly to conduct this landscaping visit immediately after the Easter holidays.

This was not a lengthy situational analysis, but rather an agile observation visit to quickly take the pulse of the Zika situation and the local response. A team of three SBCC professionals conducted the landscaping and have expertise in mosquito-borne diseases, *Aedes aegypti* vector control, risk communication, strategy design and implementation of a range of SBCC, as well as experience in the regional Central American context, family planning/reproductive health and journalism.

Over the course of one week, the HC3 team met stakeholders from the El Salvador public, non-governmental organizations (NGOs) and private sector. These interviews were not exhaustive of every group involved in Zika control, but rather representative of the main stakeholders. Despite the rapid pace of the visit, a picture of the Zika situation emerged. This report covers the observations and impressions gleaned by HC3 during the landscaping exercise in El Salvador, as well as concrete recommendations for USAID to consider as it formulates its strategy to support El Salvador in its efforts to combat and prevent Zika.

¹ World Health Organization, 2016. Zika Virus, Microcephaly and Guillain Barre Syndrome, Situation Report 7 April 2016. http://apps.who.int/iris/bitstream/10665/204961/1/zikasitrep_7Apr2016_eng.pdf?ua=1.

II. BACKGROUND

COUNTRY BACKGROUND

El Salvador is a small country in Central America with a population of just over 6 million, located between Guatemala to the north and Honduras to the east. Considerable transit and migration takes place between these countries as well as migration to the United States. The majority of the population is based in and around the capital city of San Salvador. While most people are Catholic, there is also a sizable Protestant/evangelical following.

Like its Central American neighbors, El Salvador is a low resource country with 31 percent of the population living below the poverty line.² A significant number of the population has migrated north for work and to escape violence. With one of the highest rates of homicides in the world, daily violence is a central issue in the lives of Salvadorans. Many communities are controlled and run by gangs, a situation that has wide implications for vector control and health promotion. Sexual violence, including domestic violence, is widely reported.

Regarding reproductive health, family planning use is high in El Salvador with a modern contraceptive prevalence rate of 68 percent.³ Contraceptives are available through the public sector, pharmacies and some NGOs. Emergency contraception is available in pharmacies. Condom use is low and has only been promoted previously to reduce sexually transmitted diseases and HIV transmission. Approximately one-third of the births in El Salvador are among youth.

OVERVIEW OF DENGUE, CHIKUNGUNYA AND ZIKA

Dengue and Chikungunya

To understand the landscape of the Zika outbreak in the region, it is important to understand it in the context of the ongoing and historical public health response to dengue and chikungunya. These three diseases are not only transmitted by the same vector, but are also seen as one public health crisis. All three together cause significant morbidity and loss of productivity and resources to the region. In the same respect, the global public health interest and response to the current Zika outbreak is seen as not only a necessity but an opportunity to make strides in beating back all of the *Aedes*-borne diseases.

Dengue fever outbreaks have been a perennial problem in the region for a long time, with increasing or decreasing cases of dengue and dengue hemorrhagic fever from year to year, due to multiple serotypes of the virus in circulation, varying degrees of pre-existing immunity in the population and ineffective vector control. Generally, only a portion of the clinically reported cases are confirmed in the lab because the number of suspected cases likely exceeds the diagnostic capacity of available labs. Many of the clinical symptoms and signs, when present,

² <http://data.worldbank.org/indicator/SI.POV.NAHC>

³ PRB DataFinder 2015

overlap with other febrile illnesses, resulting in over-reporting by the public and clinicians alike, while a high number of asymptomatic and mild cases results in under-reporting.

Vector control authorities and the general population report a seasonal increase of all types of mosquitoes during and right after a period of rain due to water accumulating in natural crevices and discarded containers, such as scrap metal of varying size, cans, jars and tires strewn in the open. On the other hand, both authorities and the population report more mosquitoes in the water storage containers within the home during the drier periods due to the shortage of other habitats available to *Aedes aegypti* at such times. In any case, multiple dengue serotypes, persistence of water storage practices throughout the year and ineffective vector control allow dengue to be endemic in El Salvador and for the emergence of chikungunya, another *Aedes*-borne illness.

Chikungunya, which was recently introduced in the region, paints a very similar picture to dengue, but with the following important differences:

1. Lack of pre-existing immunity, therefore a very large number of cases.
2. Causes chronic joint pain that persists long after the febrile period, increasing perceived severity for the population compared to classical dengue, but the lack of hemorrhagic or shock syndrome decreases the perceived severity for the public health establishment.
3. Circulation of a single serotype, granting life-long immunity and delineating chikungunya outbreaks more clearly over the perennial endemic dengue picture.

Zika's acute signs and symptoms are similar to classical dengue and chikungunya with two important differences:

1. More conjunctivitis (pink eye)
2. Less joint pain

A rash may occur with both dengue and Zika.

Zika Epidemic in El Salvador

Zika was first detected in El Salvador in October 2015 and the country reported an estimated 3,836 suspected cases by the end of 2015. El Salvador was the third country to report Zika in the Americas outbreak. According to the weekly Ministry of Health or El Ministerio de Salud (MOH) health bulletin, by mid-April 2016 there had been an additional **6,137 suspected cases totaling 9,973 cases thus far**. The highest burden of cases was in the San Salvador zone, and the second highest in the provinces north of the capital city zone. While El Salvador was the third country to officially report Zika, after Brazil and Colombia, Honduras now reports the third highest number of suspected cases

According to MOH monthly reporting, in 2016 **194 suspected cases of Zika have occurred among pregnant women with 43 of those confirmed**. Three cases of microcephaly have been reported, none of which have been linked to Zika. Regarding GBS, 151 cases of GBS were

confirmed between mid-November 2015 and mid-April 2016. Treatment facilities and resources are limited for Salvadoran GBS patients.

Zika Risk Perception

During the landscaping visit, the team heard anecdotal observations from stakeholders that Zika did not seem to be a top concern or worry among Salvadoran communities, especially now that the number of reported cases has dropped dramatically. Just as dengue and chikungunya are seen as a normal part of everyday life – like a common cold virus – Zika is yet another virus to live with. Violence is a much greater concern in daily life.

There may be confusion on the best Zika prevention approach since communities have received both general sanitation messages as well as messages focused on breeding site eradication. At the time of our visit, few people were talking about or preparing for a second wave of Zika during the upcoming rainy season.

III. NATIONAL ZIKA RESPONSE

To learn about the impact of Zika and the local response, the HC3 team interviewed the following key groups in the public sector, civil society, donor/multilateral groups and the media:

- Ministry of Health: Surveillance, Vector Control, Health Promotion programs and the Vice Minister of Health
- Civil Protection (CP) Agency (Protección Civil)
- Central American Integration System (SICA)/Council of Ministers of Health of Central America and Dominican Republic (COMISCA)
- U.S. Centers for Disease Control and Prevention (CDC)
- United Nations (UN) Organizations: Pan American Health Organization (PAHO), United Nations Children's Emergency Fund (UNICEF), and United Nations Population Fund (UNFPA)
- Non-Governmental Organizations: Red Cross and World Vision (WV)
- Media: La Prensa Grafica (leading daily newspaper) and La Asociación de Radios y Programas Participativos de El Salvador (ARPAS), a network of community radio

MOH Surveillance Program

The MOH (El Ministerio de Salud - MINSAL) is leading the effort to combat and control Zika in El Salvador. The MOH has a detailed and robust health surveillance system, a product of the major health system reform started in 2009 (under the previous government) to integrate health statistics and all health services into one system managed by the Ministry of Health (the same Minister of Health has been in place through both administrations). Today the MOH provides health insurance coverage for approximately 80 percent of the population while the social security health system (ISSS) covers the remaining 20 percent of the population mainly through workforce health coverage. Under the newly integrated health system, there are now over

1,000 health sites reporting data, which covers 90 percent of the population and is geographically linked so outbreaks can be detected quickly. This includes an electronic register of all patient data.

With this robust surveillance program, the MOH is tracking the Zika outbreak closely and providing timely statistical updates through a weekly bulletin posted on its website (www.salud.gob.sv). The program is managed by a team of epidemiologists who prepare the key health statistics each week. These statistics are used consistently by the various stakeholders.

The MOH's detailed system of surveillance focuses on both health statistics and vector control down to the municipal and district levels. This is closely monitored by the Civil Protection (CP) Agency (akin to the U.S. Federal Emergency Management Agency) which is mandated by law to respond to official governmental emergency alerts, including health emergencies (described below).

Through its statistical reporting system, the MOH closely tracks not only Zika, but also dengue and chikungunya. The MOH surveillance team demonstrated how the dengue and chikungunya tracking goes back several years and shows clear seasonal fluctuations. During discussions with the team, the MOH shared statistics and graphs representing the clear trend; the number of reported cases increases during the rainy season (usually beginning in May) and remains high for several months, then decreases at the beginning of the dry season. There was considerable discussion of the recent downward trend in Zika, along with dengue and chikungunya. Due to the aggressive vector control efforts put in place in early 2016 for Zika, dengue and chikungunya surveillance statistics also decreased and are lower now than they were a year ago at this time (MOH surveillance data). The government was promoting the decreased numbers as a success. While this is the dry season, when dengue/chikungunya are usually at a seasonal low, the numbers for all three diseases are lower in April '16 than at the same time last year. The MOH attributes this to their timely and aggressive Zika response.

Despite the richness of the surveillance data, it is widely speculated that both the suspected and confirmed case statistics do not capture the full impact of the Zika epidemic due to underreporting. Since many people do not have symptoms (or the symptoms are mild) and there is no treatment, it was widely believed that many people do not go to health clinics to seek medical guidance.

In the early stages of the epidemic, samples were sent to the CDC in Fort Collins, Colorado, for confirmation. In early 2016, MOH staff were trained in the laboratory procedure and can now do case confirmations locally. However, they reported having a very minimal supply of the reagents needed for the laboratory test and felt this limited their ability to carry out wider testing.

MOH Vector Control Program

The MOH described a proactive, integrated vector management approach conducted in close collaboration with the CP. They deployed vector control workers to focus on larvae surveillance through door-to-door visits during national “jornadas,” which are calls to action to mobilize all communities for clean-up days. The jornadas take place quarterly and are widely promoted social mobilization events whereby all segments of society (e.g., government agencies, NGOs and communities) join together on a designated day to clean up neighborhoods and areas around the home including breeding sites, such as water tanks and tires.

The vector and health outreach workers reported visiting approximately 80 percent of all accessible homes – as well as community sites and close to 200 churches – to check for breeding sites. However, many homes were not accessible since owners were away at work during the day. Also, due to the high rate of violence, some owners will not let strangers into their homes. Additionally, some communities are gang controlled and it is variable whether or not they allow vector control and/or health workers into the community.

Water storage barrels are prime breeding sites. Many homes, both rural and urban, have water storage tanks of some kind due to the inadequate water delivery system. The MOH shared their estimates that for every 100 barrels of water, approximately 90 contain new breeding sites. Abate[®], the most common larvicide, is used to clean these containers. However, Abate[®] is distributed via health clinics and only available when clinics are open. In 2016, it was reported that over 1 million water storage breeding sites were eliminated and 1,700 tires destroyed.

Home visits also include general sanitation cleanup efforts. In terms of fumigation, the MOH stated that community fumigation is less effective. Thus, the MOH focuses efforts on household fumigation and shared that it had fumigated 3,397 homes as of March 2016. The HC3 team was not able to find details regarding insecticide and larvicide availability, cost or the related procurement process.

The MOH is testing “alivines” in twelve municipalities – small tilapia fish which can live in water tanks and eat mosquito larvae. After a few months, they are big enough for human consumption and serve as an accessible form of protein for rural communities. This initiative began at the grassroots level when a local woman observed the decrease in breeding sites when the fish were present. Her observation led to the pilot testing which is now being scaled up to 20 more sites. This approach has also been tested and implemented in other Latin American countries.

MOH Risk Communication Program

While epidemiological statistics exist for Zika, no research or data is available on community and household perceptions or fears regarding Zika, or what actions people have taken to prevent Zika in their family. The day-to-day obstacles for families to eliminate breeding sites are not well understood. While the team heard that the MOH developed a Zika prevention communication strategy, it was unable to locate it.

The MOH produced 12,000 pieces of Zika-related educational materials (such as fliers and posters – see cover image) which were distributed in communities and via radio. The key Zika prevention slogan is: ***“It’s in My Hands” to eliminate breeding sites for Dengue, Zika and Chikungunya***. The call to action is for general clean up and breeding site elimination in and around the home. The MOH health education unit reported pretesting the materials. Nevertheless, the visuals – while colorful and attractive – may not be entirely clear and the call to action may be too diffuse. The materials serve more for information dissemination than to change key behaviors. The MOH staffs and promotes a health hotline but it is unclear how many calls the hotline has received regarding Zika.

Outreach workers provide face-to-face orientation to the public on proper cleaning of water storage barrels using Abate® or bleach (said to be less effective), as well as covering receptacles and general cleanup of bottles and tires that may collect water. They also promote household fumigation. Zika prevention messages have been integrated with dengue and chikungunya prevention messages in the community.

MOH Reproductive Health Program

Early in the epidemic, the Vice Minister was quoted as recommending women consider avoiding pregnancy for up to two years to prevent Zika-related birth defects which triggered concerns and some fears. Contraceptive methods were not being visibly promoted to prevent Zika, although they are available through the public and private sector. Emergency contraception is also available but abortion is illegal.

The MOH provided tips to pregnant women on preventing Zika (e.g., repellent, long sleeves etc.) and distributed kits to pregnant women that included repellent and mosquito nets. The MOH also purchased 1,500 mosquito nets for hospital maternity beds.

Testing for microcephaly/GBS in utero is limited. The MOH is developing a counseling protocol for newborn treatment and family support.

Gang issues also affect access to family planning, as well as antenatal, post-natal and newborn care. For example, local partners reported there are young girls being controlled by gang members who are not being allowed to venture out of the compounds. The high rates of sexual violence exacerbate the need for contraceptive use, as well as tracking potential high-risk cases for microcephaly/GBS identification and treatment.

MOH Zika Response Coordination

Two main forums exist for ongoing Zika response coordination:

- **Comite Arbovirus** (Arbovirus Commission) is a high level, intra-sectoral body that meets weekly. While this is a governmental forum, PAHO is also present.

- **Mesa de Salud, Agua y Saneamiento** (health and water, sanitation and hygiene roundtable) meets monthly and includes more than 15 local and international NGOs and UN groups, as well as key public sector partners.

A wide group of stakeholders seem to be well aligned and following the lead of the government, including their vector control and SBCC programs. The stakeholders reported that they were satisfied with the coordinating mechanisms and transparency of the government efforts.

Civil Protection Agency

El Salvador's CP is a key partner of the MOH in the Zika response. This inter-sectorial collaboration was instrumental in combatting both Zika and dengue, which is at its lowest rate in the region in four years. While CP usually responds to disaster situations, the agency is working in conjunction with the MOH to provide ongoing monitoring and vector control focused on three areas: (1) mosquito eradication; (2) isolating people with Zika to reduce transmission; (3) orienting the public in Zika prevention.

CP has a multi-level system structured at the national, municipal and district levels across the country to monitor emergency situations – including Zika. This system is based on a well-established platform of color-coded “alerts” that provide the legal justification and authority to respond. This alert system is divided into four levels from the national commission, to the 262 municipalities via 15 operating units and 86,000 volunteers. For Zika, the first alert was issued in January 2015, and CP was subsequently activated by a Presidential decree. The state of alert was recently downgraded based on the reduction in Zika cases and elimination of breeding sites.

Other sectors – such as the Ministry of Education (MOE) (including teachers), NGOs, and local leaders and officials – also participate in the community-level actions implemented by CP, such as in schools which are considered a main site for Zika transmission.

UN Agencies: UNICEF, PAHO and UNFPA

The Pan American Health Organization (PAHO) works closely with the MOH and depends on its weekly statistical updates. PAHO leads the UN interagency group of 13 agencies which meets regularly and also participates in the weekly Arbovirus Commission. PAHO has also trained journalists and monitors media coverage of Zika.

Given UNICEF's mandate focusing on the well-being of children, it is actively engaged with the MOE and schools to reach children as agents of change in community sanitation. Activities were conducted with both teachers and school children for Zika prevention, and a new effort is planned in the juvenile adjudication facilities.

The United Nations Population Fund (UNFPA) facilitates the government's contraceptive procurement, including the addition of implants. Under a regional effort, UNFPA is promoting

and importing the female condom. Since no family planning materials specifically address Zika, family planning and Zika orientation is combined at the field level. UNFPA also supports “preconception” health visits which are an opportune moment to address pregnancy and Zika risk.

Non-Governmental Organizations

Several NGOs are active in El Salvador, including World Vision (WV), Red Cross, Oxfam, Save the Children, Plan International and ARPAS (community radio network), among others.

WV put in place a short-term plan from February-May 2016 for immediate Zika response and has also formulated a longer, six-month plan, which includes fundraising for Zika activities, prevention and vector control. WV extends and bolsters the MOH-led Zika prevention efforts through its long established community linkages and networks, and it works closely with community leaders to strengthen local action and ownership. Religious leaders are key partners and WV is working with over 100 church leaders. Radio stations operated by the various churches are a powerful way to reach communities with Zika prevention messages. WV has also produced a Zika prevention kit for pregnant women that includes repellent, mosquito nets and pajamas. WV reaches pregnant women using the MOH surveillance program, which tracks them. However, young pregnant women often fall through cracks and thus are harder to reach.

The Red Cross has been active in breeding site eradication through its community outreach networks. It has been challenging to reach all the homes in certain communities – many are closed or not accessible due to gang violence. Red Cross emphasizes building local resilience and self-efficacy to stimulate local leadership.

ARPAS is an association of participatory community radio, which is part of a regional radio network through the Americas. ARPAS has promoted Zika prevention in recent months, but does not disseminate private sector news coverage on Zika which they consider negative and sensationalized, and too focused on the negative aspects of a looming Zika outbreak.

The Media

Media coverage on Zika was ample, especially at the outset of the epidemic. Most reporters are not trained in health reporting or epidemiological data, thus writing about Zika as new epidemiological information emerges (e.g., sexual transmission) has been challenging. A few private stations included Zika discussions in talk show programs. An insect repellent manufacturer has also run ads promoting Zika prevention.

Additionally, HC3 conducted a desk analysis for Zika on the website of one of El Salvador’s most popular online newspapers, La Prensa Gráfica (<http://www.laprensagrafica.com/>), and a search on Twitter looking for content written in Spanish that mentioned the words “Zika” and “Salvador” during the week of January 18-24. The findings of this desk analysis are described below.

The search for “Zika” on La Prensa Grafica resulted in 11 articles during the time period. Overall, the average length of each article was around 500 words and the majority cited information from reliable sources such as the MOH, PAHO and the CDC. Of the articles that provided disease-specific information, the majority provided accurate information, given the understanding of the virus at the time. In general, the disease information provided was not technical in nature and was often only mentioned briefly. Of the articles that mentioned disease-specific information, the focus was often regarding the effect of Zika on the fetus.

Several articles also briefly discussed prevention methods, which included covering water containers, washing *pilas* (barrels), fumigating, wearing long sleeves/pants and using mosquito repellent. Some articles covered the reproductive health implications of Zika, including advising pregnant women not to travel to affected areas and delaying pregnancy for two years. However, none of the articles provided information on methods for delaying pregnancy such as contraceptives. Finally, very few of the articles mentioned local response efforts or included graphics or videos of any kind.

With respect to social media during the same time period, the team found over 200 tweets regarding Zika in El Salvador. News agencies and individuals posted the majority of tweets. The majority of tweets were related to the recommendation that women delay pregnancy for two years due to the risks associated with Zika. Additionally, a large portion of tweets discussed disease-specific information, particularly in regard to Zika’s association with paralysis. Several tweets also discussed local response efforts.

IV. CHALLENGES

Infrastructure Challenges

The underlying cause of the continuation of *Aedes*-borne illnesses is linked to limitations in old and inefficient water distribution systems. Seasonal drought can exacerbate water availability. Poor access to water sources means that people will continue to store water as often as they can and usually in containers accessible to mosquitoes. Efforts on the part of householders to protect their stored water are not adequate to stop *Aedes aegypti* from laying its eggs inside these containers, given that the covers are rarely hermetic. Moreover, partial covering may enhance rather than reduce egg-laying, because it provides protection and shade for this container-adapted mosquito. While water supply is an infrastructure problem that may seem overwhelming to change, if it is not addressed, it will be impossible to eradicate *Aedes*-borne illnesses.

Public health officials are also challenged with understaffing and under budgeting, which leads to ineffective waste management issues, as well as limited resources for vector control itself, such as purchase of insecticides, equipment for outreach and fumigation, as well as fuel and transportation and compensation for staff.

Clogged sewage systems or standing open sewage also creates the ideal conditions for the propagation of *Culex* mosquitoes, the species that bites at dusk and is often more noticed and loathed by the population – but the *Culex* is not the vector for the dengue, chikungunya or Zika virus. This felt nuisance can result in confusion about *Aedes* versus *Culex* mosquitoes, not only by the population but often by civic authorities themselves, resulting in misdirected mosquito control efforts to the wrong mosquito type.

Vector Control Challenges

In terms of vector control challenges, insecticides are not always available at the point of use where they are needed, are expensive, are damaging to the broader environment and prolonged use inevitably causes resistance. It also appears that space spraying continues to be used, despite PAHO recommendations of its reduced effectiveness.

Recommended container cleaning behaviors are labor intensive and need to be repeated frequently, which makes these behaviors difficult to sustain. Although vector control staff usually understand how to conduct effective household cleaning, when these skills are passed from trainers to other trainers to community volunteers to household members, the skills to perform the cleaning correctly – **focused on large water containers and tires** – get lost or misrepresented. Meanwhile, the behaviors easiest to carry out are for general garbage clean ups, which tends to be a misplaced focus.

Reproductive Health and Family Planning Challenges

Due to the associated link between Zika and microcephaly, there is considerable concern regarding family planning use and access during this outbreak, as well as the availability of reproductive health services for pregnant women.

Use of family planning is high in El Salvador, with a modern contraceptive prevalence rate of 68 percent.⁴ However, access challenges remain for specific populations, including youth and women in areas of high violence and gangs. Family planning is provided at no cost by government clinics as well as by some NGOs and the private sector. However, stock outs do occur, primarily due to violence-related distribution challenges and barriers to access. As previously stated, emergency contraception is available in the private sector.

Stakeholders highlighted the high rate of adolescent pregnancies as a major concern, noting it is approximately a 30 percent of all births. Condoms have been promoted for HIV and sexually transmitted disease prevention. While nine countries worldwide have now reported evidence of person-to-person transmission of Zika virus, probably via sexual transmission, sexual transmission of Zika was not being addressed at the time of the visit.

The government warning from the Vice Minister advising women to avoid pregnancy for two years triggered concerns regarding reproductive rights. In discussions with the Vice Minister he noted this was a spontaneous remark during the initial, rapid response phase.

⁴ Ibid.

Laboratory Challenges

Zika has specifically challenged in-county and global diagnostics due to: (a) lack of reagent widespread availability for a hitherto relatively unknown disease; (b) cross-reactivity with dengue and chikungunya antibodies in immunoassays when present; (c) short window of detection both for antibody and for viral Ribonucleic Acid (RNA), before and after which the lab test is inconclusive. As a result, the number of confirmed cases remains minimal, causing rumors and lack of trust towards public health authorities in the local press and social media, as well as the population, and even among practicing clinicians.

Security Challenges

Security plays an important role in terms of violence and the presence of gangs. Security is a concern in vector control as it affects not only government access to houses for breeding site inspection and fumigation, but also MOH distribution of commodities in terms of Abate® and family planning. In El Salvador, the gang problems are severe. In this instance, the MOH relies on the Red Cross and faith-based organizations to conduct community mobilization, clean up campaigns and educational campaigns.

V. RECOMMENDATIONS

Communication Strategies

- The national stakeholders could benefit from technical support in developing or refining their national Zika Communication Strategy and corresponding Zika SBCC Operational Plan. Final documents should include not only specific communication objectives, but also: key messaging (including specific “calls to action”); guidance on key audiences, channels and tone (creative briefs); and identification of leadership, responsibilities and distribution of efforts across partners and geographic areas.

Developing national Zika control and prevention communication strategies and operational plans to implement the strategies with key partners, political and technical stakeholders at the table and part of the design and involved in the strategy rollout leading to greater consistency of prevention messages in community outreach. This includes the Ministry of Health (including Zika leadership and/or coordinating body, vector control, surveillance/epidemiology, health promotion, service providers, etc.); NGOs and other entities working in SBCC, community mobilization and advocacy (including faith-based organizations and private sector); university and/or research representatives; and those responsible for family planning distribution and placement. The process can also include local leaders (especially in decentralized health systems) and democracy and governance partners where appropriate. Collaboration among partners should not stop at the strategy design phase, but ensure continued coordination, mapping and reporting of activities.

- While stakeholders were concerned about an inevitable resurgence in Zika cases once the rainy season arrives, it was not clear if long-term planning was underway. It would be useful to develop a plan as soon as possible for a second wave of Zika and a possible upsurge in microcephaly/GBS cases. Planning should include a focus on:
 - Resource mobilization and allocation through and beyond the rainy season
 - Family planning and reproductive health
 - Microcephaly and GBS management (patient, newborn and family support and counseling)
 - Service provider needs and priorities
 - Communication strategy based on possible scenarios of the epidemic (according to phases).
 - Ensure that areas with security concerns have a targeted plan for a second wave of Zika prevention and control, including family planning access, GBS and microcephaly tracking and treatment and services.
 - Vector control plan based on possible scenarios of the epidemic (and according to phases). Issues to include:
 - The larvicide *Abate*[®] is the primary vector control method being promoted but there appears to be some challenges in distribution and access. It is only distributed in public health centers, which may be difficult for some people to access easily. This should be further explored and addressed.
 - Link vector control to local and municipal leadership to maximize local leadership engagement and the role of local government.
 - Further explore the scaling up and promotion of alivines (small fish) as a vector control method in certain areas and rethink vector control approaches at the community levels, including focused breeding site reduction in barrels vs. backyards.

Formative Research and Monitoring and Evaluation

- Rapid formative research is important to better understand the perceptions, myths and motivations around Zika, mosquito-borne illnesses, breeding site reduction behaviors, use of family planning during the Zika outbreak and other related topics. WHO has also put together a resource package that includes a set of key knowledge, attitudes and practices (KAP) questions for Zika, microcephaly and GBS. UNICEF expressed interest in research on community perceptions around Zika and is supporting a literature review on community participation regarding dengue.

The research should include exploration of knowledge, attitudes and perceptions of vector control outreach workers, community mobilizers and service providers to better incorporate them as both target audience and disseminators of messages for Zika communication efforts.

- Ensure communication and mobilization activities include monitoring and evaluation that measures not only process indicators (e.g., materials produced and houses visited) but also impact indicators (household larval indices), if at all possible.

Message Fine Tuning and Communication Platforms

- Zika prevention messaging presents an opportunity for wider vector prevention and should focus on reemphasizing the larger *Aedes aegypti* vector control (dengue, chikungunya and Zika) with a “shared responsibility” tone, outlining specific calls to action for breeding site reduction by the family, and motivational messaging to reposition mosquito-borne illnesses as beatable and not acceptable or inevitable. The MOH already has a Zika prevention slogan which includes a call to action to citizens to get involved in Zika prevention – “*En Mis Manos Esta.*” However, the call to action revolves around monthly or quarterly clean up mobilizations (jornadas) organized by the governments which are insufficient to keep the mosquito population down. Every family is part of the solution – the MOH alone or government alone cannot make significant headway in fighting the three vector-borne diseases.

Messages should not be positioned as “general cleanup messages.” While these are good for overall and long-term health, for the immediate epidemic this confuses recipients about priority actions. Preventative behaviors should focus on the most important larval habitats and campaigns should de-emphasize behaviors directed at unimportant habitats. Monitoring (entomological surveys) and recognition campaigns should be based on this as well (i.e., no prizes for a clean yard, just for containers free of larva.)

Linking Zika to microcephaly and GBS should be done in a way that is empowering, realistic within the local context and not fear based, with an emphasis on family planning access and informed choice and use. More attention should be paid to family planning messages in the Zika context for women and couples who choose to postpone pregnancy. Currently sexual transmission is not addressed in the region but this should be integrated into counseling guidelines.

At the same time, specific messages are needed for pregnant woman to avoid Zika, as well as women and couples who are thinking about having children in the near future. Some information is available for pregnant women, but personal protection messages can be stepped up and proactively integrated into a range of counseling and outreach opportunities.

- Technical support is needed to help identify specific, realistic and effective calls to action to address in the communication strategy. This should include a technical vector control team to assess the available breeding site reduction techniques (e.g., larvicides,

the “Untadita” dabbing of bleach with and without detergent along the water line of water storage containers, alivines (small fish), house-to-house surveillance and jornadas), and to develop recommendations on priority actions for individuals and vector control teams, including recommended larval reduction techniques by container and geographic location.

- Audience-specific materials should be based on technically sound and global recommendations. Regional guidance documents could be identified or developed for specific SBCC Zika materials, or generic and adaptable creative briefs/materials developed for country adaptation. These could include:
 - Provider jobs aids (family planning and Zika, sexual transmission, prenatal Zika prevention, microcephaly and GBS prevention and treatment)
 - Outreach workers’ *Aedes* breeding site reduction aid
 - Press information packets
- Train vector control field staff and other NGO outreach workers in interpersonal communication; personal prevention of Zika, chikungunya, dengue; recognition of symptoms; and health care seeking.
- Experience in the recent Ebola outbreak and other risk communication issues has demonstrated the importance of good press communication and education. It would be useful to establish an ongoing system to regularly update the press, as well as establish open, transparent communication for questions and timely exchanges. Internews or a similar organization should be explored to develop a media training package and workshop, as well as developing a rumor tracking system as done by HC3 for Ebola.
- Digital platforms can be explored for improving communication and outreach to pregnant women and women of reproductive age via WhatsApp, along the lines of the txt4baby platform. This would be an opportunity to enable women of reproductive age to access information they need related to pregnancy prevention and family planning in the context of Zika. This falls into the context of the SMART client approach, where interventions empower women to answer the questions they might already have, think about what else they need to make decisions and get access to resources to address their needs (informational and/or family planning services). The platform would need to be promoted, presumably through existing relevant mechanisms.
- Similarly, digital platforms can support providers in family planning counseling and Zika prevention during pregnancy. WhatsApp groups could be organized for providers with Zika frequently asked questions (FAQs) as a job aid.
- Maximize the existing Ministerio de Salud de El Salvador health hotline to promote targeted and technically accurate Zika prevention and control messages.

- An online portal and regional network could serve as a neutral platform for Zika stakeholders to share SBCC materials. Materials would include those locally produced and related to Zika prevention and treatment, such as vector control, maternal and child health, and family planning, as well as materials from UNICEF, PAHO, WHO and other trusted public health agencies in the region. Stakeholders could then upload SBCC materials for review by the site administrator(s) and sharing (underway with USAID support).

Stakeholder Coordination

- Better leverage the NGO community that has strong links to peri-urban and rural communities. Many of these NGOs use community participation methodologies that generate proactive community vector control. Bring on more partners who can widen the reach, such as church networks and the private sector, who benefit from a healthy workforce and play a large role in some countries in the tourist industry.
- Interface with the Council of Ministers of Health of Central America and Dominican Republic and the health arm of the regional coordinating body, Central American Integration System (SICA) to share lessons learned and best practices as they emerge as well as to increase consistency in Zika prevention, especially prevention messages for pregnant women, family planning messages for couples and vector control messages for families across the region with substantial cross border commerce and tourism.

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