HC3 Landscaping Report on Zika Communication and Coordination: Guatemala, April 18-22, 2016

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ACRONYMS

APROFAM	Asociación Pro Bienestar de La Familia de Guatemala (Association for the Well-Being of the Family, Guatemala)
CCP	Johns Hopkins Center for Communication Programs
CDC	Centers for Disease Control and Prevention
COCODE	Consejos Comunitarios de Desarrollo (Community Councils of Urban and Rural Development)
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Surveys
ENSMI	Encuesta Nacional de Salud Materno Infantil (National Survey of Maternal and Child Health)
GBS	Guillain-Barre Syndrome
GT	Grupo Técnico
HC3	Health Communication Capacity Collaborative
IGSS	Instituto Guatemalteco de Seguridad Social (Government Social Security)
KAP	Knowledge, Attitudes, Practice
MSPAS	Ministry of Public Health and Social Assistance
NGO	Non-government Organization
OSAR	Observatorio en Salud Reproductiva (Observatory Network for Reproductive Health)
PAHO	Pan American Health Organization
PASMO	Pan American Social Marketing Association
PCI	Project Concern International
PROEDUSA	Promoción y Educación en Salud (MSPAS Health Promotion Program)
SBCC	Social and Behavior Change Communication
SIGSA	National Health Surveillance Information System
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Emergency Fund
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 (pinkeye).

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, the scientific consensus is that Zika virus is a cause of microcephaly and GBS[1]. 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 for Zika in Guatemala on April 18-22, 2016. Due to the urgent nature of Zika, HC3 moved quickly to conduct this landscaping visit shortly 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 Guatemala 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 Guatemala, as well as concrete recommendations for USAID to consider as it formulates its strategy to support Guatemala in efforts against 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

Guatemala has a population of approximately 15.47 million (2013). According to the World Bank, about half of the country's population lives in rural areas. Guatemala has large topographical and climate variation, including rainforest, highland plateaus, river valleys, low-lying grasslands and coastal areas. Guatemala is a country of varied cultural groups, including a large indigenous population of Mayan heritage, and over 20 languages are spoken throughout the country. Guatemala sees significant internal seasonal migration for agricultural labor (e.g., coffee or sugar), as well as international migration in search of employment. The government is mostly decentralized across the 22 departments in the country (divided into 29 "Areas de Salud"). The Ministry of Public Health and Social Assistance (MSPAS) is expected to provide free health care services to approximately 80 percent of the population (the actual coverage has decreased recently), while a government social security scheme, Instituto Guatemalteco de Seguridad Social (IGSS), provides subsidized services through employee health insurance to approximately 17 percent of the population. The rest access private providers.

A new President of Guatemala has recently taken office following elections held in late 2015. The previous president and vice-president resigned their positions in 2015 amidst corruption charges. The government faces a significant budget shortfall due to a large accumulated debt. The lack of funds affects the ability to pay health care worker salaries, purchase and maintain medical equipment, and procure and transport medical supplies, medicines, vaccines, family planning commodities and other essential items. MSPAS has also been affected by the frequent turnover of health ministers since 2014. Another challenge is providing primary health care services after the collapse of the "Programa de Extension de Cobertura," a decentralized system that provided primary health care to 4.6 million people in rural and hard to reach areas of the country through government financed NGO clinics. This system was discontinued in late 2014 and a replacement primary health care system was planned but not yet implemented at the time of the landscaping visit.

Family planning use is moderate in Guatemala. According to the Demographic and Health Surveys (DHS)/ Encuesta Nacional de Salud Materno Infantil (National Survey of Maternal and Child Health) (ENSMI) 2014-15 Key Indicators Report, the contraceptive prevalence rate (CPR) with modern methods in Guatemala is at 49 percent. Since 2014, due to the depletion of the MSPAS's fiscal resources, the supply of family planning commodities in government clinics has been irregular and stock-outs are common. Currently, the MSPAS National Reproductive Health Program has procured a stock of family planning commodities, with supplies for at least one year. However, a lack of funds for supply chain logistics limits the movement of the stock to health care centers throughout the country. Emergency contraception is available in Guatemala and abortion is illegal. Of adolescents aged 15-19 years, 21 percent have had at least one live birth or are currently pregnant for the first time.[2]

[2] Guatemala DHS/ENSMI 2014-15 Key Indicators Report.

OVERVIEW OF DENGUE, CHIKUNGUNYA AND ZIKA

Dengue and Chikungunya

To understand the landscape of the Zika outbreak in the region, it is important to see 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 dramatically.

Dengue fever outbreaks are a long-term perennial problem in the region, 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. Only a portion of the clinically reported cases are confirmed in the lab because the number of suspected cases exceeds the diagnostic capacity of any lab. Many of the clinical symptoms and signs, when present, 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 of the region 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 allows for endemic dengue in Guatemala and for the emergence of other *Aedes*-borne illnesses like chikungunya and Zika.

Chikungunya 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 (pinkeye)
2. Less joint pain

A rash may occur with both dengue and Zika.

Zika Epidemic in Guatemala

Stakeholders are in consensus that Zika is grossly underreported in Guatemala. The first Zika case was recorded in November 2015. In 2016 epidemiological week 14, Guatemala reported 915 suspected cases and 261 confirmed cases. In 2015-2016 (up until the time of the landscaping visit), the country had 57 confirmed cases of Zika among pregnant women. No cases of microcephaly or GBS were reported. The majority of the Areas de Salud (76 percent) have reported at least one confirmed case of Zika (epidemiological week 14). The Guatemala national laboratory is able to test for Zika. The majority of confirmed cases are in women of reproductive age. The highest burden of disease is found in the departments of Zacapa, Santa Rosa, Quetzaltenango, Chiquimula, Suchitepequez and Retalhuleu.

Zika Risk Perception

Anecdotally, it does not seem that Zika is a top concern or priority among the general population in Guatemala. 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. This is likely due to the commonly mild symptoms of Zika and that there is no treatment. At the time of the landscaping visit, the definitive link between Zika and microcephaly and GBS had not been officially announced by local authorities. Stakeholders mentioned that this contributed to a lower level of public fear or perceived threat. In addition, more pressing concerns have taken center stage, such as the gaps in the health care system described above. The media has paid some attention to Zika, especially in the early months of 2016, but mostly it has reported international Zika news (from Brazil and El Salvador) with little domestic coverage. Guatemala is the only one of the four HC3 landscaping countries in which Zika has not been declared a national public health emergency.

III. NATIONAL ZIKA RESPONSE

To learn about the impact of Zika and the local response, the HC3 team interviewed the following key groups:

- MSPAS: Epidemiology, Vector control, Health promotion, and Reproductive health programs
- Sanidad Militar (Military Health)
- Non-Governmental Organizations: Project Concern International (PCI), Pan American Social Marketing Association (PASMO), World Vision (WV), Asociación Pro Bienestar de La Familia de Guatemala (Association for the Well-Being of the Family, Guatemala) (APROFAM), Observatorio en Salud Reproductiva (Observatory Network for Reproductive Health) (OSAR)
- United Nations (UN) Agencies: Pan American Health Organization (PAHO) and United Nations Population Fund (UNFPA)
- Professional Medical Associations: Colegio de Médicos y Cirujanos de Guatemala, Asociación de Ginecología y Obstetricia de Guatemala
- Media: Canal Antigua (TV), Nuestro Diario (print), Prensa Libre (print)
- Department of Health: Area de Salud Quezaltenango
- Association of Sugar Producers

Coordination through the "GT *Aedes*"

The MSPAS is viewed by most stakeholders as the leader in the Zika response. The MSPAS's coordination mechanism for dengue, chikungunya and Zika, previously called the Grupo Tecnico (GT) *Dengue*, was recently renamed to GT *Aedes*. GT *Aedes* is led by the MSPAS's Epidemiology Department and includes various departments across MSPAS, such as vector control, the National Laboratory, hospital administration and health promotion. The advantage of this GT is that it is an integration mechanism, so that each section of the MSPAS is not working on its own. This group developed an integrated plan for dengue, chikungunya and Zika for the short- (two months), medium and long-term (one year). The group meets internally each week and bi-weekly with outside partners; coordination with the latter can be ad hoc. Attendance at the "open" portion of the meeting depends on interest and relevance, and if any of the external groups have made a specific agenda request. PAHO provides technical leadership and guidance. The short-term plan will be implemented in Quetzaltenango, Zacapa, Escuintla, Suchitepequez and Izabal.

MSPAS Epidemiological Surveillance and Laboratory Testing

Zika reporting is built into the National Health Surveillance Information System called "SIGSA." SIGSA data is analyzed by the Epidemiology program and discussed weekly at the GT *Aedes* meetings, covering dengue, chikungunya and Zika. The national Epidemiology office has been monitoring Zika data quality and diligently investigated data discrepancies from the departments. Gaps in the reporting are due to not all departments and health facilities reporting to SIGSA regularly. For example, in epidemiological week 10, approximately 86

percent of all health facilities were reporting. This has to do, in part, with the MSPAS budget shortfall and lack of data entry personnel at the department level. As a result, data entry is slow. The stakeholders HC3 interviewed agreed that Zika is significantly underreported in Guatemala. To what extent this is an artifact of data entry, health provider diagnosing, low health-care seeking by those with Zika symptoms, the dearth of primary health care facilities, or other factors, is not clear. Another factor to consider is that private clinicians (and IGSS providers to some extent) have no available channel to report Zika cases or to send samples for Zika testing.

The national laboratory is able to test for Zika in-house. The current protocol is to test all samples of suspected cases from pregnant women or suspected cases of GBS, and one in every ten samples from the general population. The majority of confirmed cases are in women of reproductive age. Although the U.S. Centers for Disease Control and Prevention (CDC) has made a statement regarding scientific consensus about the causative link between Zika and congenital malformations like microcephaly, at the time of the landscaping MSPAS would not issue definitive guidance until a statement was made by the World Health Organization (WHO)/PAHO.

MSPAS Vector Control Program

The MSPAS vector control program' is in charge of developing the technical norms for medical entomology and vector control. The program focus is elimination of larval sources with larviciding (using Temephos one percent, called Abate®), prioritizing large water storage containers in homes. They have a cadre of field staff ("operativos") that was recently cut by 50 percent; these staff vary in their experience and capabilities. The field staff make home visits to conduct entomological surveillance, physically destroy containers and other breeding sites that homeowners agree to, apply larvicide to large water containers and investigate houses where febrile outbreaks are reported. The field staff also promote "deschatarrizacion" or junk clean up campaigns for homeowners to remove junk items for collection by municipal trucks. Scrubbing the inside walls of large water containers regularly is also promoted (there is no recommendation given about use of bleach or detergent). Fumigation with an adulticide is used only in cases of outbreaks to cut transmission, as this method has limited sustainability for vector control. Although initiatives to repair and/or upgrade equipment have been successful, close to half of the existing vector control equipment is in poor condition. The vector control program is also hindered by a lack of budget for transportation of teams to field sites and for supply chain logistics for larval control products.

Since the vector control field staff are so visible in the community, it is not uncommon for community members to report febrile cases to this field staff rather than health care facilities. Vector control staff investigate houses in areas where febrile outbreaks are reported. However, financial limitations keep them from following-up in these areas every 7-15 days, as recommended. Because vector control field staff have more contact with community members than other MSPAS Zika response field staff, they often find themselves in the position of ad hoc communicators about prevention of *Aedes* transmitted diseases, symptom recognition, and other topics. However, they are not trained in counseling or inter-personal communication

skills. Similarly, the language they use is often too technical, hindering the effectiveness in their own interventions to engage households in vector control.

MSPAS Health Promotion Program (PROEDUSA)

The MSPAS Health Promotion Program (PROEDUSA) seeks to address Zika within its overarching Communication for Development platform, encouraging community and municipal participation and empowerment to identify and address the issues they face, and recognize this is a long-term strategy. As of last year, PROEDUSA had increased their involvement in chikungunya and dengue prevention. For Zika, they promote: "Patio Limpio, Escuela Limpia, Municipio Limpio," which translates to "Clean Patio, Clean School, Clean Municipality."

PROEDUSA was approached by WV and the Red Cross with pre-developed communication activities and materials (posters, radio, TV spots and a coloring book for children). These were adapted by MSPAS as official national communication materials for Zika. The slogan is "Zika depende de mi, depende de ti," which translates to "Zika depends on me, depends on you." These materials focus on vector control and personal prevention of mosquito bites. These materials focus on vector control and personal prevention of mosquito bites. Information on sexual transmission or the risks for women who may become pregnant is not covered, neither is guidance on GBS or microcephaly. WV has played an important role in mobilizing quickly to support the MSPAS to respond to Zika and WV supported the mass production of the final materials. MSPAS lacks funds for printing and has limited resources for implementation and supervision due to the small number of field staff who have many duties in addition to Zika communication. Other groups are not required to utilize these SBCC materials.

MSPAS Reproductive Health Program

The Reproductive Health program does participate in technical discussions about Zika, although the program is not as involved in the Zika response as the other MSPAS programs described above. The program's role lies mostly in issuing technical guidance and not implementation. Although the CDC has stated scientific consensus about the causative link between Zika and congenital malformations, the MSPAS will not issue guidance on this point until a formal statement is made by the World Health Organization (WHO) and PAHO. Most stakeholders expressed hesitation to initiate programming around this due to lacking a formal announcement from MSPAS. As an initial step, the MSPAS Reproductive Health Program has developed a Guide for Clinical Care of Suspected or Confirmed Zika Cases among Women of Reproductive Age, Pregnant Women and Newborns (Spanish title: Guía de Atención Integral: Mujer en edad fértil, embarazada y recien nacida(o) con sospecha o caso confirmado con la enfermedad de Zika). At the time of the landscaping visit, the guide was not yet public and was soon to be pretested with the target user: health care providers. However, MSPAS Reproductive Health Program does not have the budget for printing or dissemination of the guide. The Program does not currently use any Zika communication material directed at pregnant women.

The UN Agencies: PAHO and UNFPA

PAHO has hosted several round table meetings about Zika with high-level functionaries and within the UN agencies. PAHO is also coordinating closely with the MSPAS, and providing technical assistance to GT *Aedes* and the MSPAS's Health Promotion Unit. At the time of the landscaping visit, PAHO was planning to employ an international consultant to support the MSPAS in evaluating the possible underreporting of Zika, and was working to coordinate donations and financing for the purchase of vector control equipment and insecticides, as well as the training of field staff. PAHO employs a risk communication strategy for Zika and makes ample use of social media as part of this strategy. The agency noted the need to utilize more communication platforms for Zika, and make more effective and efficient use of mass media. PAHO also noted that the social media, mass media and the press have very full "agendas" with coverage of political news, leaving little space for Zika. UNFPA is supporting MSPAS's supply chain logistics for family planning commodities, and notes that in other Zika-affected countries family planning and reproductive health have been important to framing the response to Zika. However, since the MSPAS in Guatemala has not yet made a definitive pronouncement about the link between microcephaly and Zika, or about the sexual transmission of Zika, the reproductive health aspects of the Zika response are not being discussed. Stakeholders are concerned that this needs to be addressed in order for the country to be ready for another outbreak peak, should it arrive during or after the rainy season. The HC3 team was not able to meet with United Nations Children's Emergency Fund (UNICEF) representatives due to scheduling difficulties during the week of the landscaping visit.

Non-Governmental Organizations (NGOs)

A number of NGOs, private sector groups, professional and civil society organizations are active in Guatemala's Zika response and coordinate with the MSPAS to varying degrees. Many of them are rolling out their own activities within existing programs, as well as contributing to collaborative efforts with the government and mobilizing resources when possible.

Some of these organizations are key family planning stakeholders in Guatemala, such as Asociación Pro Bienestar de La Familia (APROFAM), Population Services International (PSI), PASMO, UNFPA, OSAR, and the Asociación de Ginecología y Obstetricia de Guatemala. The OSAR is a civil society organization that monitors the implementation of the legal frameworks for safe motherhood, adolescent pregnancy and family planning. OSAR is a highly respected organization and is adept at stimulating political dialogue and advocacy at all levels of government. APROFAM is the second most important provider of family planning and reproductive health services in the country, covering nearly 16 percent of the population with its services. APROFAM clinics are among the best equipped in the country for antenatal care.

Of those NGOs with which the landscaping team was able to meet, PCI, PASMO, APROFAM and WV are conducting SBCC activities, which focus on the prevention of vector-borne transmission. APROFAM's "Que no te pique" campaign involves educating its clinicians to counsel clients on Zika prevention, and their community health promoters share Zika prevention messages with clients during community visits. PASMO is pre-testing a Zika prevention kit for pregnant women

containing condoms and repellant. At the time of the landscaping visit, PASMO was the only group providing information about prevention of sexual transmission.

World Vision supports the protection of children and vulnerable populations and has worked in Guatemala for 40 years. In February 2016, WV declared an "international emergency" in five countries: Brazil, Colombia, Honduras, El Salvador and Guatemala. As described above, WV developed a package of Zika communication materials, which the Health Promotion Program at MSPAS has adapted and put into use. The materials include radio spots, a TV spot, posters and other printed materials focused on larval breeding site reduction, and promoting "patio limpio" with MSPAS, as described above. The materials promote washing the water "pila" (barrel) once a week and covering it, as well as the use of mosquito nets by pregnant women when they rest during the day. WV also distributes untreated mosquito nets. With MSPAS, WV implements a campaign in schools with a coloring book to help children identify breeding sites and have started a radio campaign. They have a community prevention kit for working with the Consejos Comunitarios de Desarrollo (Community Councils of Urban and Rural Development) (COCODES) on community reduction of breeding sites. WV's challenges include translating information into other languages and that expected behaviors are mostly falling on the shoulders of women and children. Both OSAR and WV have been active in the GT *Aedes* bi-weekly external meetings. From the perspective of these groups, they hope to coordinate communication efforts so that everyone speaks with the same voice. However, they also note that a big weakness of GT *Aedes* is that it is purely technical with little political weight or influence.

PCI has a several platforms that can be leveraged for Zika prevention, such as the "Mi Barrio" program to improve peri-urban infrastructure, a network of women entrepreneurs and a maternity waiting home. Much of PCI's work has focused on strengthening community resiliency and ability to mitigate disasters, as well as local development through community-driven improvements to housing and water and sanitation. They recognize that it is an important time to involve municipal governments in combating *Aedes*-transmitted diseases. PCI also has many urban and peri-urban sites, which are important settings for the increasingly urbanized *Aedes aegypti* mosquito. PCI has also produced Zika posters and took the initiative to host an NGO coordination meeting on Zika early in 2016.

Finally, several other groups have strong platforms to reach influential or key actors in Zika and are open to collaboration, including the College of Medical Professionals and the Guatemalan Association of Gynecology and Obstetrics, OSAR, the media, Sanidad Militar (military health) and the sugar growers' association. The latter has also produced some radio spots and print materials on Zika, and made significant investments in breeding site reduction and vector control in all of its campuses and worker housing complexes. The Guatemalan Association of Gynecology and Obstetrics is influential among practicing gynecologists and obstetricians. The Association publishes a monthly bulletin (the March 2016 issue covered Zika) and conducts trainings, meetings and advocacy for reproductive health.

IV. CHALLENGES

Coordination

The GT *Aedes* led by MSPAS is an important coordination mechanism although it faces some challenges. The busy leadership has limited time to manage the group and take full advantage of opportunities with other partners. In addition, the initiative to coordinate comes from cooperating partners themselves.

The group is highly technical in its membership and discourse, and lacks members with sufficient political influence to advocate for changes and swift action at higher levels. For example, the group is limited in its ability to break implementation bottlenecks or bypass considerable bureaucratic red tape to accept a large donation of insecticide. This roadblock has resulted in a several months' delay in being able to use the insecticide as part of the GT *Aedes* plan. National-level stakeholders in Guatemala also expressed that the decentralized health system requires strong coordination to ensure there is no disconnect between the technical guidance being produced at the national level and implementation happening at the regional or local level. This can also cause a lag time between case identification and vector surveillance data at the regional level and the national level.

Infrastructure

In general, important underlying causes of the continuation of *Aedes*-borne illnesses are old and inefficient water distribution systems and endemic water shortages. Seasonal drought can exacerbate water shortages. Poor access to water sources assures 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 may not be sufficient to stop *Aedes aegypti* from laying eggs inside these containers. Covered containers are rarely hermetically sealed. Moreover, partial covering may enhance rather than reduce egg-laying because it provides protection and shade for this container-adapted mosquito. 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 *Culex* is not a 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. While water supply and sewage are infrastructure problems that countries may find overwhelming to change, if these are not addressed, it will be impossible to eradicate *Aedes*-borne illnesses.

MSPAS Financing

The MSPAS is challenged with understaffing and under budgeting, which affects surveillance systems, data entry, vector control (including the purchase of insecticides, equipment for outreach and fumigation), health communication, provision of primary care services, fuel and transportation and compensation for staff. This ongoing financial crisis extends to other government agencies too and is high on the media agenda.

Communication and Media

At the time of the landscaping visits, stakeholders felt that the general population was not concerned about Zika. Stakeholders also mentioned that the population has been aware of dengue and chikungunya prevention methods for several years, but do not act. This may be related to the challenges around vector control behaviors, described below. The activities of PROEDUSA are limited due to the overall budget shortfall; they lack funds for buying airtime on mass media and to bolster implementation of communication activities on the ground. PROEDUSA does not have funds to conduct technical assistance or on the ground monitoring to see how SBCC processes are rolling out, or to evaluate the extent of behavior change. Early in the epidemic, the media coverage on Zika was focused on informing the population about the disease and how to prevent it, but coverage had waned since then. The link between Zika and GBS and congenital malformations (microcephaly) has not been disseminated; media stakeholders have stated that discussion of the sequelae of Zika has been "mild" to avoid creating fear in the population. The media's agenda is saturated with political news and most health stories focus on the failures of the health system, leaving little space or interest for Zika. The media also finds it challenging to navigate the constantly changing science about Zika, as new information is constantly being produced.

Vector Control

Challenges to the vector control program are the reduction of more than 50 percent of field entomologists, the lack of funds for transportation and other field activities, lack of insecticides and equipment when needed, and the lack of opportunities to train field vector control staff in interpersonal communication skills.

Aedes mosquito control is also challenged by global practices: 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 also labor intensive, require special skills and must be repeated very frequently, which makes them difficult to sustain and places an extra burden on the already overworked women caregivers. While general cleanup campaigns are positive and promote overall healthy living, they also may lead to less focused messages and a diffused or scattered "call to action." Community mobilizers and individuals can spend a lot of time picking up garbage, which is less likely to be an *Aedes* breeding site (especially during the dry season), rather than cleaning large water receptacles which may harbor the most mosquito eggs and larvae.

Although vector control staff usually understand how to conduct effective cleaning for breeding site elimination, 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 – often gets lost or misrepresented. Furthermore, a visually neat yard may give a false impression that water containers have been cleaned of eggs and

larvae. Meanwhile, the behaviors easiest to carry out are those for general garbage cleanup, which tend to attract the attention of authorities and potentially miss-direct efforts from *Aedes* breeding site reduction, and often picked up by the news, social media and TV programs. This is another leverage point where more coordinated and state of the art SBCC might bring positive change.

Reproductive Health and Family Planning

The CPR with modern methods in Guatemala is moderate at approximately 49 percent (2014-2015 DHS/ENSMI Key Indicators Report). The Reproductive Health Program also has a mandate to support access to family planning services and supplies throughout the country. However, over the past two years the country has seen many stock-outs of family planning commodities in clinics, as well as a reduction of government reproductive health services at the primary care level with the closing of the Programa de Extension de Cobertura (described above). Stakeholders said the situation has led to an increase in unwanted pregnancies. The government has procured contraceptive supplies, however, at the time of the landscaping, a lack of funds for supply chain logistics, a bottleneck in the distribution system, and an inability to reach primary care level providers has limited the movement of this stock to health care centers throughout the country. Some groups, including the local Catholic Church, are vocal in opposition to family planning and emergency contraception, even in cases of sexual abuse and rape. Many organizations avoid the topic altogether in public communications. Even the media refrains from covering family planning or covers it with much restraint. Stakeholders mentioned that the recent announcement by El Salvador to recommend women delay pregnancy in light of the Zika threat was poorly received among Guatemalans and stirred considerable attention in the press and on social media. Sexual transmission of Zika appeared to be mostly ignored at the time of the landscaping visit and no recommendations have been issued regarding informed choice in contraceptive use for delaying pregnancy in light of Zika. Finally, MSPAS health services have little clinical capacity to monitor pregnant women or treat microcephaly or GBS.

V. RECOMMENDATIONS

National Zika Communication Strategy and Operational Plan

- Multiple stakeholders are involved in the Zika response in Guatemala. Their communication efforts may benefit from the development or refinement of a **National Zika Communication Strategy** and a corresponding **National Zika SBCC Operational Plan**. The **primary role** of the national strategy and plan would be to: coordinate and harmonize communication activities across all stakeholders and groups communicating about Zika. Technical assistance can support these processes.

  The **National Zika Communication Strategy** 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.

  The **National Zika SBCC Operational Plan** ensures that collaboration amongst partners does not stop at the strategy design phase, but that there is continued coordination, mapping and reporting of activities.

  There are many benefits of the development of such a national Zika communication strategy and operational plan, with the involvement of key partners and technical stakeholders:
  - Greater consistency of communication messages
  - Coordinated roll-out of activities, such as community outreach.
  - Consistency and coordination help maintain public and partner trust in the Zika response.

  The key partners and technical stakeholders can include:
  - MSPAS (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
  - Organizations 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.

- While stakeholders expressed concern about a resurgence in Zika cases once the rainy season arrives, it was not clear if coordinated long-term planning was taking place. The

country would benefit from planning as soon as possible for a second wave of Zika and a potential increase in microcephaly/GBS cases. Planning can include a focus on:

- **Resource mobilization and allocation** through and beyond the rainy season
- **A communication strategy** based on possible scenarios of the epidemic (and according to phases)
- **Vector control plan** based on possible scenarios of the epidemic (and according to phases)
- **Service provider needs and priorities**
- **Family planning and reproductive health**
- **Microcephaly and GBS management** (patient, newborn and family support and counseling)

Formative Research and Monitoring and Evaluation

- Rapid formative research is important to better understand the perceptions, myths, fears 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 put together a resource package that includes a set of key knowledge, attitudes and practices (KAP) questions for Zika, microcephaly and GBS. The HC3 team was not able to meet with UNICEF in Guatemala. However, in other countries UNICEF expressed interest in research on community perceptions around Zika and is supporting a literature review on community participation regarding dengue. This may be relevant to Guatemala too.

- Formative research can also include vector control outreach workers, community mobilizers and service providers, to explore their knowledge, attitudes and perceptions of Zika control and prevention efforts. Formative research with these groups will allow for better incorporation as they are both a 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 possible, and engage in technical assistance for monitoring and evaluation, as needed.

Message Fine Tuning and Communication Platforms

- Overall, messaging should focus on framing Zika control as a reemphasis on the larger *Aedes aegypti* vector control (against 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. Guatemala has a Zika prevention slogan that does include a call to action to "you and me" to get involved in Zika prevention, and stakeholders discussed the importance of family and community involvement in the

effort. Taking this messaging a step further to emphasize that every family is part of the solution can motivate broader action; the government's vector control efforts need to be supported by family and community action to fight 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 that will most reduce *Aedes* mosquitoes. 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., recognition should be for larval free containers, not for a clean yard.)

- 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. Positioning of the communication can be around the importance of being informed and the right to know about the effects of Zika and how to prevent it. More attention should be paid to family planning messages in the Zika context for women and couples who choose to postpone pregnancy. At the same time, specific messages are needed for pregnant woman to avoid Zika, as well as women and couples who may be thinking about having children in the near future. Some information, materials and messages is available for pregnant women, but personal protection messages can be stepped up and proactively integrated into a range of counseling and outreach opportunities. Attention should also be paid to seasonal migrant workers to areas with high Zika transmission and their families. Sexual transmission is not currently addressed in the region but this should be integrated into counseling guidelines.

- Support the publication and dissemination of the *Guía de Atención Integral: Mujer en edad fértil, embarazada y recien nacida(o) con sospecha o caso confirmado con la enfermedad de Zika* by MSPAS for health providers.

- Technical support is needed to identify specific, realistic and effective calls to action to address in their communication strategy. This should include a technical vector control team to assess the available breeding site reduction techniques (e.g., larvicides, Untadita solution made with bleach and without detergent, alevines (small fish), house-to-house surveillance and cleaning days ("jornadas")), and to develop recommendations on priority actions for individuals and vector control teams, including recommended larval reduction techniques by container and geographic location.

- Support developing audience specific materials based on technically sound and global recommendations by developing or adapting regional guidance documents, specific SBCC Zika materials, or creative briefs/materials developed. These could include:
    - Health provider jobs aids (on family planning and Zika, sexual transmission, prenatal Zika prevention, microcephaly and GBS prevention and treatment)

- *Aedes* breeding site reduction job aid for outreach workers
- Press information packet

- Harness the synergy of on the ground efforts by training vector control field staff and other NGO outreach workers in inter-personal communication skills, personal prevention of Zika, chikungunya, dengue, recognition of symptoms and health care seeking.

- Translate Zika, dengue and chikungunya messages (in particular oral messages in for radio spots or inter-personal communication) into one or two other Guatemalan languages to reach more of the population, and pre-test materials prior to finalizing translations.

- Develop an online portal and regional network to 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 would be able to upload SBCC materials for review by the site administrator(s) and sharing (Note: USAID has subsequently approved funding for this activity).

- Experience in the recent Ebola outbreak and other risk communication issues has demonstrated the importance of good press communication and education. The Guatemala Zika response stakeholders can, if they have not already, develop a system for regularly updating the press, as well as establishing 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. The media stakeholders interviewed during the landscaping indicated interest in learning more about Zika, and support in navigating the constantly evolving science around Zika.

- Digital platforms can be explored for improving communication and outreach to pregnant women and women of reproductive age via WhatsApp or along the lines of the Text4baby 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 follows a similar strategy as the “SMART client” approach, commonly used by CCP, HC3 and other groups in family planning programs, where interventions empower women to seek answers to 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.

- Digital platforms can also support providers in family planning counseling and Zika prevention during pregnancy. WhatsApp groups could be organized for providers with

Zika frequently asked questions as a job aid. A similar platform, via an app or WhatsApp group, could be employed for vector control field staff.

- The professional medical association and the OB/GYN association of Guatemala have existing platforms for continuing medical education that present an opportunity to reach large numbers of health providers and support them in counseling their clients on Zika risks and prevention. Similarly, APROFAM also has an eLearning platform with its network providers.

Coordination

- Bolster the leadership of GT *Aedes* with a staff member focused exclusively on the *Aedes* response, as well has strong political networks and links to advocate for decision making and action at a higher level. Consider developing a communication coordination roundtable in the GT *Aedes*. Consider adding non-governmental coordination as a standing agenda item to take greater advantage of the willingness to collaborate of many non-governmental stakeholders.

- Coordinate more closely with the NGOs that have strong links to peri-urban and rural communities. Many of these NGOs use community participation methodologies that empower communities to be proactive in infrastructure improvements, address water and sanitation needs, and in vector control. Similarly, NGOs that work with men who migrate to Zika hotspots for seasonal labor may be able to reach a key population to prevent sexual transmission of Zika to their female partners when they return home. The coordination effort can 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 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.

- Consider the possibility of coordinating with APROFAM and the Association of Obstetrics and Gynecology in antenatal care for pregnant women confirmed Zika cases in the catchment areas of these clinics and providers.

- Reinforce capacity and participation of civil society, including OSAR, as a model for other issues such as vector-borne diseases and explore the expansion of promising social mobilization initiatives in Quetzaltenango.

Strengthening MSPAS

- The Zika outbreak is hitting Guatemala at a challenging time for MSPAS, due to gaps in financing and in the primary health care system, among other challenges described above. Because a coordinated Zika response taps into several core functions of MSPAS, responding to Zika can be an opportunity to strengthen certain key MSPAS activities, such as:
  - Logistics management
  - Surveillance and health information system
  - Prenatal care
  - Reproductive health rights and family planning services
  - Reducing dengue and chikungunya
  - Coordination within and without the MSPAS

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