



EMERGENCY ZIKV:
RESULTS OF THE CONSULTATION
PROCESS KNOWLEDGE, ATTITUDES
AND PRACTICES (KAP) ON ZIKV
COUNTRY REPORT:
GUATEMALA



September 2016

Acknowledgements and Thanks

The KAP-ZIKV interview team is grateful to those who shared their knowledge, skills and practices about the ZIKV in the different communities consulted in Guatemala, and those who provided support to ensure that the KAP-ZIKV process achieved its objectives. Special thanks to the team of facilitators and managers of the 10 ADPs who participated in the process. Likewise, thanks to the Zonal Managers, the NB Steering Committee for their unconditional support, and other staff who participated in the process.

The technical staff that participated was:

- Ovidio García (HEA National Manager)
- Julio Lone, (National Health Manager)
- Osberto Leonel Moreno, Manaen Marcos Orozco and Alma Delia Sánchez (El Tumbador ADP Facilitators)
- Edgar Salguero and Ana Barrera (APAS ADP Facilitators)
- Brayán Jiménez and Edvin Montoya (Comapa ADP Facilitators)
- José Ángel Gutiérrez, Osman Oswaldo Flores and Wilfredo González Roque (Jocotán ADP Facilitators)
- Ariel Tash Zamora, Edgar Vinicio Suruy, Dyna Roxana Charuc and Luis Ordóñez (Yepocapa ADP Facilitators)
- Wendy Rebeca Lemus Díaz, Juan Carlos Sosa Escobar and Edgar Carranza (La Unión ADP Facilitators)
- María Elizabeth Pérez Amador, Edin Giovanni Guerra Raymundo, Daniel Humberto Mendoza Almazán and Ilsy Dalila Vásquez Lázaro (ADICCA II ADP Facilitators)
- Beneditin García Pérez and Elsa Marilú Súchite Ramos (ASODELUV ADP Facilitators)
- Walter Estuardo Barrios Gálvez, Ana Lorena Pérez Mérida, Pablo Arturo Pérez and Dener Enrique Nimatuj (ADRIDM ADP Facilitators)
- Mefiboset Natanael Chun, Daniel Rafael de León, Eli Mejía and Juan Carmelo Aguilar (Nuevo Progreso ADP Facilitators)

The KAP-ZIKV process was commissioned by the ZIKV Emergency Response Directorate of World Vision International and the Pan American Health Organization. The KAP-ZIKV technical team consists of World Vision International's Response Director ZIKVV, WV International Technical Director of Humanitarian Accountability and DME, WV-LACRO Regional Director of HEA for the WV-LACRO Regional Health and HIV Adviser and the Consultant for the CAP-ZIKV. For more information on this CAP-ZIKV process, please contact Alfonso Rosales, Director of ZIKV's Emergency Response at World Vision International, at arosales@WorldVision.org

Contents

Acknowledgement and Thanks	2
Contents	3
Abbreviations	4
BACKGROUND	5
SUMMARY	7
DEMOGRAPHIC DATA.....	8
METHODOLOGY	9
RESULTS	11
A. KNOWLEDGE	11
B. ATTITUDES	12
C. PRACTICES	13
MAIN FINDINGS	15

Abbreviations

APR Annual progress report

KAP Knowledge, skills and practice

DN National Office of the WV-GT office

DME Design Monitoring and Evaluation

EHP Humanitarian Country Team

GT Guatemala

GoGT Government of Guatemala

MS Ministry of Health of Guatemala

WHO World Health Organization

ON National Office

ONGi International non-governmental organization

PAHO Pan American Health Organization

PDA Area Development Programs

PPS Probabilities proportional to size

SE Epidemiological week

WV-GT World Vision Guatemala

WV World Vision

ZIKV ZIKA Virus

BACKGROUND

In May 2015 the first case of ZIKA (ZIKV) virus infection was confirmed in Brazil. In less than nine months the virus spread through 41 countries and territories in Latin America and the Caribbean, infecting more than 1.3 million people. A causal link has now been established between ZIKV and congenital malformations such as microcephaly and Guillain-Barre syndrome; the increase in abnormalities in other organs such as eyes and ears has also been associated with ZIKV ¹. In February 2016 the WHO declared that the emergence of clusters of cases of microcephaly and Guillain-Barre syndrome associated with the ZIKV epidemic constituted an international public health concern, i.e., a situation that should be treated as an emergency. By September 1, 2016, 73 countries and territories have reported the presence of ZIKV transmitted by mosquitoes since 2007 ².

In this context, WVI and PAHO realized the need for a KAP (knowledge, attitudes and practices) survey related to ZIKV disease. The objective of this survey is to determine the knowledge, beliefs, behaviors and practices of people (adults and adolescents, women and men) on ZIKV, in communities where WV has developed a plan of response to the epidemic, which includes six countries (Brazil, Colombia, El Salvador, Honduras, Guatemala and El Salvador) in Latin America and the Caribbean.

In this report, the results of the KAP survey in Guatemala (GT) are presented.

The ZIKV statistics in Guatemala indicate that the first case was reported in November 2015. The Government of Guatemala, through Ministerial Agreement No. 152-2015, declares "State of Sanitary Emergency" for care in 7 states of the country. In 2016, the Congress of the Republic established Resolution No. 1-2016, which provides support to the Ministry of Health to establish prevention actions for disease control. Likewise, the "Arbovirosis Technical Table" was set up, which is directed by the National Epidemiology Center of the Ministry of Public Health and Social Assistance and includes a network of strategic allies such as PAHO, WHO, UNICEF, Armed Forces, Guatemalan Red Cross, National Coordinator for Disaster Reduction, World Vision Guatemala, and related health units. As of August 15, 2016, the Ministry of Health of Guatemala reports 2,728 cases of suspected ZIKV, of which 435 are confirmed. Likewise, 700 suspected cases were identified in pregnant women, of which 194 cases have been confirmed. There are no reported cases of GBS (Guillain-Barre syndrome). To date, the response of the Government of Guatemala has included: community-based vector control; use of larvicides; informational campaigns; population-based education and communication; cleaning campaigns for control and eradication of potential breeding sites; epidemiological, entomological and laboratory surveillance; monitoring and evaluation of actions and health promotion.

¹ Final Draft ZIKV Honduras Proposal. 07-2016

² WHO SitRep September 29, 2016.

SUMMARY

During August 2016, World Vision Guatemala (WV-GT) surveyed 599 residents of twelve communities about their knowledge, attitudes and practices about the ZIKV. The present document gathers the results, compared by population groups: adult males, adult females and adolescents. Some of them are:

<p>81% of male respondents feel vulnerable to ZIKV transmission</p>	<p>84% of adolescents who responded stated they did not know what Guillain-Barré syndrome was</p>	<p><25% of respondents expressed that they were most concerned about the disabilities caused in babies by ZIKV</p>
<p><5% of respondents mentioned sexual intercourse, breast milk or blood transfusion as mechanisms of transmission of ZIKV</p>	<p>55% of women expressed that microcephaly is the greatest risk to the fetus/baby of a pregnant woman infected with ZIKV</p>	<p>ZIKV in GT</p>

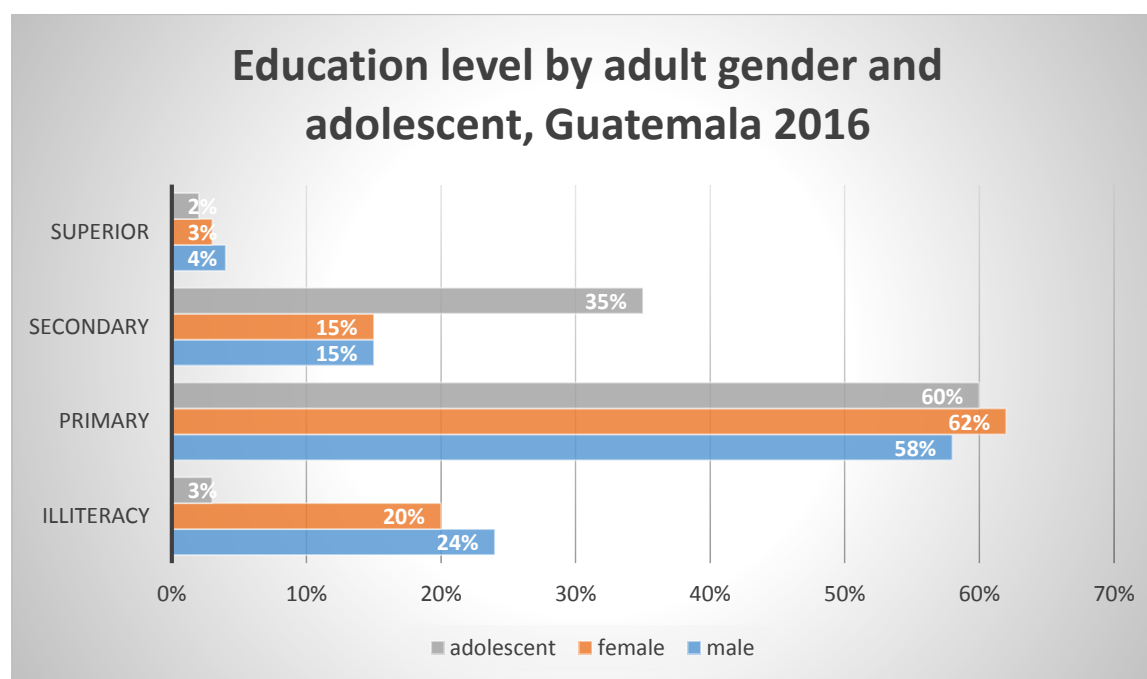
Number of interviews:	607
Without consent:	1
Test	7
Effective Interviews	599
Number of households interviewed:	599
Population groups:	
Adult women interviewed:	253
Adult men interviewed:	199
Adolescents interviewed:	147
Interviews with due diligence errors	0*
Net number of interviews	599

* In the adolescent population, atypical values (outliers) were found for the number of pregnant women and for distance to health centers. These values were removed to estimate the averages.

DEMOGRAPHIC DATA

GUATEMALA	MEN		WOMEN		ADOLESCENTS		
TOTAL	199		253		147		
Age	Rank	Average	Rank	Average	Rank	Average	
		19-76 years	36.9 years	19-73 years	35.3 years	12-18 years	15.2 years
Number of people living/sleeping in the household of the respondent	6.6 people		6.1 people		7.08 people		
Area of residence	Urban	0	0%	2	0.8%	1	0.7%
	Rural	199	100%	250	98.8%	146	99.3%
	Peri-urban	0	0%	1	0.4%	0	0%
Number of pregnant women living in the household	Mean = 0.196 (39 pregnant women in / 199 households)		Mean = 0.18 (46 pregnant women in / 253 households)		Mean = 0.24 (36 pregnant women in / 145 households) (two outliers were found: 123 and 10)		
Distance to the nearest health center	5 km (data of 1 km to 130 km)		4.14km (data of 1 km to 50 km)		4.3 km (data of 1 km to 24 km)		

EDUCATION



METHODOLOGY

A cross-sectional survey using a mobile-technology-based structured questionnaire was administered to 599 inhabitants of 29 communities in 11 municipalities (See table 1) of Guatemala during August 2016. The study used a 2-stage, 30-cluster sampling method. The sample size was

determined using the following equation:

Equation 1

$$n = \frac{Z^2(p)(q)d_{eff}}{d^2}$$

Z=1.96 for error risk of 5% (statistical certainty)
 Deff=2 (design effect common for cluster)
 P=50% estimated prevalence of indicator in the population (hh with severely damaged shelter)
 Q=1-p (population not presenting with indicator)

To compare between men and women (aged from 19 to 65 years) and adolescents (from 13 to 18 years), population sample was stratified by gender and age-group. Survey teams intentionally prioritized geographical areas where WV has a presence and/or wants to develop activities in the near future. Thirty clusters were randomly selected with probability proportionate to the size (PPS) of the population in the municipality. Within each cluster, 20 households were randomly selected. In each household one person was interviewed.

The questionnaire consisted of 43 closed-ended questions selected from WHO's Knowledge, Attitudes, and Practices for Zika disease guidelines. Seven supervisors and 19 community volunteers underwent a 2-day training period on interview techniques and utilization of mobile technology [(KOBOLLECT 1.4.8 (1057)³]. The questionnaire was administered in Spanish in face-to-face interviews. Each interviewer used a smart phone to collect and store the interview data. When the team had access to the Internet, the completed questionnaires were sent to the SMAP⁴ management platform. All collected data were downloaded from the SMAP server into Microsoft Excel. Data were checked for inaccuracies and inconsistencies and then entered into IBM SPSS Statistics 23 software. Data analysis was conducted in two steps. The first step consisted of the production of descriptive statistics for each variable included in the survey. The second included the calculation of *p*-values using a Mantel-Haenszel 2-tailed test.

No.	Community	Municipality	State
1	Barrio Nuevo	Camotán	Chiquimula
2	La Lima		
3	Limón		
4	Lela Chancó		
5	Suchitan	Santa Catarina Mita	Jutiapa
6	San José Buena Vista	Jutiapa	
7	Minas Abajo	Joctán	Chiquimula
8	Minas Arriba		
9	La Ceiba	Comapa	Jutiapa

³ Kobo Toolbox is an open source tool for collecting mobile data, available to everyone. It allows you to collect data in the field using mobile devices such as mobile phones or tablets, as well as with paper or computers.

⁴ (SMAP Consulting)

10	Buena Vista		
11	Ojo de Agua	Jocotán	Chiquimula
12	Matazano		
13	Lampocoy	La Unión	Zacapa
14	Timushan		
15	Tasharte		
16	Mangales	Nuevo Progreso	San Marcos
17	San Antonio Las Flores		
18	Palin		
19	7 de Febrero		
20	Tocache	San Pablo	San Marcos
21	Tojoj		
22	Nueva Buena Vista		
23	Caserio Villa Verde	El Tumbador	San Marcos
24	Plan de La Gloria		
25	Alameda Nahuatancillo		
26	Monte Los Olivos	San Pedro Yepocapa	Chimaltenango
27	Paraíso		
28	Monte Llano		
29	San Rafael Sumatán		

Table 1: CAP-ZIKV Guatemala: list of communities where the collection of information was performed, location municipality and Area Development Programs (PDA).

RESULTS

A. KNOWLEDGE

Knowledge

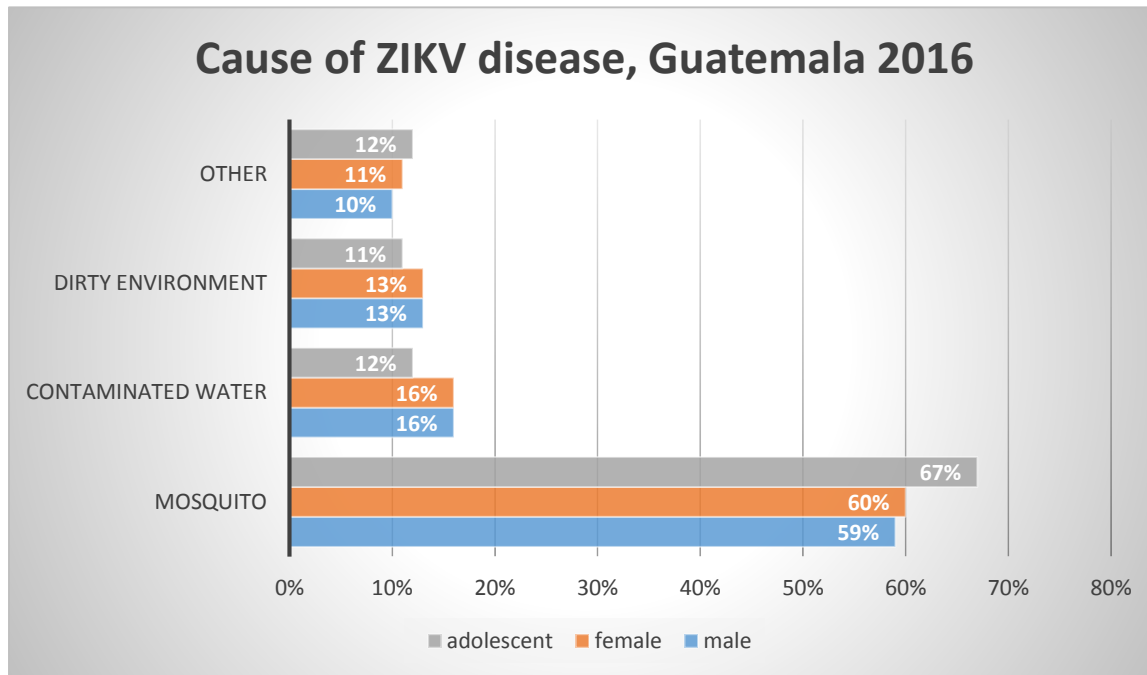
More than four fifths (adult male=81%, adult female=87%, adolescent=86%) of the population interviewed consider that it is possible at this time to get ZIKV in their community.

Two-thirds of those interviewed did NOT know anyone in their community who had recently contracted ZIKV.

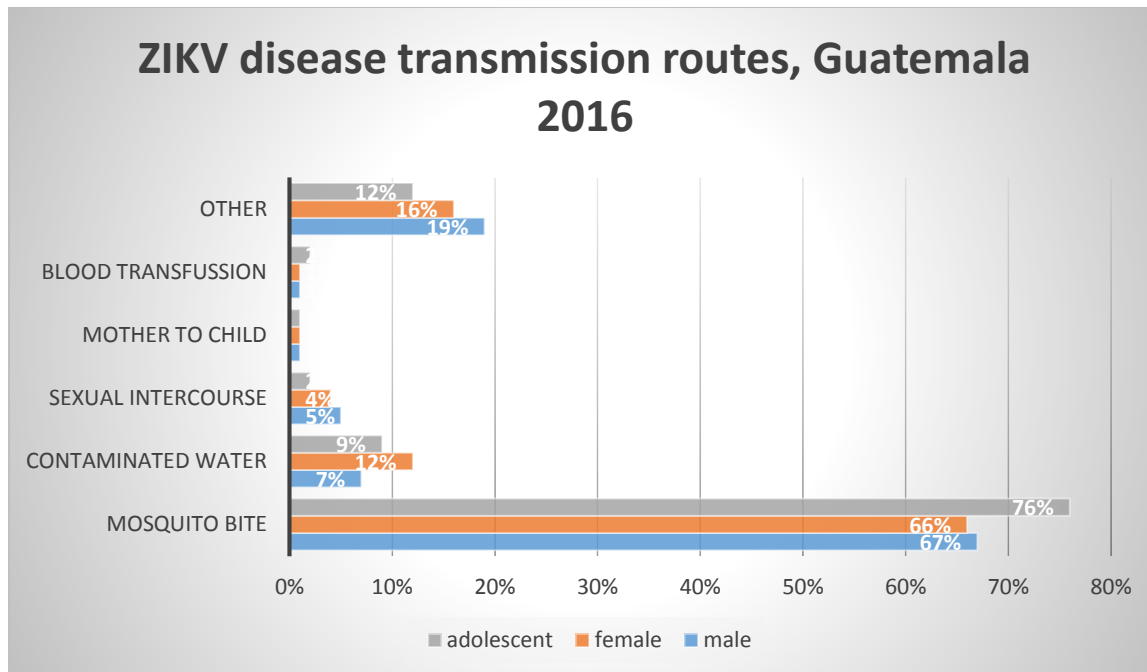
SYMPTOM CAUSE

Although 35% of the interviewed men believed that they can contract ZIKV (as well as 30% of the women and 32% of the adolescents consulted), 26% of the men and 29% of women interviewed believe ZIKV to be an illness primarily affecting children (27% of adolescents). Less than 5% of the interviewees associate women of childbearing age with ZIKV.

59% of male respondents identified mosquitoes as the cause of ZIKV (and 60% of women and 67% of adolescents). Additionally, all respondents relate contaminated water and a dirty environment as ways of contracting this disease. Less than 2% of respondents relate it to sexual intercourse, breast milk (1%) or vaccines (1%). 2% of the men interviewed stated not knowing the cause of ZIKA (4% in the group of women and adolescents).



67% of male respondents believe that the ZIKV is contracted by mosquito bites (66% in women; 76% in adolescents). Other aspects such as drinking contaminated water, a dirty environment and a virus are considered to be relevant factors for contracting ZIKV. Less than 5% of respondents in the three population groups mentioned sexual intercourse, breast milk (1%) or blood transfusion (1%) as mechanisms of ZIKV transmission. On the other hand, 3% of men and adolescents reported not knowing how ZIKA is contracted (as well as 5% of women surveyed).



Among the men and women interviewed, the most commonly recognized signs and symptoms of ZIKV infection in a person were: fever (24%, 24% for adolescents), headache (~ 23%), rash (~ 12%) and joint pain (~ 13%) in the three population groups.

69% of the men interviewed said that all who contract ZIKV have symptoms (77% of women and 78% of adolescents).

73% of men and adolescents interviewed said that it is possible to prevent ZIKV (81% of women). The three groups of respondents pointed to the following measures as the most efficient in preventing ZIKV infection: using bednets at night (21% in men, 28% in women and 25% in adolescents), cleaning/scouring water containers (13% men, 12% women and 13% adolescents), and eliminating stagnant water (16% men, 15% women and 17% adolescents).

Treatment and seeking medical care

38% of the men interviewed said that there is treatment available for ZIKV (41% of women and 42% of adolescents). 15% of the men interviewed indicated that there is no treatment (16% of women and adolescents). 35% of men interviewed said they did not know whether treatment for ZIKV was available (33% in women and 23% in adolescents).

Risk

SSR - sexual and reproductive health

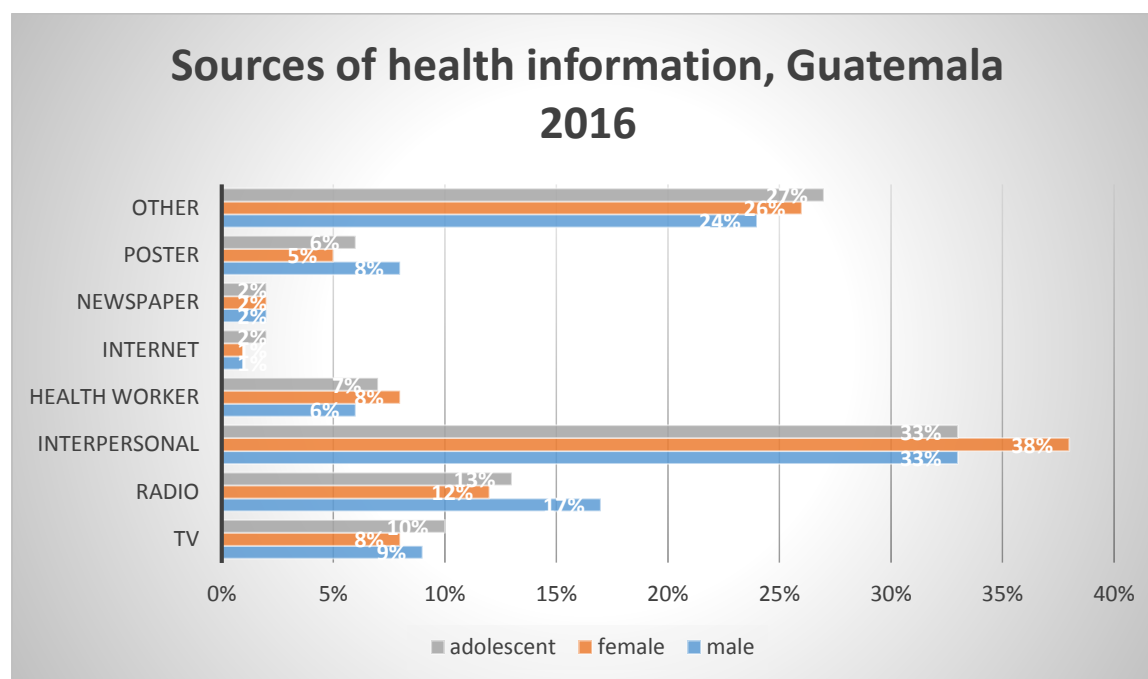
The men, women and adolescents interviewed stated that pregnant women (~ 41%), children (~ 31%) and the elderly (12%) were the groups most at risk of harm by ZIKV.

Respondents said that if a pregnant woman is infected with ZIKV, the main risks facing her include the risk of having a natural abortion (27% men, 29% women, 28% in surveyed adolescents), difficulty during childbirth (25% of respondents) or being ill (30% men, 28% women and 31% adolescents consulted). 10%

of the men and women consulted did NOT know about the risks facing pregnant women (12% in adolescents).

The men interviewed said that if a pregnant woman is infected with ZIKV the main risks to her baby are: risk of not growing or developing naturally in utero (20% men, 23% women and 18% among adolescents), risk of natural miscarriage (11% among men, 17% among women and 16% among adolescents) and / or risk of stillbirth (11% among men and women, 14% in adolescents).

The three population groups surveyed reported they have received information on the ZIKV through: radio, family, friends or neighbors and health workers at the health center. However, only 30% of women indicated that microcephaly is when the baby is born with a smaller than normal head. 56% of the men interviewed, 55% of women and 63% of teenagers do not know what microcephaly is.



More than half of the participants do not have knowledge on microcephaly (56% of men, 55% of women and 63% of adolescents); and more than three quarters do not know if there is a relationship between microcephaly and ZIKV.

Table 2: Knowledge of microcephaly and its association with ZIKV. Guatemala 2016

Microcephaly	Male	Female	adolescent
No knowledge	57%	55%	63%
No association with ZIKV	79%	74%	74%

More than three-quarters of participants said they did not know what Guillain-Barré Syndrome is (88% of men, 78% of women, and 84% of the adolescents consulted).

81% of the men interviewed expressed NOT knowing if there was a relationship between ZIKV and Guillain-Barre syndrome (77% of women and 76% of adolescents).

B. ATTITUDES

Risk

More than half of participants consider themselves to be at high or medium risk of being infected with ZIKAV in the next 6 months (male 68%, female 69% and adolescent 74%). Of this group of respondents, about 48% of men and 46% of women (54% of adolescents) relate the risk with the presence of mosquitoes in their neighborhood because they do not use repellent or store water in uncovered containers (14% of men and women and 10% of adolescents). Another reason is that the house does not have metal screens on doors or windows, or because they do not have or do not use mosquito netting.

Less than one fifth of the population consider themselves at low risk or no risk of them contracting ZIKV in the next 6 months (male 17%, women 16% and, adolescents 15%). This group of respondents relate the low risk of infection with having cleaned their yard at home (44% men, 35% women and 31% of adolescents), clean-up campaigns in their neighborhoods or the fact that the water stored is covered (22% of men, 18% women, 9% of adolescents).

PREVENTION

Most of participants placed responsibility of protecting the household from the Zika transmission at the individual level (45% of men, 50% of women and 49% of adolescents), followed by head of the household and health workers.

SSR- Sexual and Reproductive Health

Male and female respondents expressed agreement (29% of men, 40% of women and 33% of adolescents) that women should avoid becoming pregnant at this time because of potential ZIKV infection. Respondents stated that the reason for their response is that women can become ill (27% of men, 30% of women and 38% of adolescents) or because there is a risk that the baby will be born with a disability (19% of men, 22% of women and 24% of adolescents interviewed).

Information / Communication

67% of male respondents, 57% of women and 65% of adolescents believe that they do not have enough information about ZIKV, but WOULD want to receive more information.

16% of the male respondents, 24% of the women respondents and 23% of the adolescents interviewed indicated that they DO have enough information about the ZIKV. This group expressed their desire for more information on the cause of the infection, as well as information on prevention, signs and symptoms. Few people (<7%) showed interest in Guillain-Barre syndrome.

33% of men surveyed felt that the key messages were always clear and easy to understand (36% of women and 27% of men).

Knowledge

The men interviewed said that what worries them most about ZIKV is that it can make people sick (37% of men, 40% of women and 48% of adolescents consulted), cause disabilities in babies (25% of men, 21% of women and 20% in adolescents consulted), as well as the fact that it can kill people (18% men, 15% women and 24% adolescents).

On the other hand, less than 2% mentioned that ZIKA could be transmitted through sexual intercourse.

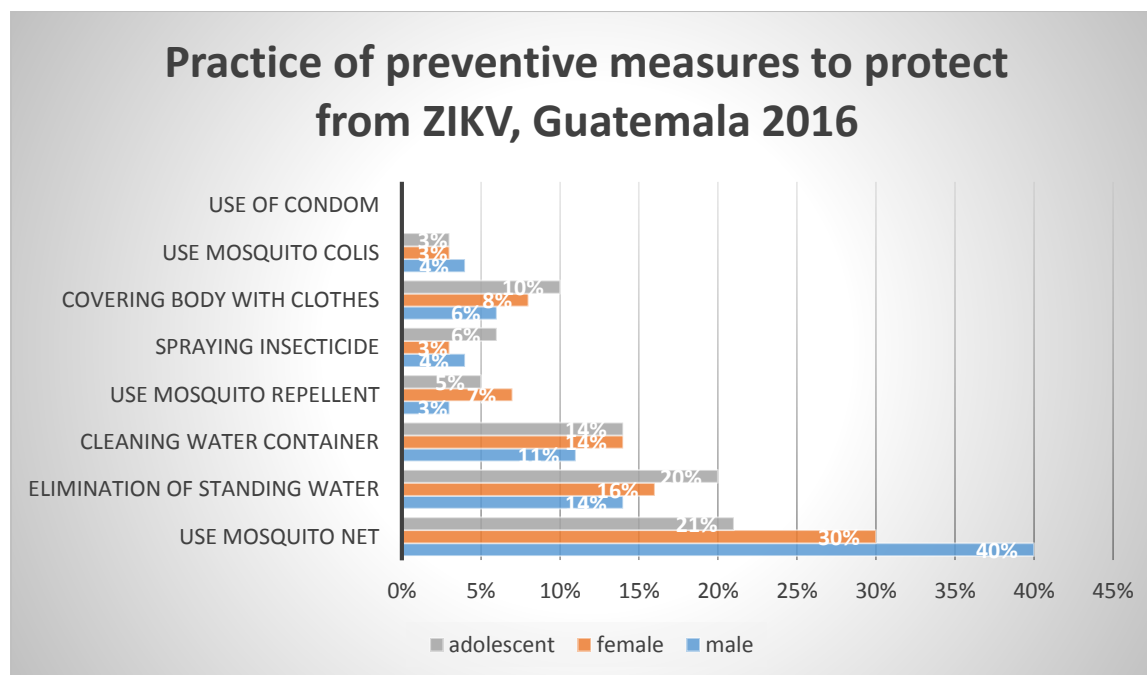
C. PRACTICES

PREVENTION

68% of the men interviewed stated that they had taken the following steps to avoid contracting the disease, since they had heard of ZIKV (as well as 76% of women and 65% of adolescents): use mosquito netting at night, clean/scour containers with standing water storage or water, place a lid on water storage tanks and eliminate standing water.

About 29% of male respondents (21% of women and 24% of adolescents) said they had not taken any steps to prevent ZIKA infection since hearing of the ZIKV. The most common reasons for this response was not knowing what to do or the belief that there is no risk of contracting ZIKA.

49% of male respondents answered YES to having taken steps to prevent cases of ZIKV in their communities (62% in women and 56% in adolescents). In this group, the measures taken included cleaning the sources of water storage, placing a lid on the source of water storage, eliminating standing water and removing the trash.



Among respondents who said they have not taken any preventive measures against ZIKV in their communities (32% of men, 24% of women and 34% adolescents), the reasons specified were not having the resources or access to preventive measures (32% of men, 29% of women, and 17% of adolescents), believing that the community was not at risk (12% of men, 21% women and 24% adolescents) and not having time to take preventive measures in the community (11% of men and 10% of women and adolescents, respectively), or not knowing what to do (25% of men, 19% of women and 7% of adolescents).

32% of male respondents and adolescents (40% of women and 49% of adolescents) indicated that local / national organizations have NOT taken any action to protect them from ZIKV.

However, ~ 52% of respondents stated that the local / national organizations HAVE indeed taken steps to protect with community clean-up campaigns, home visits for family counseling, educational messages on TV and training in schools and colleges.

The men interviewed mentioned that mosquitoes can be reduced or eliminated from the home by fumigation (30%), keeping water sources / storage / water containers clean (12%), removing standing water (19%), keeping the environment clean and removing waste (14%). Less than 13% said it was important to keep a lid on the source and storage of water.

66% of the men interviewed stated that the last time they had cleaned their water storage source was between 1-7 days (along with 70% of women and 67% of those adolescents surveyed). 21% of men said that it was over a week ago.

42% of the men and 37% of the women interviewed (48% of the adolescents) described cleaning the water storage source by emptying the container and rubbing it with soap or other solution before filling it.

Treatment and seeking medical care

About ~ 73% of respondents said that if someone (other than a pregnant woman) thinks they have ZIKA, they should go to the health center. Other choices were to stay home and take medications to reduce fever and relieve pain, go to the private doctor and drink plenty of fluids.

76% of the men interviewed mentioned that if they had a fever at the moment they would consider taking a diagnostic test to know if they have ZIKV (as well as 85% of the women and 80% of the adolescents consulted).

65% of the male respondents, 64% of the women and 70% of the adolescents said that if a woman develops a fever while she is pregnant, she should go to the health center. They also suggested going to a private doctor (10%) and receiving care and prenatal checkups.

MAIN FINDINGS

On the knowledge of ZIKA, the KAP-ZIKA consultation in Guatemala showed that more than 81% of respondents believe that YES, it is possible to get ZIKV in their community, although two-thirds of respondents did not know someone in their community who had contracted ZIKV recently.

About 35% of respondents believe that everyone can get ZIKV; 26% consider ZIKV as a disease of children. Less than 5% of respondents associate women of childbearing age with ZIKV. Less than 5% of respondents in the three population groups mentioned sexual intercourse, breast milk or blood transfusion as mechanisms of ZIKV transmission. Nearly 69% of those surveyed said that ALL those who get ZIKV have symptoms and about 38% said that YES there is treatment for ZIKV.

The interviewees stated that if a pregnant woman is infected with ZIKV, the main risks she faces are: that she is at risk of having a natural abortion, that she may have difficulties during labor or that she may become ill. 10% of the men and women consulted do NOT know the risks faced by a pregnant woman (12% of adolescents). On the other hand, the main risks facing the baby are: risk of miscarriage/abortion and risk of not growing or developing naturally in the uterus.

Although the three population groups interviewed reported that they had received information about the ZIKV through TV, radio, family, friends and health workers, only 30% of those interviewed knew the meaning of microcephaly; less than 26% related ZIKV with microcephaly, while about 60% did not know what microcephaly is. On the other hand, about 88% of those interviewed did not know what Guillain-Barré syndrome was: less than 14% declared it to be a type of paralysis. About 80% of respondents said they did NOT know if there was a relationship between ZIKV and Guillain-Barré syndrome.

On attitudes around ZIKA, less than two-thirds of respondents believe that they are at high and medium risk of contracting ZIKA within the next six months, and relate it to the presence of mosquitoes in their neighborhood because they do not use mosquito repellent, or because stored water is left in uncovered

containers. Those who consider themselves to be at low risk or at no risk (less than 17% of respondents) are reassured by clean-up campaigns in their neighborhoods, because they have a yard free of hatching sites or because the water stored is covered. Those consulted, mainly women (~ 40%) indicate that women should avoid becoming pregnant due to ZIKA, because of the risk of the baby being born with a disability.

Almost two-thirds of those surveyed feel that they do not have enough information on ZIKA; they want more information primarily on prevention, signs and symptoms and the cause.

About half of respondents indicated that local / national organizations have taken no steps to protect them from ZIKV with community clean-up campaigns, home visits for family counseling, TV education messages and training in schools and colleges.

Two thirds of respondents said that if a woman develops a fever while pregnant, she should go to the health center, and that she needs to receive antenatal care and prenatal checkups.