# THE ZIKA VIRUS: GAPS IN AMERICANS' KNOWLEDGE AND SUPPORT FOR GOVERNMENT ACTION 

A new study from the March of Dimes and NORC at the University of Chicago finds significant gaps in Americans' understanding of the Zika virus, including the ways it is transmitted and its health consequences. The public is increasingly concerned about the virus, and large majorities in both political parties support additional federal funding into research to prevent the spread of the virus and to develop vaccines and treatments.

The Centers for Disease Control and Prevention (CDC) reports over 16,000 cases of the virus in the United States and its territories as of August 31, 2016. ${ }^{1}$ While the vast majority of the reported cases are associated with travel to areas outside the United States, 49 people have recently acquired the virus from mosquitoes in southern Florida. ${ }^{2}$

In the wake of recent news about Zika, 95 percent of Americans say they have heard at least a little about Zika, and awareness of the virus has increased since March. ${ }^{3}$

As awareness has increased, the new poll finds fewer than 1 in 4 Americans is confident in the ability of the federal government to respond to an outbreak in the United States or abroad.

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Three Things You Should Know about the March of Dimes and NORC Zika Survey Among American Adults..

1) Ninety-five percent have heard about Zika, and a majority are moderately worried there will be a large number of Zika cases in the United States in the next year.
2) Three-quarters support increased federal funding into research to prevent the spread of Zika, and majorities support mosquito control policies.
3) Most know mosquitoes can spread Zika (94 percent) and that the virus is linked to birth defects ( 81 percent), but fewer than 6 in 10 know about sexual transmission and about half are aware of the symptoms or tests for Zika.

In February, President Barack Obama requested $\$ 1.9$ billion from Congress in emergency funding to accelerate research into the prevention and treatment of Zika. However, a $\$ 1.1$ billion emergency funding bill failed to pass Congress in June, at which point the administration redirected over $\$ 500$ million originally budgeted for combatting the Ebola virus toward the government's response to Zika. ${ }^{4,5}$

The CDC continues to work to track the spread of Zika, study the links between the virus and birth defects, and educate both health care providers and the public about Zika. ${ }^{6}$ However, it announced on August 29, 2016, that the redirected funding will run out by the end of September. ${ }^{7}$

Despite increased awareness and concern about Zika generally, public knowledge about it has changed little since March, and Americans continue to have a mixed understanding of the virus, including its transmission and health consequences. For example, more than 9 in 10 Americans correctly state that a person can be infected if bitten by a mosquito carrying the virus, and 8 in 10 are aware that Zika is linked to birth defects in babies born to infected mothers. However, fewer know that Zika can be spread through sex ( 58 percent) or are aware that there is a test for the virus ( 48 percent).

The age gap in knowledge has diminished since March and younger adults are now no less likely than older adults to be aware that Zika can be transmitted by sexual intercourse. However, this important population of younger adults in their childbearing years still has key gaps in knowledge, including less understanding than older Americans of recommendations to consider delaying pregnancy in certain circumstances.

The poll shows most people are not sure about the symptoms and treatments for the virus, but Americans say they are taking steps to protect themselves from Zika by removing standing water (53 percent), applying insect repellent (49 percent), and closing windows or putting up screens (47 percent).

About 1 in 10 Americans age 18-40 report personally changing their plans in regards to pregnancy due to Zika, and women and their partners who are pregnant or trying to get pregnant are more likely than other adults to worry about Zika.

The nationally representative survey of 2,379 adults included oversamples of men and women age 1840. It was funded by the March of Dimes and used AmeriSpeak®, the probability-based panel of NORC at the University of Chicago. Interviews were conducted between August 23 and 28, 2016, online and using landlines and cell phones.

Other key findings from the poll include:

- Sixty-one percent of Americans are moderately worried that the country will see a large number of Zika infections in the next year, up from 52 percent in March.
- Three-quarters of Americans support increased federal funding into research to prevent the spread of Zika, and majorities support mosquito control policies.

[^1]- Seventy-seven percent of adults recognize the need to delay pregnancy when a woman lives in a Zika-affected area, but awareness is lower for the age group most at risk, 18-40 year olds (68 percent).
- Most Americans (85 percent) have received information about Zika from television or radio news, but few (39 percent) trust that source.
- Americans are most trusting of Zika information from the CDC, their personal doctor, and their state or local public health departments, but few have received information from these sources.
- Thirteen percent of adults age 18-40 say they have abstained from sex to prevent pregnancy in light of Zika, while 24 percent report they have used condoms or other forms of birth control to prevent sexual transmission.


## MOST AMERICANS HAVE HEARD ABOUT ZIKA AND MAJORITIES ARE WORRIED ABOUT THE VIRUS, BUT THERE ARE DIFFERENCES BASED ON AGE, GENDER, REGION, AND PREGNANCY.

In the wake of news about Zika cases from mosquitoes in Florida, only 5 percent of Americans report they have heard nothing at all about the virus. The number of people who say they have heard at least some about the virus has increased since March (74 percent vs. 60 percent).

Public awareness of Zika has increased since March 2016.


Question: How much have you heard or read about the Zika virus?

With many of the U.S. Zika cases located in New York, Florida, and Texas, nearly 80 percent of those in the Northeast and the South have heard at least some about Zika, compared with 70 percent in the Midwest and 66 percent in the West.

Adults age 18 to 40, who are at the greatest risk for the pregnancy-related impacts of Zika, are less likely to have heard some about the virus ( 65 percent) than those age 41 and older (79 percent).

As awareness has risen over the last five months, so has concern. The number of Americans moderately worried that the United States will see a large number of Zika infections has risen since March ( 61 percent vs. 52 percent).

The public is most concerned that Zika will have serious impacts on those who become infected (73 percent at least moderately worried). Less than half are moderately worried about needing to change travel plans ( 23 percent), or about contracting Zika personally or a family member becoming infected (37 percent).

Those who may be most impacted by Zika's effects are also the most worried. Women who are pregnant or trying to get pregnant and their partners are more likely than other adults to be worried about being infected with Zika, having to change travel plans to avoid areas with Zika, the impacts on those who become infected, and the recent cases in Florida.

Women who are pregnant or trying and their partners are most likely to be at least moderately worried about Zika.


Questions: How worried are you that...? [The U.S. will see a large number of cases of the Zika virus in the next 12 months] [You or someone in your family will be infected by the Zika virus] [You or someone in your family will need to change travel plans to avoid the Zika virus] [Zika will have serious impacts for those who do become infected]. How worried are you about the recent locally transmitted Zika cases in Florida?

With the recent Zika cases in Florida, Americans in the South and Northeast are more likely to be worried about themselves or someone in their family being infected than people in the West (43 percent, 41 percent, and 31 percent, respectively). Concern among Midwesterners falls in the middle at 33 percent.

## THREE-QUARTERS OF AMERICANS SUPPORT INCREASED FEDERAL FUNDING FOR ZIKA RESEARCH, AND MAJORITIES SUPPORT MOSQUITO CONTROL MEASURES AIMED AT PREVENTING THE SPREAD OF THE VIRUS.

While Congress has been unable to agree on an emergency funding bill, the public overwhelmingly supports greater investment by the federal government in Zika-related research. Three-quarters of the public say it is necessary for the federal government to increase funding for research to develop vaccines and treatments to prevent the spread of the Zika virus.

Majorities of Democrats, Republicans, and independents favor increased funding, though Democrats are more supportive than Republicans or independents.

There is bipartisan support for increased federal funding for Zika research.


Question: Do you think increasing federal government funding for research to develop vaccines and treatments is necessary or unnecessary to prevent the spread of the Zika virus?

Few Americans approve of how the federal government has responded to Zika thus far; only 25 percent approve of Obama's actions, and just 11 percent approve of Congress's response. A third of Americans do not approve of Congress's response, and 20 percent say the same about Obama. A majority of Americans don't have an opinion on either the President's or Congress's response. Lack of approval of Congress cuts across party lines, with no more than 16 percent of Democrats, Republicans, or independents expressing approval. Democrats are more approving of Obama's response than Republicans and independents ( 43 percent vs. 7 percent and 11 percent, respectively).

Likewise, few Americans are very confident in the federal government's ability to respond to an outbreak of Zika in the United States ( 24 percent) or worldwide ( 11 percent), and there is a similar lack of confidence in the ability of states to respond to an outbreak in their area ( 20 percent). Confidence is low across party lines in the government's ability to respond either in the United States or worldwide, though Democrats express more confidence than either Republicans or independents.

Few are confident in the government's ability to respond effectively to a Zika outbreak.


Questions: How confident are you in the federal government's ability to respond effectively to an outbreak of the Zika virus...? [Worldwide] [In the United States]. How confident are you in your state's ability to respond effectively to an outbreak of the Zika virus in your area?

At the same time, there is strong public support for measures the government could take to control the spread of Zika, and majorities favor applying pesticides and larvicides to public spaces and introducing genetically modified mosquitos to areas affected by the virus. Support for these measures has changed little since March, but older adults are more supportive of these measures than those age 18-40.

Older adults are more supportive than younger adults of several measures the government could take to control the spread of Zika.


Question: To control the spread of the Zika virus, do you support, oppose, or neither support nor oppose the following measures? [Rules and regulations that mandate homeowners and businesses to remove standing water and other mosquito breeding sites from their property] [Introducing genetically modified male mosquitos in areas affected by Zika virus. The mosquitos are modified to produce offspring that cannot survive long enough to breed.] [The application of pesticides and larvicides in public spaces] [Temporarily allowing organic farmers to use pesticides and larvicides to control mosquitos without losing their organic certification].

## MOST AMERICANS KNOW THAT MOSQUITOS CAN SPREAD ZIKA AND THAT THE DISEASE IS LINKED TO BIRTH DEFECTS, BUT MANY DO NOT KNOW ABOUT SEXUAL TRANSMISSION, THE SYMPTOMS, TREATMENTS, OR TESTS FOR ZIKA.

Despite widespread news coverage and public health campaigns, Americans have mixed knowledge about the ways Zika is spread. Nearly all ( 94 percent) of those who are aware of Zika know that a person can become infected through the bite of a mosquito carrying the virus, a majority ( 58 percent) are aware that Zika can be spread by sexual intercourse, and 33 percent know it can be transmitted by sexual activity other than intercourse.

Since March, the age gap in knowledge has diminished, and younger adults are now no less likely than older adults to be aware that Zika can be transmitted by sexual intercourse.

Many Americans correctly report Zika cannot be transmitted by coughing or sneezing (44 percent) or through casual contact like shaking hands (65 percent). Nearly half of Americans report Zika cannot be spread by caring for a person who is infected ( 46 percent), but the CDC has expressed uncertainty about the possible spread of Zika through caregiving after a recent case in Utah where the virus was transmitted from an elderly patient to a caregiver. ${ }^{8}$

Amid the public release earlier this month of the first brain scans of babies born to Zika-infected mothers, 81 percent of adults report knowing that the virus is linked to birth defects, a slight increase from 75 percent in March.

Although most of the public knows Zika is linked to birth defects, many do not know about other effects of the virus. About half of Americans are aware Zika causes symptoms similar to the common cold, but only about 3 in 10 recognize that Zika has been linked to stillbirth or miscarriage, a rash, or that someone can have Zika with no symptoms at all. In general, men are less likely than women to know about the effects of Zika.

Few Americans know symptoms or effects linked to Zika.


Question: To the best of your knowledge, does Zika virus cause the following, does it not cause the following, or have you not heard enough to say? [Stillbirth or miscarriage] [Guillain-Barré syndrome, a disease causing muscle weakness and sometimes paralysis] [Symptoms similar to the common cold] [A rash] [Infection with no symptoms at all].

[^2]When it comes to knowledge of Zika treatments and preventive measures, many Americans admit that they are unsure about the virus. Less than half of Americans know that there is currently no effective vaccine ( 49 percent) or medicine to treat Zika ( 33 percent). Only 22 percent correctly report insect repellent with DEET is safe for pregnant women, and adults age 18-40 are less likely than older adults to know DEET is safe for pregnant women (19 percent vs. 25 percent). However, among those who are aware of Zika, 48 percent know there is an effective test to diagnose Zika, an increase from 40 percent in March.

While few adults know about Zika treatments, about 3 in 4 adults recognize the need to delay pregnancy under each of the following situations: the woman lives in an area affected by Zika, the woman had sex without a condom with an infected man, or either the woman or her partner traveled to areas affected by Zika. Younger adults age 18 to 40 are less likely than those 41 and over to be aware of when women should postpone becoming pregnant.

Younger adults are less likely to recognize women should delay pregnancy when exposed to Zika.


Question: To the best of your knowledge, should women delay pregnancy in each of the following situations or isn't it necessary? [The woman lives in an area affected by Zika] [The woman recently had sex without a condom with a man infected with Zika] [The woman recently traveled to areas affected by Zika] [The woman's partner recently traveled to areas affected by Zika]

## TELEVISION AND RADIO NEWS AND SOCIAL NETWORKS ARE THE MOST COMMON SOURCES OF INFORMATION ABOUT ZIKA, BUT FEW AMERICANS TRUST THE ACCURACY OF INFORMATION ABOUT ZIKA FROM THESE SOURCES.

The sources the public is most likely to receive information from about Zika are not sources many people trust.

Of Americans who have heard or read about the Zika virus, the most common sources of information on the topic were television or radio news ( 85 percent) and social media or blogs ( 26 percent).

However, trust in information from news and social media is low, and the public views less-used sources such as the CDC, their personal doctor, and their state and local public health departments as the most trustworthy.

Many Americans trust information on Zika from sources such as the March of Dimes, the CDC, their personal doctor, and their state and local health departments, but few have received information from them.


Questions: From which sources have you gotten information about the Zika virus? (Please select all that apply). In general, how much do you trust each of the following to provide accurate information about the Zika virus? [Your personal doctor or your child's doctor] [The Centers for Disease Control and Prevention] [Your state or local public health department] [Friends or family members who are employed in the field of health care] [Friends or family members who are not employed in the field of health care] [Television or radio news] [Social networking sites such as Twitter, Facebook, blogs, or discussion boards] [A religious leader from your faith] [Websites from other health organizations, like WebMD] [The March of Dimes or its \#ZAPzika campaign]

Women who are pregnant or trying to become pregnant or their partners are more likely than others to say they received information from the CDC ( 32 percent vs. 15 percent), a friend or family member who works in health care ( 14 percent vs. 7 percent), their state or local health department ( 22 percent vs. 11 percent), or their personal doctor (18 percent vs. 3 percent). However, women who are pregnant or trying to become pregnant or their partners are less likely than others to say they trust information from the CDC ( 64 percent vs. 75 percent) or their state and local health department ( 51 percent vs. 64 percent).

Those age 18 to 40 are more likely than older adults to say they received information from social media ( 40 percent vs. 18 percent), their doctor ( 7 percent vs. 1 percent), friends or family who work in health care ( 11 percent vs. 6 percent), or other friends or family ( 16 percent vs. 7 percent). They are less likely to have received it from television or radio news ( 78 percent vs. 90 percent). Those age 18 to 40 are more trusting than those age 41 and older of information from friends and family not employed in health care ( 10 percent vs. 7 percent), but less trusting of information from television or radio news (27 percent vs. 46 percent).

## IN RESPONSE TO ZIKA, SOME AMERICANS HAVE CHANGED THEIR PREGNANCY PLANS OR ABSTAINED FROM SEX, AND NEARLY HALF HAVE TAKEN PREVENTIVE MEASURES SUCH AS APPLIED INSECT REPELLENT OR REMOVED STANDING WATER.

Since Zika can be transmitted from an infected person to his or her sex partners, the CDC recommends the use of condoms and other barrier methods to protect against infection during sex and abstaining from sex or delaying pregnancy if the woman or her recent sex partners have been infected with Zika. ${ }^{9}$

Among Americans in their childbearing years (age 18 through 40), some say they have taken steps to avoid pregnancy in response to reports about Zika. Thirteen percent of adults in this age group, including 16 percent of women and 10 percent of men, say they have abstained from sex to prevent pregnancy. Twenty-four percent say they have used condoms or other forms of birth control, with women being more likely than men to say so ( 28 percent vs. 20 percent).

Overall, 7 percent of adults age 18-40 say they have personally changed their plans to become pregnant because of Zika, and slightly more (12 percent) know someone else who has changed their plans.

The CDC advises that the best way to avoid Zika infection is to prevent mosquito bites, and it recommends using insect repellent registered by the Environmental Protection Agency (EPA), wearing long-sleeved shirts and long pants, staying in places with air conditioning or window and door screens, and removing standing water in areas around homes. ${ }^{10}$

Many Americans say they are taking these recommended actions in their personal lives in response to reports about the virus, and the number who report they have done so has increased since March. More now say they have removed standing water from their property, applied insect repellent when spending time outdoors, closed windows or put up screens to keep mosquitos out of their homes, or worn long-sleeved shirts or long pants to avoid mosquito bites. Of those who say they applied insect repellent, 60 percent say it was registered by the EPA. Thirty-five percent were not sure if it was registered or not.

[^3]More Americans now say they have taken action in response to reports of Zika than in March.


Question: In response to reports of the Zika virus, have you or has someone in your household done any of the following or haven't you done this? [Applied insect repellent when spending time outdoors] [Changed past or future travel plans to areas affected by the Zika virus] [Removed sources of standing water from your yard or household that provide mosquitobreeding sites, such as tires, buckets, toys, or trash containers] [Closed windows and used air conditioning or put screens in windows to keep mosquitos outside] [Avoided people you think may have recently visited areas affected by the Zika virus] [Worn long-sleeved shirts and long pants to avoid being bitten by mosquitos] [Abstained from sex or used condoms or dental dams to prevent sexual transmission]

Women who are pregnant or trying to become pregnant and their partners are more likely than other adults to say they have worn long-sleeved shirts or long pants ( 45 percent vs. 29 percent) or changed travel plans ( 28 percent vs. 14 percent) in response to Zika reports. Women age 18 to 40 are also particularly likely to have taken many of these actions.

## ABOUT THE STUDY

## Survey Methodology

This survey was conducted by NORC at the University of Chicago with funding from the March of Dimes. Data were collected using AmeriSpeak®, a probability-based panel designed to be representative of the U.S. household population. During the initial recruitment phase of the panel, randomly selected U.S. households were sampled with a known, non-zero probability of selection from the NORC National Sample Frame and then contacted by U.S. mail, email, telephone, and field interviewers (face-to-face).

Interviews for this survey were conducted between August 23 and 28, 2016, with adults age 18 and over representing the 50 states and the District of Columbia. Panel members were randomly drawn from AmeriSpeak ${ }^{\circledR}$. There were 2,379 completed surveys-2,106 via the web and 273 via telephone. The survey included oversamples of men and women age 18-40 for a total of 646 interviews with men age $18-40$ and 1,108 interviews with women age 18-40. The final stage completion rate is 32.2 percent, the weighted household panel response rate is 21.3 percent, and the weighted household panel retention
rate is 93.8 percent, for a cumulative response rate of 6.4 percent. The overall margin of sampling error is $+/-3.2$ percentage points at the 95 percent confidence level, including the design effect. The margin of sampling error may be higher for subgroups.

All respondents were offered a cash equivalent incentive to complete the survey with male respondents age 18-40 years offered an additional incentive.

Once the sample has been selected and fielded, and all the study data have been collected and made final, a poststratification process is used to adjust for any survey nonresponse as well as any noncoverage or under- and oversampling resulting from the study-specific sample design. Poststratification variables included age, gender, census division, race/ethnicity, and household phone status. The weighted data, which reflect the U.S. population of adults age 18 and over, were used for all analyses.

All differences reported between subgroups of the U.S. population are at the 95 percent level of statistical significance, meaning that there is only a 5 percent (or lower) probability that the observed differences could be attributed to chance variation in sampling.

## About the March of Dimes

The March of Dimes is the leading nonprofit organization for pregnancy and baby health. For more than 75 years, moms and babies have benefited from March of Dimes research, education, vaccines, and breakthroughs. For the latest resources and health information, visit our websites marchofdimes.org and nacersano.org. If you have been affected by prematurity or birth defects, visit our shareyourstory.org community to find comfort and support. For detailed national, state, and local perinatal statistics, visit persistats.org. You can also find us on Facebook or follow us on Twitter.

## About NORC at the University of Chicago

NORC at the University of Chicago is an independent research institution that delivers reliable data and rigorous analysis to guide critical programmatic, business, and policy decisions. Since 1941, NORC has conducted groundbreaking studies, created and applied innovative methods and tools, and advanced principles of scientific integrity and collaboration. Today, government, corporate, and nonprofit clients around the world partner with NORC to transform increasingly complex information into useful knowledge.

NORC conducts research in five main areas: Economics, Markets, and the Workforce; Education, Training, and Learning; Global Development; Health and Well-Being; and Society, Media, and Public Affairs.

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[^0]:    ${ }^{1}$ http://www.cdc.gov/zika/geo/united-states.html
    ${ }^{2}$ http://www.floridahealth.gov/diseases-and-conditions/ zika-virus/index.html?utm source=flhealthIndex
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[^1]:    ${ }^{4}$ http://www.bigstory.ap.org/article/cdb2bf80928b48d9a72e742clec8f1af/congressional-dysfunction-likely-stall-zika-funding-bill
    ${ }^{5}$ http://www.bigstory.ap.org/article/8f5a10b960bb458592b5fe2dac881ddc/zika-fears-escalate-lawmakers-point-fingers-afar
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[^2]:    ${ }^{8}$ http://www.cdc.gov/media/releases/2016/s0718-zika-utah-investigation.html

[^3]:    ${ }^{9}$ http://www.cdc.gov/zika/prevention/protect-yourself-during-sex.html
    ${ }^{10}$ https://www.cdc.gov/zika/about/needtoknow.html

