Maternal Child Health Capacity for Zika Response

February 2018

NACCHO
National Association of County & City Health Officials

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Background and Methods

Mosquito-borne diseases are a constant public health concern in the United States. Zika virus (ZIKV) is a mosquito-borne virus spread to humans mainly through the bite of infected *Aedes aegypti* mosquitoes. The related *Aedes albopictus* mosquito can also support ZIKV transmission in laboratory studies.[1] Both mosquitoes inhabit a large portion of the U.S. and contribute to increased risk of exposure to ZIKV, particularly for high-risk and vulnerable populations.

ZIKV infection in pregnancy can cause microcephaly and other severe brain defects, making pregnant women and infants a priority population to ensure adequate programs and serves are available to address their needs.[1]

Local health departments (LHD) are on the front lines of public health response to ZIKV infections in their jurisdictions. Limited data exists on LHD capacity to respond to Zika infections and connect pregnant women and infants with necessary services. Lack of information limits federal, state, and local efforts to support community-level response and address capacity gaps.

Methods

The National Association of County and City Health Officials (NACCHO), with support from the Centers for Disease Control and Prevention (CDC), National Center on Birth Defects and Developmental Disabilities (NCBDDD), conducted the Local Health Department Maternal and Child Health (MCH) Zika Capacity Assessment to assess the organizational capacity of LHDs and their MCH programs to monitor, track, and support mothers and their infants potentially affected by ZIKV.

NACCHO surveyed LHDs in 10 high priority states: Alabama, Arizona, California, Florida, Georgia, Hawaii, Louisiana, Mississippi, New York, and Texas. The states were identified as high-priority based on the prevalence of *Aedes aegypti* and *Aedes albopictus* mosquitos and risk for travel-related ZIKV cases.

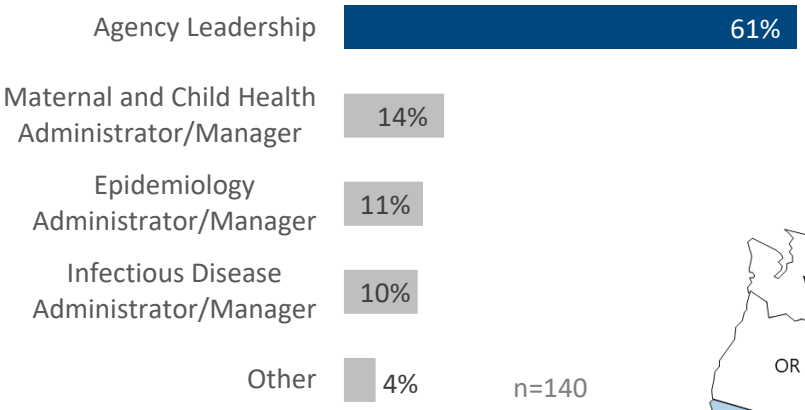
The LHD MCH Zika Capacity Assessment was sent to the 246 local health departments identified in 10 high priority jurisdictions in the U.S. Varying strategies to assess local MCH capacity were used based on the location of LHDs within state governance structures. In three states – Alabama, Louisiana and Mississippi – assessment response was coordinated at the district or regional level rather than at each LHD. Assessment response in Hawaii and Florida were coordinated at the state level due to these LHDs being a part of state-based governance systems.

The assessment included 13 questions and was distributed online via Qualtrics Survey Software™. Each LHD self-reported current and ongoing activities. The assessment was open July 18, 2017 through September 16, 2017.

A total of 140 LHDs completed the assessment, achieving a 58% response rate.

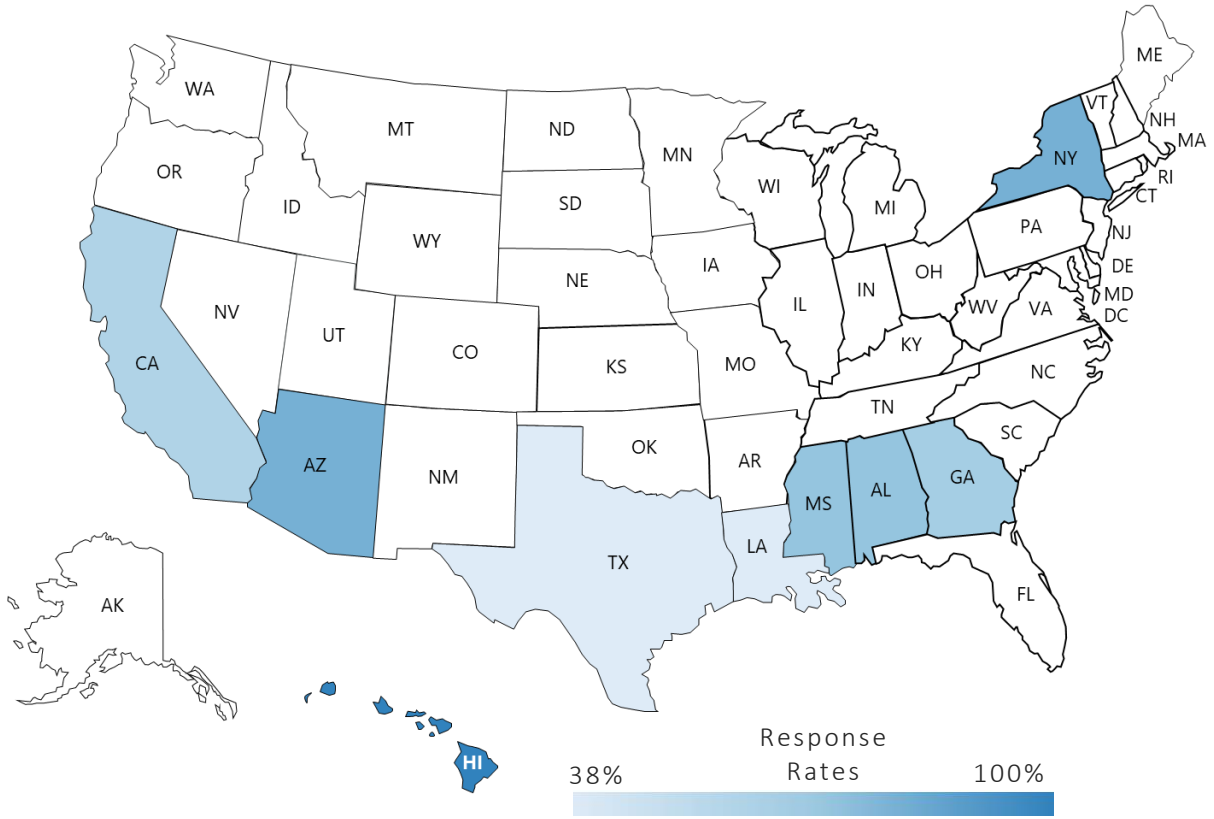
LHD MCH Zika Capacity Assessment Response Characteristics

Role of LHD respondent



Most survey respondents were agency leadership, such as the local health officer or health department director.

Response to the MCH Zika Capacity Assessment was received from 9 of the 10 high-priority states identified. On average, 65% of LHDs, regional/district offices, and state offices responded to the assessment in each state.



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Internal and External Partnerships & Referrals

Review of LHD partnerships and referral activities between MCH programs, internal key programmatic areas and external community health care providers.

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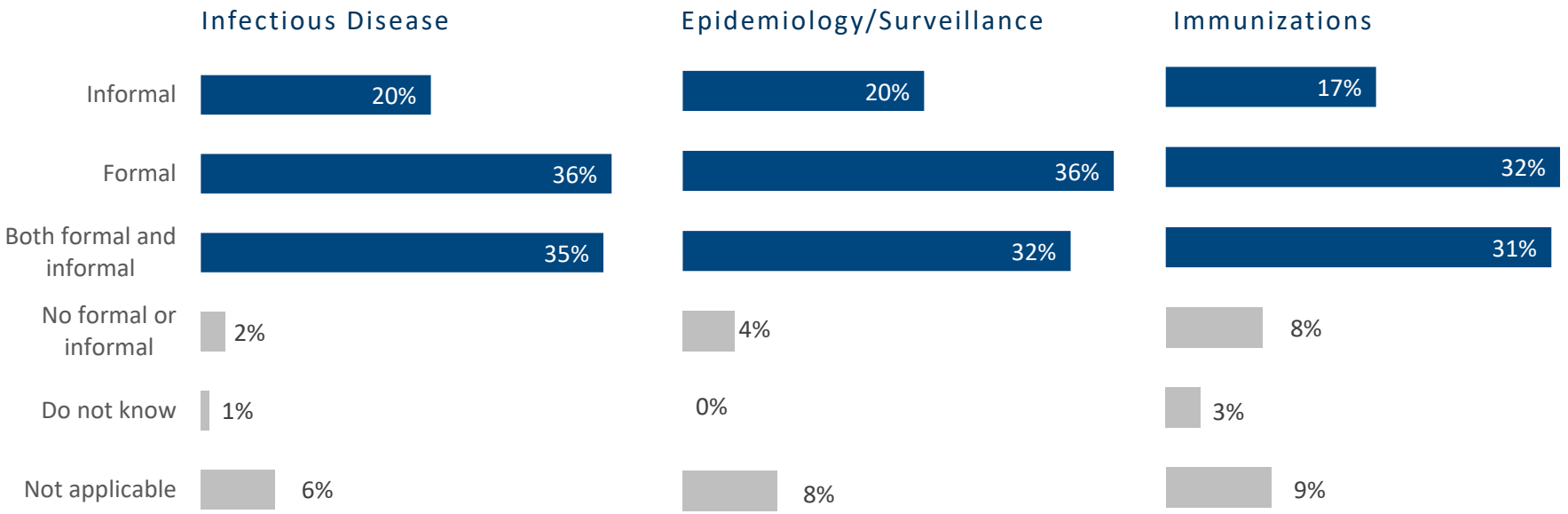
LHD internal referral capacity between MCH and key programmatic areas.

Respondents were asked about internal partnerships and referral activities between the MCH program and other key programmatic areas, which included infectious disease, epidemiology/surveillance, and immunization programs.

The majority of respondents reported that the LHD has a formal and/or informal process for referral/notification between their maternal and child health program and infectious disease (91%), epidemiology/surveillance (88%), and immunizations (80%) programmatic areas within the health department.



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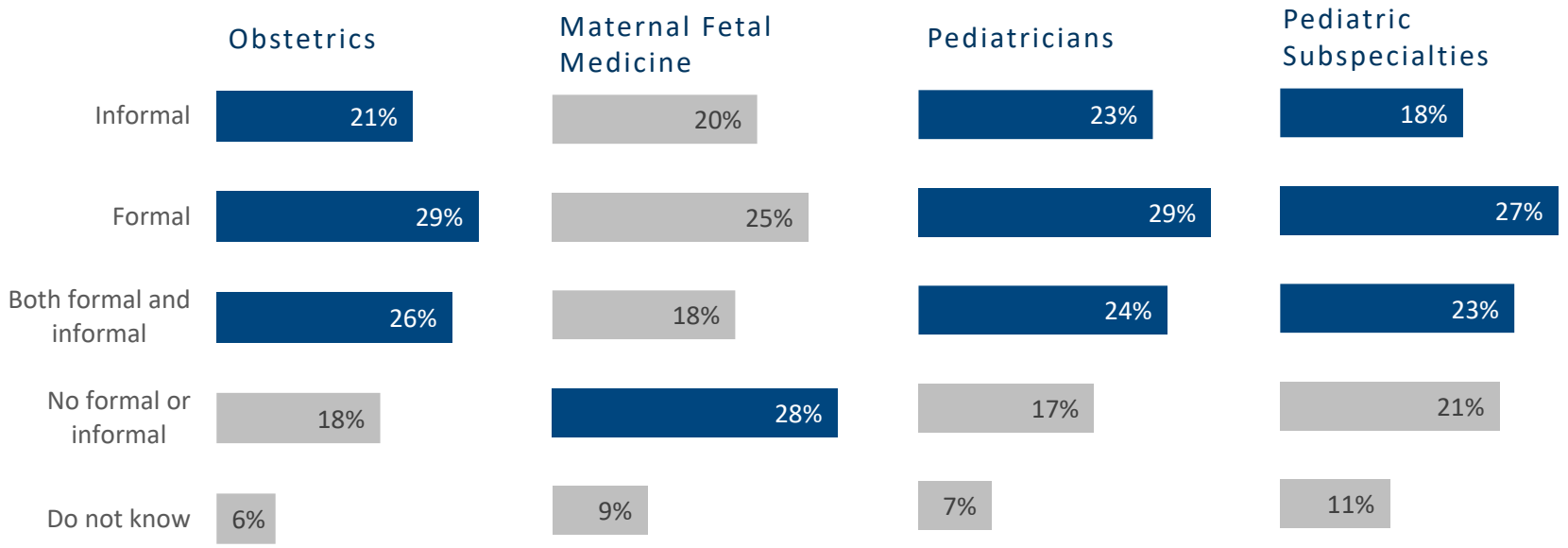
LHD external partnerships and referral activities between MCH and key healthcare providers.

Respondents reported on current capacity to partner with or refer clients to services external to the health department. Seventy-six percent of LHD MCH programs had a formal, informal, or both formal and informal referral process with Obstetric providers in the community.

Nearly one-third (28%) of LHD MCH programs had no formal or informal referral system or did not know (9%) if there was a referral system to Maternal Fetal Medicine providers in the community. Additionally, 11% of respondents did not know if they had a referral system for pediatric subspecialties.

Over two-thirds of respondents stated their MCH program had a formal, informal, or both a formal and informal referral system to pediatricians and pediatric subspecialties in their community.



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Zika Response and Engagement Capacity

Review of LHD response and engagement capacity to support community-level Zika response efforts.

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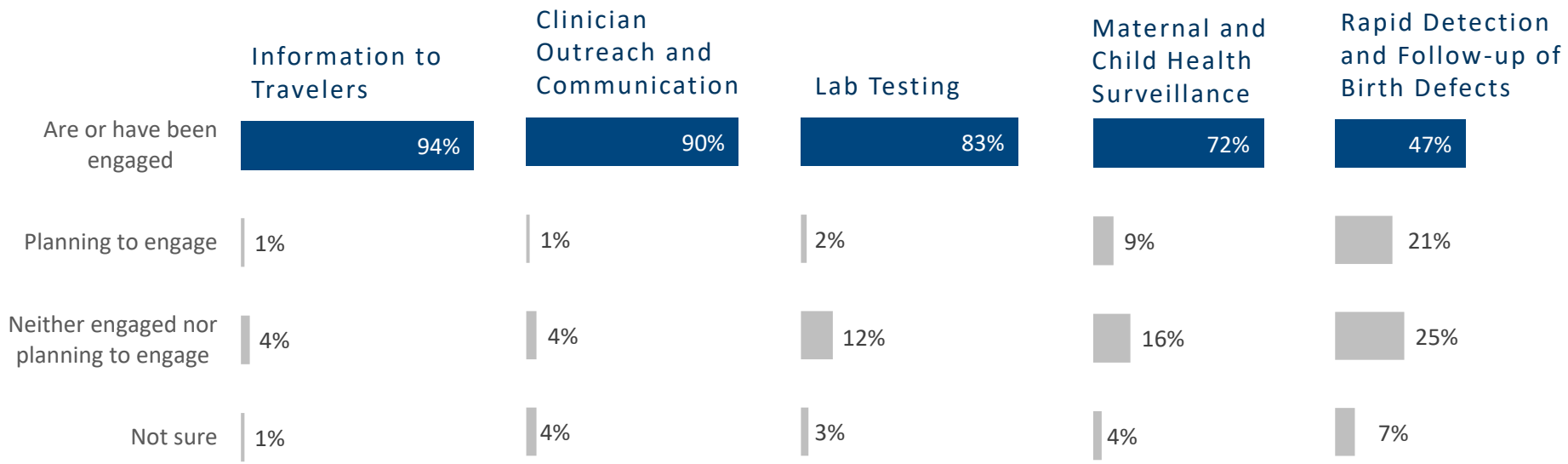
LHD engagement in local Zika prevention and response activities.

Respondents were asked to indicate their LHD's level of engagement in specific Zika prevention and response currently or during the most recent mosquito season. The key prevention and response activities were: providing information to travelers, clinician outreach and communication, lab testing, MCH surveillance, and rapid detection and follow-up of birth defects.

Ninety-four percent of respondents are providing information to travelers about Zika risk and protective measures, and 90% of respondents are providing clinical outreach and communication on Zika clinical care guidance.

Seventy-two percent of LHDs are or have been engaged in MCH surveillance and response activities, while only 47% of respondents are or have been engaged in rapid detection and follow-up of birth defects associated with ZIKV.



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Zika Surveillance & Reporting

Review of LHD responsibilities and activities to collect and report data on positive Zika lab tests and birth defects within their jurisdiction.

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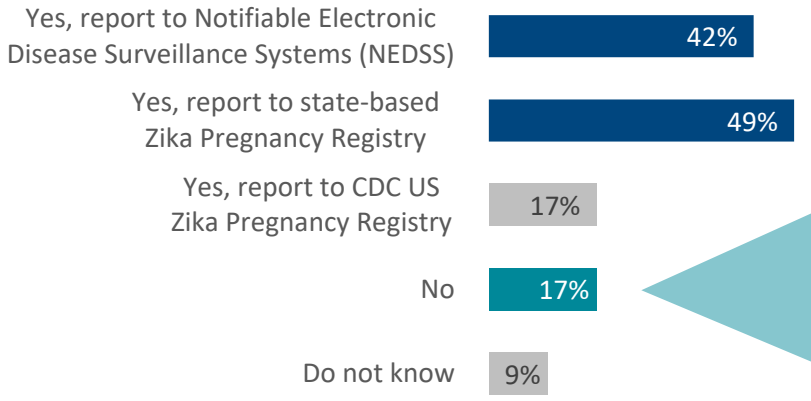
LHD responsibility for collecting and reporting positive Zika lab results.

Respondents were asked if they were primarily responsible for collecting and reporting positive Zika lab results for their jurisdiction. Almost half indicated they reported positive labs through the Notifiable Electronic Disease Surveillance System (42%) and/or a state-based Zika Pregnancy Registry (49%).

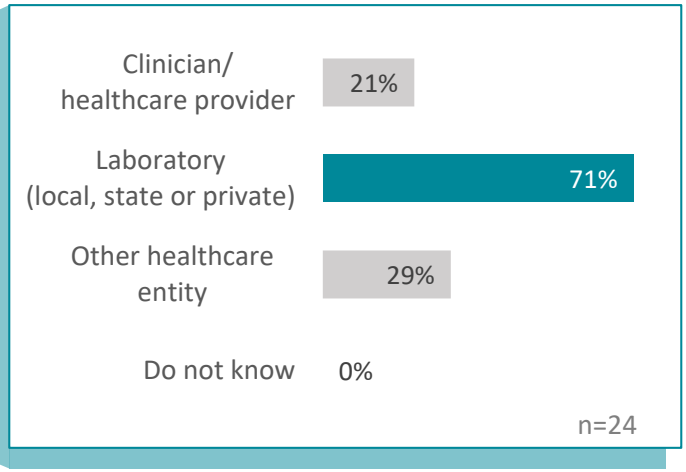
Seventeen percent of respondents indicated the LHD is not the primary reporter of positive Zika lab results. In jurisdictions where the LHD is not the primary reporter, state, local or private labs were responsible for reporting positive Zika lab results (71%).

Overall, 9% of the respondents were unaware if they or another entity in the jurisdiction is the primary agency responsible for reporting positive Zika lab results for their jurisdiction.

Respondents primarily responsible for collecting and reporting positive Zika lab results for pregnant women and infants in their jurisdiction.



Primary responsibility for collecting and reporting positive Zika lab results, where the LHD is not responsible.

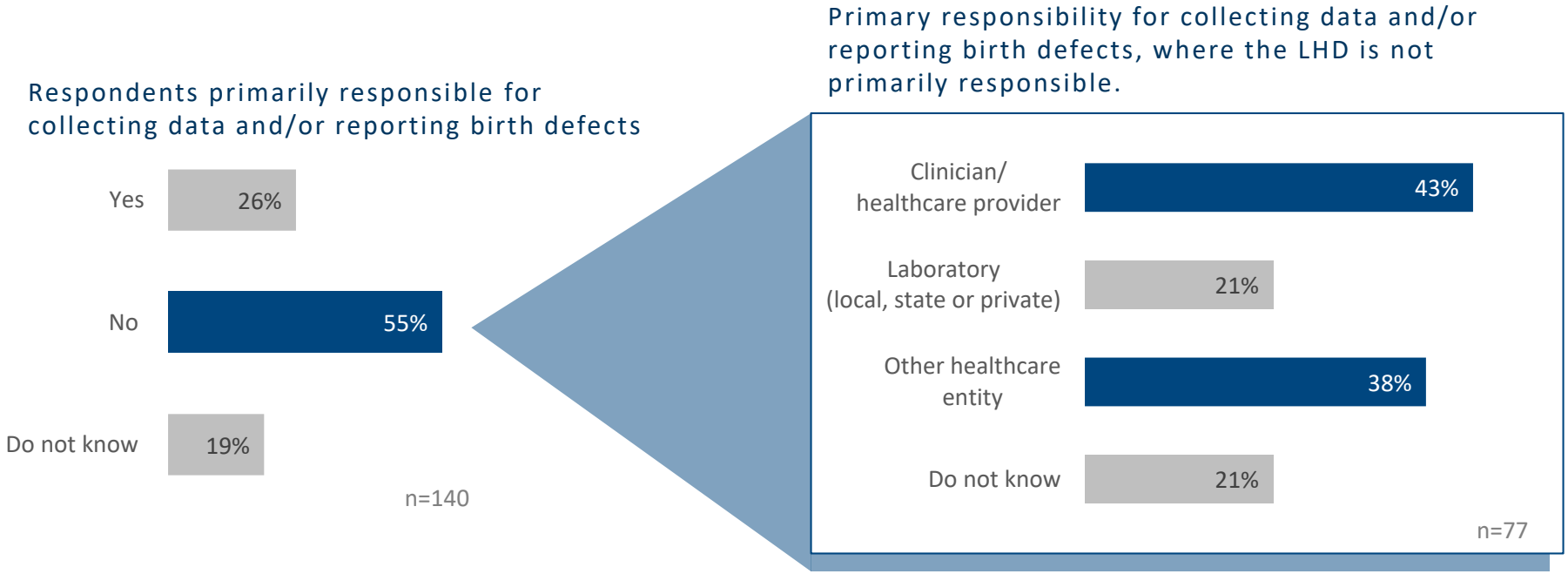


LHD responsibility for collecting and/or reporting data on birth defects.

The majority of respondents (55%) are not primarily responsible for collecting data and/or reporting on birth defects in their jurisdiction. Nineteen percent of respondents did not know if their agency or another entity in the jurisdiction had primary responsibility for reporting birth defects.

For respondents that are not primarily responsible for reporting on birth defects, the responsible entity is most commonly a clinician or healthcare provider (43%) or other healthcare entity (38%).

Twenty-one percent of LHDs that were not responsible for reporting birth defects did not know which entity in the jurisdiction was responsible for collecting data and/or reporting birth defects.



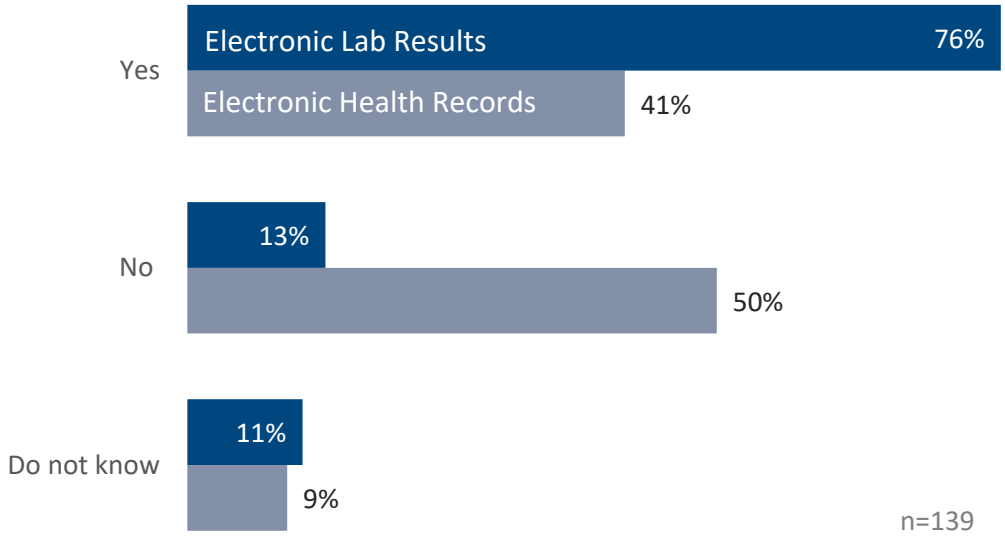
LHD access to electronic lab results and electronic health records.

Respondents were asked if the LHD had access to electronic lab results or electronic health records of pregnant women and/or infants with positive Zika lab test results.

Three-fourths (76%) of LHDs reported access to electronic lab results, whereas only 41% of LHDs have access to electronic health records.

Eleven percent and 9% of respondents did not know if they had access to electronic lab records or electronic health records, respectively.

LHD access to electronic lab results and electronic health records related to pregnant women and/or infants with positive Zika lab test results.



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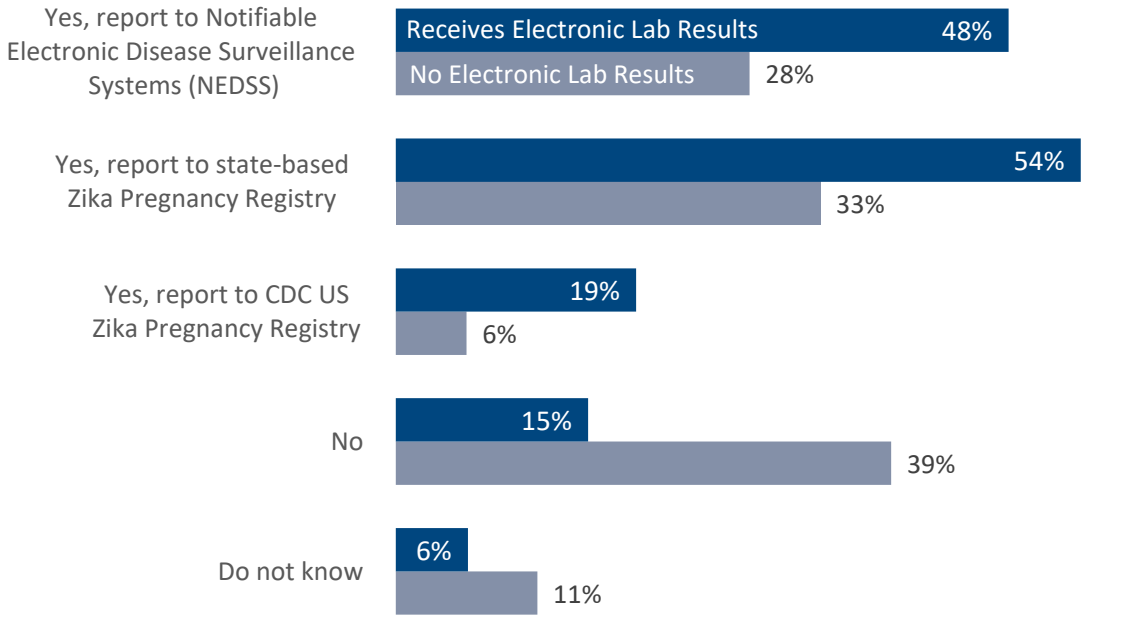
LHDs receiving electronic lab results and positive Zika lab test reporting.

Respondents who reported receiving electronic lab results are more likely to report positive Zika lab test results to the Notifiable Electronic Disease Surveillance System (48%), state-based Zika Pregnancy Registry (54%), and CDC U.S. Zika Pregnancy Registry (19%). Thirty-nine percent of respondents who do not have access to electronic lab results do not report to any of the registries.

Respondent access to electronic lab results and their reporting status of positive Zika lab test results.



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Community Engagement and Outreach

Review of LHD activities to educate and inform their jurisdiction about Zika exposure risk and prevention.

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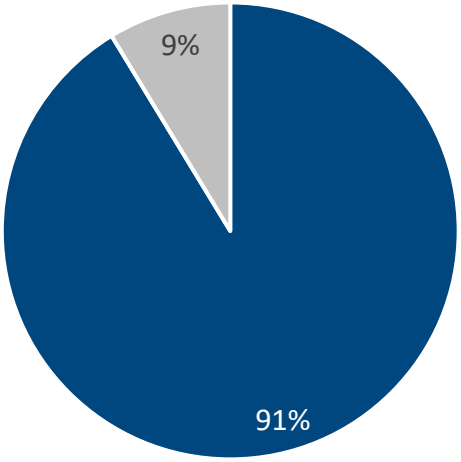
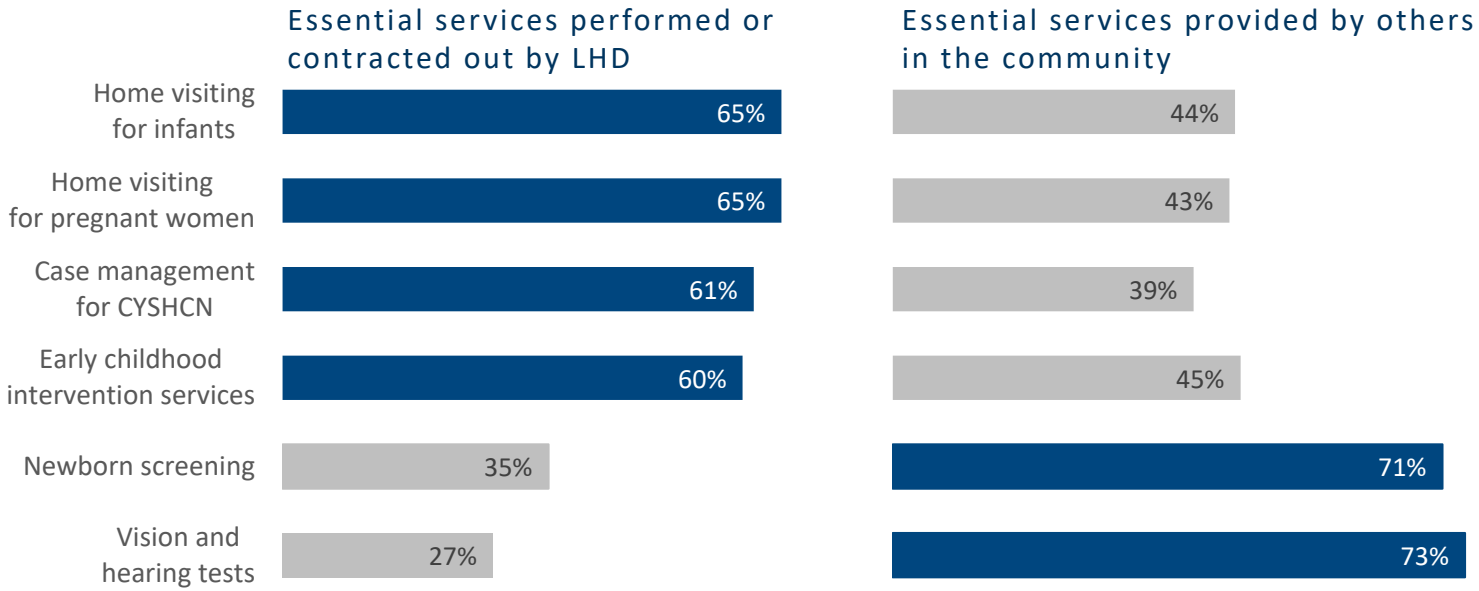
Essential maternal and child health services provided for pregnant women and/or infants.



Over 90% of respondents have a formal or informal referral system to community-level programs and services in their area. Overall, 6% of respondents said they did not have a formal or informal referral system, and only 2% of respondents were not aware if their LHD had a referral system to programs and services for pregnant women and/or children.

Specifically, 60% or more LHDs reported directly providing or contracting-out home visitation services for infants and pregnant women, case management services for children and youth with special health care needs, and early childhood intervention services. Over 70% of newborn screening and vision and hearing services are provided by others in the community. These services were not available at all in 2% of communities, and 5% of respondents were not aware if the services were available in their community.



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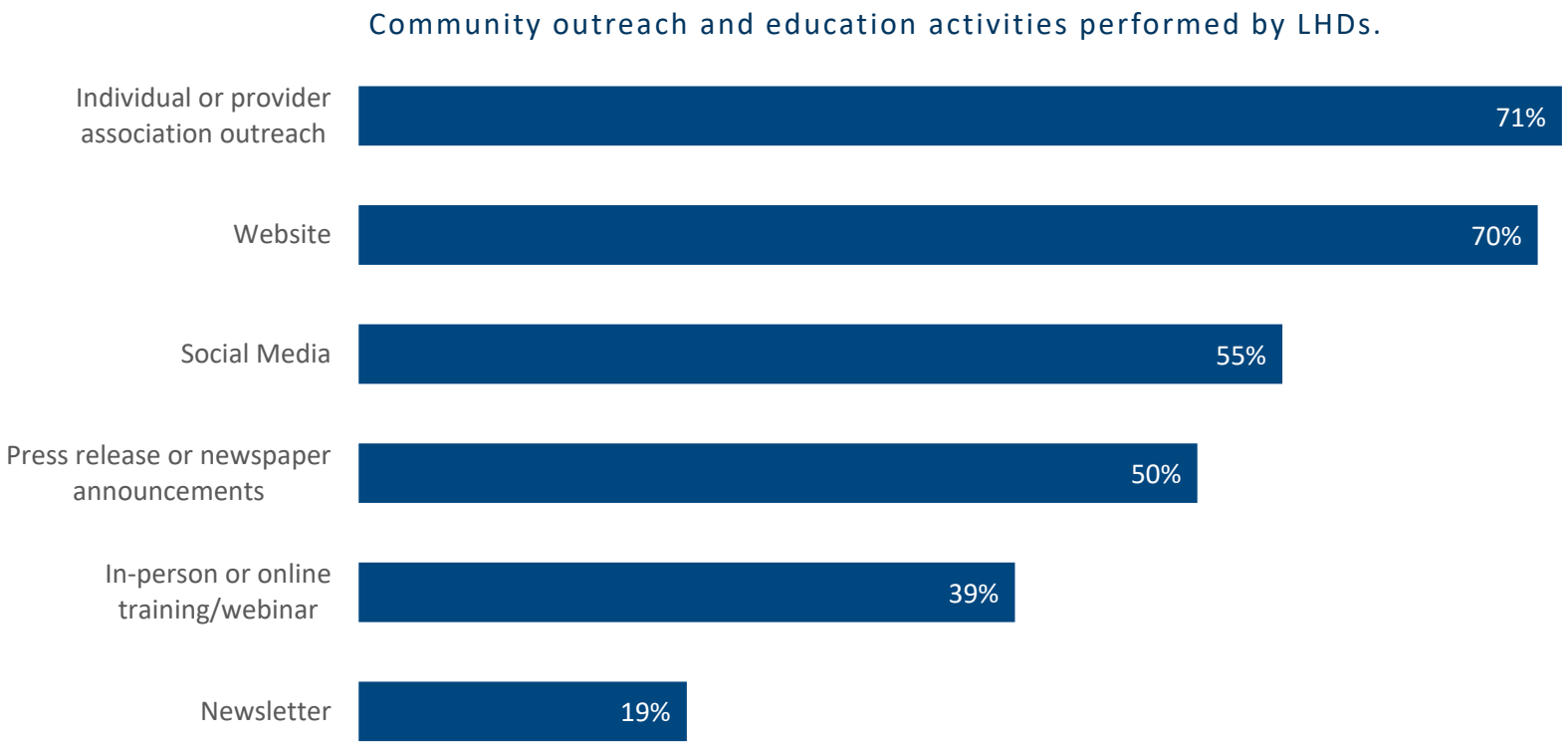
Zika community outreach and education activities performed by LHDs.

Respondents were asked to identify all community outreach activities they are engaged in to inform the public and health care providers of ZIKV risk and prevention.

Most LHDs reported individual or provider association outreach (71%) and sharing information on their website (70%) as the most common outreach and education activities related to Zika risk and prevention.

Over half of the LHDs are performing community outreach and education using social media (55%).

Only 7% of LHDs are not engaging in any community outreach and education activities.



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Summary State-Level Zika Capacity Review

Review of MCH Zika response capacity in two high-risk states, New York and Texas.

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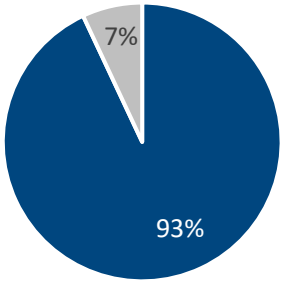
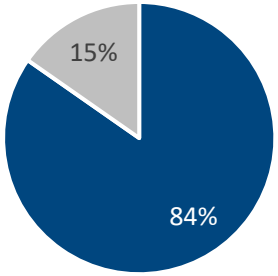
New York state LHD internal and external referral and Zika response activities



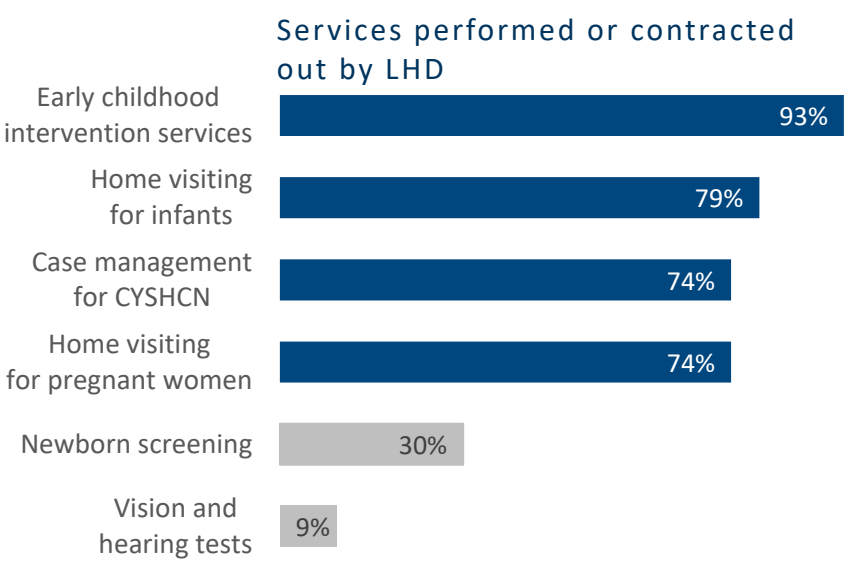
Ninety-three percent of respondents in New York state had formal, informal, or both formal and informal notification and/or referral systems with key programmatic areas within the LHD.

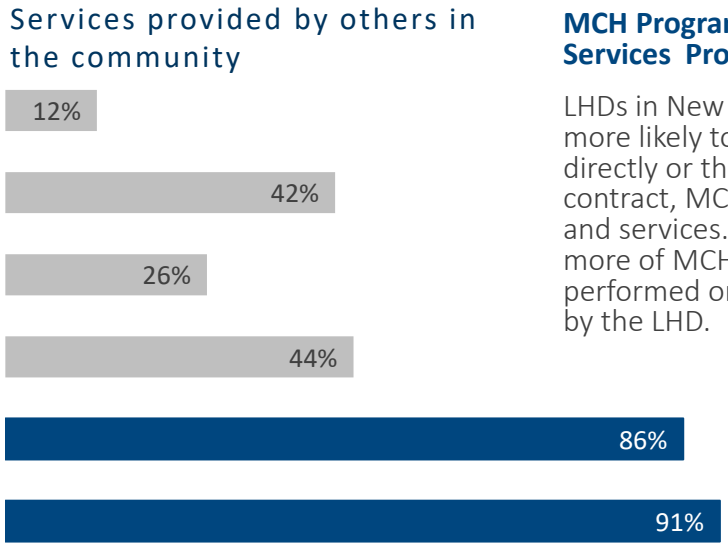


Eighty-four percent of respondents in New York state had formal, informal, or both formal and informal notification/ referral systems with key providers in the community.

Zika Response Activities

LHDs in New York state have been actively engaged in informing travelers (94%), providing clinical outreach and communication (93%), lab testing (86%) and MCH surveillance activities (74%).





MCH Programs and Services Provided

LHDs in New York are more likely to provide, directly or through contract, MCH programs and services. Two-thirds or more of MCH services are performed or contracted by the LHD.

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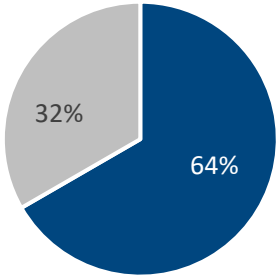
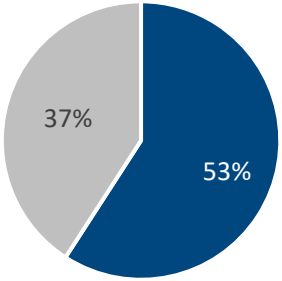
Texas state LHD internal and external referral and Zika response activities



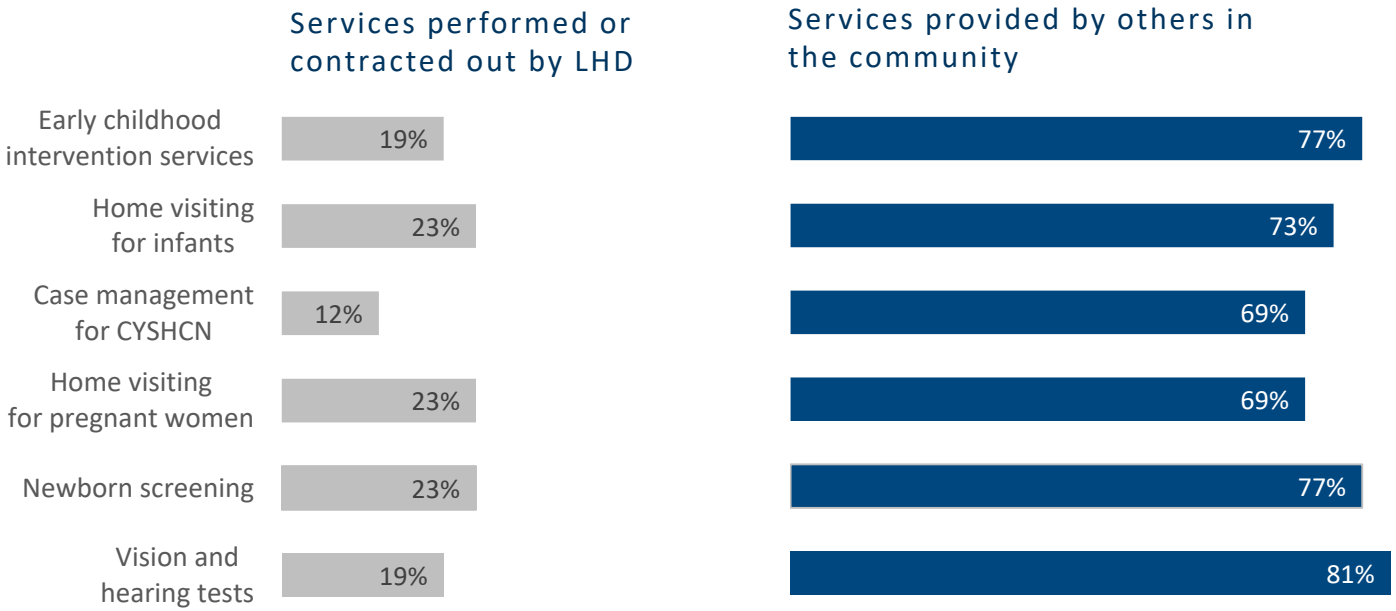
Sixty-four percent of LHDs in Texas had formal, informal, or both formal/ informal notification/ referral systems with key programmatic areas within the LHD.



Fifty-three percent of LHDs in Texas had formal, informal, or both formal/informal notification/referral systems with key providers in the community.

Zika Response Activities

LHDs in Texas have been actively engaged in informing travelers (88%), providing clinical outreach and communication (81%), lab testing (65%) and MCH surveillance activities (65%).



MCH Programs and Services Provided

LHDs in Texas are less likely to provide, directly or through contract, MCH programs and services. Two-thirds or more MCH services are provided by entities external to LHDs within the state.

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Conclusions, Limitations and Recommendations

MCH Zika Assessment Conclusions and Limitations

This report is the first report of an assessment of the organizational capacity of LHDs and their MCH programs, in high-risk jurisdictions, to monitor, track and support pregnant women and/or infants potentially affected by the Zika virus.

Key Findings

Over 80% of LHDs have formal and/or informal communication and referral mechanisms between their MCH programs and key programmatic areas within their agency. Referrals between key programmatic areas can support identification and follow-up efforts of pregnant women and/or infants potentially exposed to the Zika virus.

Seventy-eight percent (78%) of LHDs have access to electronic lab results. LHDs receiving electronic lab results are more likely to report to local, state, and federal disease surveillance systems.

Disease surveillance and monitoring is an essential public health service of LHDs. Access to lab results allows LHDs to plan adequate response to the burden of disease within their communities.

LHDs are actively engaged in community-level Zika response activities. Over two-thirds of LHDs are currently or have participated in response activities including providing information to travelers about Zika risk and protective measures, providing clinical outreach and communication, supporting lab testing, and conducting MCH surveillance.

LHDs are less likely to provide screening and testing services to identify potential birth defects in infants. Seventy-one percent of newborn screening and 73% of vision and hearing testing were provided by other entities within LHD jurisdictions.

Limitations

Governance of LHDs in each state varies. Due to state preferences, the MCH assessment was not disseminated to each LHD in every state. Therefore, the results of the survey may not be broadly attributable to individual LHD capacity.

Resources, or lack thereof, to support MCH and Zika response activities was not addressed in this assessment. Therefore Zika response activity engagement by the LHD is not understood in relation to the available resources in the community.

Due to the 58% response rate, the presented responses may not reflect all LHD MCH Zika response capacity.

Recommendations

Increase LHD training and support for MCH reporting and surveillance.

- Provide support to LHD staff on Zika-related disease surveillance and monitoring
- Improve LHD access to electronic lab results to support reporting and follow-up of positive Zika lab results
- Train LHDs on how to engage pediatric clinicians and sub-specialties on the risk of Zika exposure in the community
- Increase capacity of LHDs to engage in rapid detection and reporting of birth defects in the jurisdiction, or to identify entities responsible for detecting and reporting birth defects

Enhance LHD capacity for formal and informal, internal and external referral processes.

- Support LHDs in identifying pediatric clinicians, specifically sub-specialties, to support Zika response and follow-up activities

Increase local support for LHD engagement in MCH Zika response.

- Ensure LHDs have access to resources and information that can be tailored to the individual needs, or risks, of their communities
- Engage LHDs in local, state, and federal partnerships to stay abreast of Zika exposure risk for vulnerable populations

Acknowledgements

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Acknowledgements

This document was supported in part by the Centers for Disease Control and Prevention.

Its contents are solely the responsibility of NACCHO and do not necessarily represent the official views of the sponsors.

NACCHO thanks Margaret Carr; Debra Dekker, PhD; and Calondra Tibbs, MPH, for contributing to the analysis and writing of this report.

For more information, please contact NACCHO's Safe & Healthy Families team at mcahivp@naccho.org

References

1. Centers for Disease Control and Prevention. Key Messages- Zika Virus Disease, 2017a. Retrieved from: https://www.cdc.gov/zika/pdfs/zika-key-messages.pdf

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