



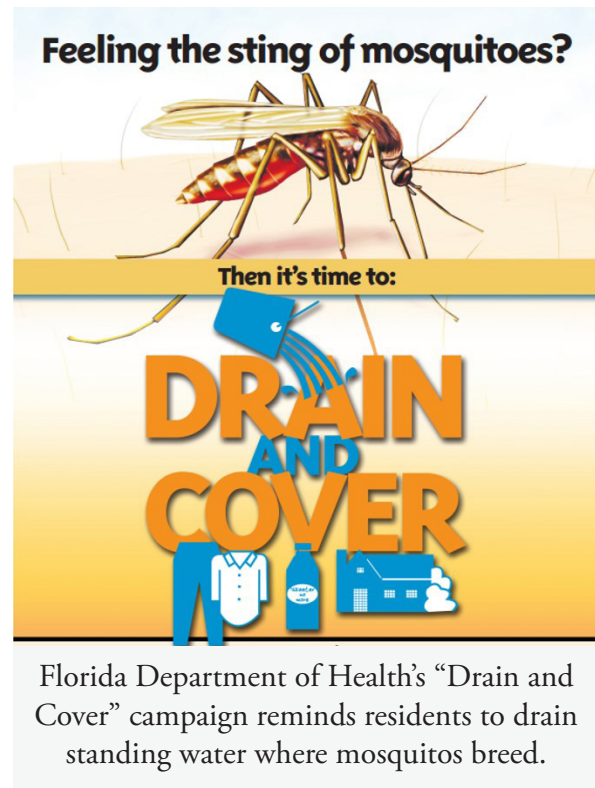
State Strategies to Prevent and Respond to Disease Crises Through Medicaid and Public Health Partnerships

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Executive Summary

The National Academy for State Health Policy (NASHP) looked at three states where Medicaid and public health agencies worked together to address infectious disease challenges.

- **Texas**, where the first patient was diagnosed with **Ebola** in the United States. The state responded by coordinating its response across agencies, with federal, state, and local partners. Texas Medicaid and public health also worked together to respond to **Zika**, with Medicaid covering Zika testing as well as insect repellent to prevent the disease's spread.
- **Florida** used existing partnerships between the Department of Health, Department of Agriculture and Consumer Services, Medicaid, and other state agencies to help control the spread of **Zika** and support Zika-impacted women and children.
- **California's** Medicaid and public health agencies worked together during a severe **influenza** season to overcome shortages of generic antiviral medicine.



The following are lessons learned from policymakers in the three states:

- Cultivate relationships with potential state partners before a crisis hits;
- Braid funds and maximize federal funding streams by aligning them with state priorities;
- Ensure that information shared with the public is timely, accurate, and consistent;
- Invest in data and other public health infrastructure;
- Seek additional partners outside of state government; and
- Keep an eye on the globe.

Introduction

Protecting the public's health requires creative responses to new and potential challenges in an era when infections can spread from remote areas to major world cities in less than 36 hours.¹ The re-emergence of vaccine-preventable diseases² and tick- and mosquito-borne diseases propelled by a changing climate³ cannot be underestimated. Mosquito- or tick-borne illnesses have tripled in the United States between 2004 and 2016, and scientists have identified nine new such pathogens during that period.⁴ Measles, a vaccine-preventable disease that causes 120,000 deaths around the globe each year, reached a 20-year high in the United States in 2014.⁵ States also experienced more cases of pertussis (whooping cough) in 2012 than in any year since 1955.⁶ State and local public health, Medicaid, and emergency management agencies must meet these challenges at a time when their resources are already stretched thin.

The threats of infectious disease occurs at time when poverty and climate change render residents of some states vulnerable to dengue fever, Zika, chikungunya, West Nile virus, influenza, and other diseases.⁷ The prevalence of HIV and other sexually transmitted diseases (STDs) is also higher among people with lower socioeconomic status, and many low-income people struggle to obtain adequate nutrition, housing, and medical care.⁸ Some states have been able to use their existing Medicaid dollars to address such health-related social needs in alignment with their public health priorities.⁹ In other states, Medicaid has helped respond to public health emergencies, such as those arising from hurricanes in Florida, Louisiana, and Texas.¹⁰

Building strong partnerships between state public health, Medicaid, and other agencies, as well as local partners, is critical to strengthening the public health infrastructure. Critical infrastructure capabilities include the surveillance, informatics, and disease investigation and control capacity needed to meet these challenges systematically, long before crises begin. Investment in local public health infrastructure also helps local health departments respond to infectious diseases, promote health, maintain partnerships, communicate with the public, and report to state officials, which, in turn, helps the state monitor and respond to infectious diseases. According to the Center for Disease Control and Prevention's (CDC) [Healthy People 2020](#) objectives, the strength of an effective public health infrastructure depends in great measure on whether public health agencies have the workforce and data systems needed to carry out its 10 essential public health services.¹¹ Those services include two that are at the core of state infectious disease crisis preparedness and response: identifying and investigating health problems in the community, and mobilizing community partnerships to address those problems.¹²

State and local agencies provide a range of resources and expertise, including disease surveillance, Medicaid claims data, provider capacity, and other information from their respective domains to catalyze a rapid collaborative response to emerging crises. Infectious disease crises begin at the local level, and local health departments are often able to connect with vulnerable populations within a community to help prevent the spread of disease. While the agencies involved may vary based on the disease — for example, diseases such as Zika often require the expertise and resources of both state environmental protection agency and local mosquito control — cultivating relationships between potential state and local partners before a crisis builds resilience in the public health infrastructure and is the cornerstone of states' success. For example, having pre-established relationships with offices of emergency services, occupational safety and health, coroners, and state and local law enforcement helped California, Texas, and other states prepare for or respond to the Ebola crisis.

During an infectious disease crisis, state agencies and local health departments work to safeguard the health of populations, monitor the spread of disease, conduct disease investigations, and rapidly implement control measures to prevent the spread of the illness to at-risk individuals and communities. During an outbreak, affected individuals require clinical care to treat short- and long-term effects. When disease crises strike low-income populations, the cost to Medicaid can be significant.¹³ Not surprisingly, one of the critical partnerships

Case Studies of State Cross-Agency Coordination during Recent Infectious Disease Crises

California recently responded to a severe influenza season. During the [2017-2018 influenza season](#), California and a number of other states experienced staggering increases in influenza-related outpatient visits, hospitalizations, and deaths, which raised concerns about antiviral treatment access and availability. While there were shortages of the generic antiviral medications, one brand-name antiviral medication, Tamiflu® (oseltamivir), was in stock and overabundant. Traditionally, Medicaid does not pay for the brand-name drug, creating decreased access to antiviral medication among Medicaid enrollees. To ensure the availability of antiviral medications, the California Department of Public Health collaborated with the Department of Health Care Services (the state Medicaid agency) to allow Medi-Cal (California's Medicaid program) to cover Tamiflu® during the 2017-2018 influenza season.

Florida recently experienced and responded to a Zika crisis. The Florida Department of Health, along with other agencies, is a part of the [Florida Coordinating Council on Mosquito Control](#), which advises the commissioner of agriculture and the legislature on mosquito-borne diseases in the state. In 2016 and 2017, the Florida Department of Health and the Florida Department of Agriculture and Consumer Services conducted workshops to foster relationships and to share information about domestic mosquito control.¹⁷ Existing partnerships between the Department of Health and other state agencies ensured a rapid, coordinated response to reported Zika infections, which reached 1,500 in 2016, and included locally introduced cases.¹⁸ Local mosquito control officials were notified within two or three days of any indication that a patient might be infected, such as a preliminary laboratory test or call from a clinician.

The Florida Department of Health's Bureau of Epidemiology, Children's Medical Services [Early Steps Program](#), and [Healthy Start Program](#) also worked closely with one another and with Medicaid to support referrals and care coordination for Zika-impacted women and children. This collaboration with Medicaid ensured that medical support was available during the women's pregnancies and for Zika-impacted children up to age 21. During the Zika crisis, Hurricane Irma struck Florida in September 2017. Medicaid worked closely with the Florida Department of Health to provide rapid access to and continuation of care for critical medical and long-term services in the face of widespread power outages and evacuations. This support was extended to more than 100 Zika-impacted families who evacuated to Florida from Puerto Rico and the US Virgin Islands due to Hurricane Maria.

Additionally, a partnership between the Department of Health and Medicaid during the severe [2017-2018 influenza season](#) led to increased influenza vaccine coverage for populations, such as pregnant women, who are at high risk of severe complications from the infection.

Texas also experienced and responded to a Zika crisis. Medicaid covers at least half of births in Texas and had a stake in preventing Zika in infants, so Texas Health and Human Services Commission (HHSC, the state Medicaid agency) collaborated with Department of State Health Services (DSHS, Texas' public health agency) to address Zika. For example, Medicaid covered insect repellents to help prevent Zika transmission, paid for Zika testing, and established provider billing codes.¹⁹ State public health officials also worked with Medicaid on sharing accurate information with providers and the public.

Texas also coordinated across agencies to respond to Ebola. The first patient to be diagnosed in the United States with Ebola was treated at a Dallas hospital in September 2014, according to the [CDC](#). Shortly thereafter, a health care worker who cared for the patient contracted Ebola. State public health officials coordinated with federal, state, and local colleagues to ensure that clear, consistent, and credible information was shared with decision-makers and the public. The state also worked closely with state emergency management staff, as well as the local and regional public health and emergency medical partners involved in the on-the-ground response. The Ebola situation underscored the importance of having strong public health laboratory capacity and a robust, skilled public health workforce. "We stopped Ebola where it started in the United States," said the director of the Texas Health Emergency Preparedness and Response Section.²⁰

states can leverage before, during, and after infectious diseases crises is that between public health agencies and Medicaid. As of April 2018, Medicaid and the Children’s Health Insurance Program (CHIP) covered more than 73 million Americans,¹⁴ including those who are especially vulnerable during public health emergencies, such as low-income pregnant women, children, the disabled, and the elderly. In addition, Medicaid covers many individuals with infectious diseases that develop into chronic conditions and require lengthy and costly treatment, such as HIV¹⁵ and hepatitis C.¹⁶

To learn how Medicaid and public health have worked together in the face of infectious disease challenges, the National Academy for State Health Policy (NASHP) examined three states that recently grappled with disease crises that affected Medicaid populations. Lessons learned by the three states include the need to develop creative responses to new and potential challenges — such as obtaining Medicaid coverage for insect repellent — and the importance of consistent, aligned public communication. To help other states learn from these states’ experiences, this paper highlights collaborative approaches used to improve state Medicaid and public health partnerships to prevent and respond to communicable disease crises.

Medicaid’s Role in Infectious Disease Prevention and Detection

While detection and prevention are core public health responsibilities, Medicaid can also help safeguard the public’s health, particularly with infectious diseases such as influenza, Zika, HIV, and other sexually transmitted infections.

Medicaid can cover screening and preventive services for certain infectious diseases.

One of the preventive services offered by most state Medicaid programs is immunization. As of 2012, 36 state Medicaid programs covered all adult vaccines recommended by the Advisory Committee on Immunization Practices, and 17 of these programs prohibited copayments, which removes a cost barrier for beneficiaries who cannot pay them.²¹ In addition to routine vaccines, Medicaid has also mobilized its vaccination infrastructure to respond to public health emergencies. For example, Medicaid covered non-routine influenza vaccines during the H1N1 flu pandemic in 2009.²²

Medicaid can also cover prophylaxis and screening for beneficiaries at risk of contracting certain diseases. In December 2016, the Center for Medicaid & CHIP Services (CMCS) and other federal agencies released a joint informational bulletin that highlighted state opportunities to cover HIV testing without cost sharing and reduce barriers to accessing HIV pre-exposure prophylaxis (PrEP) services.²³ Many Medicaid programs also cover testing for other STDs and tuberculosis.²⁴ For Zika in particular, states may offer contraception, family planning services, and mosquito repellent to reduce transmission, as well as diagnostic services to detect Zika infections.²⁵

Medicaid can promote the adoption of antibiotic stewardship programs to prevent the emergence of “superbugs.”

The Centers for Medicare & Medicaid Services (CMS) issued a 2016 final rule requiring long-term care facilities to have an antibiotic stewardship program that includes antibiotic use protocols and monitoring systems to reduce the emergence of antimicrobial resistance.²⁶ In June 2016, the agency also proposed updating its Conditions of Participation for hospitals and critical access hospitals participating in Medicare and Medicaid to promote antibiotic stewardship.²⁷ While the proposed rule for hospitals is not finalized, state Medicaid agencies can step in and offer provider guidelines or even incentives.²⁸ For example, entities participating in California’s Public Hospital Redesign and Incentives in Medi-Cal (PRIME) program, which is authorized under the state’s Section 1115 demonstration waiver, can choose to implement an antibiotic stewardship project and obtain incentive payments for reducing inappropriate antibiotic use.²⁹

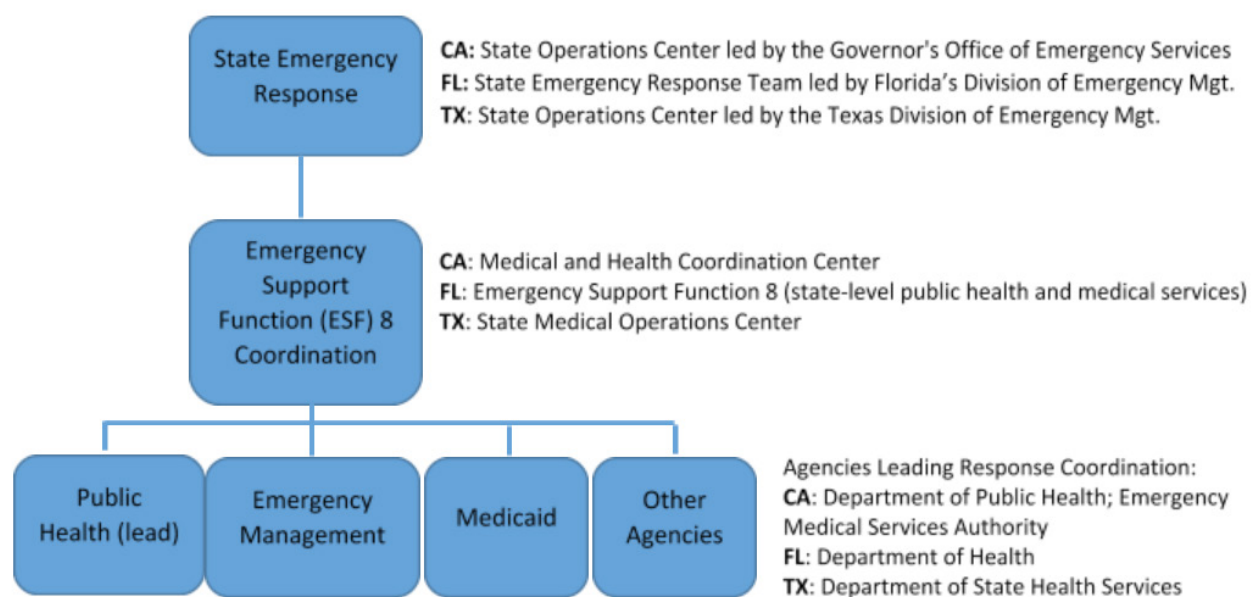
Medicaid data may help identify infectious disease trends.

State public health agencies require providers and laboratories to report cases of certain diseases and conditions.³⁰ With continuous improvement in electronic health records (EHR) technology, public health and Medicaid could work together to harness the power of Medicaid clinical and claims data to help public health laboratories identify disease patterns in the near future, particularly for conditions that may not be on a state's list of reportable conditions.³¹ The Medicaid EHR Incentive Program, which rewards providers and hospitals for making meaningful use of EHRs, encourages such engagement with public health agencies. Measures of meaningful use can include electronic sharing of immunization data with a public health agency, as well as electronic case reporting of reportable diseases and conditions.³² Improvements in data-sharing processes could help facilitate collaboration and communication between state Medicaid and public health agencies during crises and every day.

Overview of Cross-Agency Infectious Disease Emergency Response at the State Level

Infectious disease crisis response often requires multiple state and local agencies with different strengths and resources to collaborate, and states can drive these partnerships by leveraging their emergency response infrastructures. In the event of statewide emergencies, such as wildfires in California and hurricanes in Florida and Texas, the entity coordinating state emergency responses — called State Operations Center (SOC) in California and Texas and State Emergency Response Team (SERT) in Florida — is activated. State emergency response requires many agencies working in synergy, and SOCs and SERT coordinate cross-agency efforts to ensure efficient use of resources and timely responses. State emergency response is usually led by the state emergency management agency, such as the Governor's Office of Emergency Services (Cal OES) in California and the Division of Emergency Management in Texas and Florida (see chart below).

How Do States Organize Infectious Disease Emergency Response?



Under the state emergency response center, state agencies and volunteer organizations that perform similar duties to one another during an emergency response are grouped into Emergency Support Functions (ESFs) with one or more agencies leading and coordinating emergency response efforts for each ESF (see table below). The state public health agency generally leads and coordinates state-level public health and medical services, called ESF-8, with Medicaid, emergency management, and other agencies supporting the public health agency. Some states have infrastructures that coordinate resources, equipment, and supplies for public health and medical emergencies, such as the Medical and Health Coordination Center (MHCC) in California (a collaboration between the California Department of Public Health, Emergency Medical Services Authority, and the Department of Health Care Services) and the State Medical Operations Center (SMOC) in Texas. When responding to large-scale disasters, such as widespread wildfires, states open both

List of Emergency Support Functions (ESFs)

Despite some variations in the number and order of ESFs between states and the federal government, public health and medical services consistently occupy the eighth slot on the list and are thus referred to as ESF #8.

ESF#	<u>Federal Government</u>	<u>California</u>	<u>Florida</u>	<u>Texas</u>
1	Transportation	Transportation	Transportation	Transportation
2	Communications	Communications	Communications	Communications
3	Public Works and Engineering	Construction and Engineering	Public Works	Public Works and Engineering
4	Firefighting	Fire and Rescue	Firefighting	Firefighting
5	Emergency Management	Management	Information and Planning	Directions and Control
6	Mass Care, Housing, and Human Services	Care and Shelter	Mass Care	Mass Care
7	Resources Support	Resources	Resources Support	Logistics Management and Resource Support
8	Public Health and Medical Services	Public Health and Medical	Health and Medical	Public Health and Medical Services
9	Urban Search and Rescue	Search and Rescue	Search and Rescue	Search and Rescue
10	Oil and Hazardous Materials Response	Hazardous Materials	Hazmat	Hazardous Materials and Oil Spill Response
11	Agriculture and Natural Resources	Food and Agriculture	Food and Water	Animals, Agriculture, Food and Feed Safety
12	Energy	Utilities	Energy	Energy
13	Public Safety and Security	Law Enforcement	Military Support	Law Enforcement
14	Long-Term Community Recovery and Mitigation	Recovery	Public Information	Recovery
15	External Affairs	Public Information	Volunteers and Donations	Public Information
16		Evacuation	Law Enforcement	Evacuation and Population Protection
17		Volunteers and Donations Management	Animal Protection	Volunteers and Donations Management
18		Cybersecurity	Business, Industry and Economic Stabilization	Warning
19				Food and Water

state emergency response centers and ESF-8 coordination centers. However, in the event of an infectious disease crisis, such as a measles outbreak, influenza, or Ebola, ESF-8 coordination centers may support state public health emergency responses even if the state determines that it is not necessary to activate the state emergency response center.

Policy Recommendations for Cross-Sector Preparedness and Response

State officials experienced with preparing for and responding to infectious disease crises in California, Florida, and Texas offered the following recommendations:

Cultivate relationships with potential state and local partners before a crisis hits. States identified this as the single most important overarching aspect to a successful response. As mentioned previously, cross-agency collaboration helps states maximize available resources and avoid duplication.

Braid funds and maximize federal funding streams by aligning them with state priorities. Successful state responses to infectious disease crises often hinge on federal financial support from the CDC. Every year, state health departments receive federal funds from the CDC's [Public Health Emergency Preparedness \(PHEP\)](#) cooperative agreement and [Epidemiology and Laboratory Capacity \(ELC\)](#) cooperative agreement, as well as from the Department of Health and Human Services' [Hospital Preparedness Program \(HPP\)](#), to strengthen public health emergency preparedness capacity. In the event

A California Department of Public Health official commented on the importance of relationships during the Ebola response:

“We couldn't respond to Ebola using existing emergency protocols and had to start from scratch, but fortunately we had pre-established relationships with other agencies such as local health departments, health care providers, the Governor's Office of Emergency Services, Division of Occupational Safety and Health, law enforcement, coroners, and others. The long-standing relationships help more than you ever know.”

of infectious disease crises, affected states may also receive disease-specific supplemental funding, such as [PHEP](#) and [HPP](#) supplemental funding for Ebola, and [ELC supplemental funding for Zika](#), Ebola, and other infectious disease outbreaks. The many funding streams for preparedness have different timelines and reporting requirements. It can be challenging, but states can try to braid those funding streams into a larger pool to maximize all available funds while still keeping track of individual funding streams for reporting accountability purposes.³³

Texas identified priorities on which to focus Zika spending (education and awareness, vector control, testing and surveillance, and prevention and treatment for women and children with Zika-related health conditions) and braided federal funds at the state level so local entities did not have to navigate different funding rules themselves.

Ensure that information shared with the public is timely, accurate, and consistent.

Keeping the public informed can be challenging. One Texas state official observed, “With emerging diseases such as Ebola and Zika, the biggest challenge is the lack of science and the lack of data. The science is being written as you are responding.” However, communicating consistent, accurate information in a timely manner, which may include conveying uncertainties and acknowledging gaps in knowledge, is important to reassure the public and providers. Consistent information includes not only consistent messaging, but also consistent use of language. Using a standardized vocabulary across agencies and refraining from the use of jargon can avoid confusion that may stoke public fears.

States can use multiple channels to spread information. Medicaid, public health, and other agencies often have their own effective channels and partners for disseminating information with their key constituencies. For example, Medicaid can communicate information to individual beneficiaries as well as Medicaid-enrolled providers.

Invest in data infrastructure. Timely and accurate data is central to effective infectious disease crisis prevention and response. Building and perfecting disease surveillance systems, electronic laboratory reporting, and informatics systems before crises hit helps with timely and effective response. Investing in what one state official called “data highways” can help move data rapidly between providers and state health officials from multiple agencies, including public health epidemiologists. “While these systems can be costly, the need for speed — summarizing data rapidly, timely, and accurately — cannot be underestimated,” said a state official.

Keep an eye on the globe. With dense urban populations and air travel allowing communicable diseases to spread quickly across the globe, early detection of threats to prevent avoidable outbreaks is critical. States should remind health care providers to ask for travel history during patient visits and maintain strong communication with the CDC about tracking disease outbreaks and crises around the world.

Seek partners beyond state government. The Florida Department of Health’s pre-existing partnerships with blood banks allowed them to quickly adapt blood safety response plans to ensure the safety of Florida’s blood supply during the Zika crisis. The Department of Health also found blood banks to be helpful partners in Zika surveillance — 29 blood donors flagged through blood bank screening tests were confirmed as having Zika infections following testing at Florida Department of Health’s Bureau of Public Health Laboratories, including 14 local cases. The fact that no blood donors tested positive for Zika in 2017 and 2018 provided added assurance to state health officials that the virus was no longer circulating in Miami-Dade County.

States can also work with manufacturers and the private sector to ensure adequate vaccine and antibiotic supplies to prevent and respond to disease crises. California’s experience with a hepatitis A outbreak in 2017 illustrates how private sector involvement can complement public sector efforts. The state had been working with CDC to obtain the hepatitis A vaccine since the outbreak started in April 2017, but by the end of the federal fiscal year in September 2017, the CDC bumped against its yearly cap on vaccines purchased with Section 317 funds.³⁴ To solve the problem of vaccine shortage, public officials reached out and purchased vaccines from the private sector.

Conclusion

Scientific and biomedical technological advancements have given state and federal governments valuable tools in the arms race against rapidly evolving, disease-causing microorganisms, but these advancements must be accompanied with a robust public health infrastructure that can prevent, detect, and respond to infectious diseases effectively. While public health agencies are the backbone of the public health infrastructure, cultivating relationships between public health and other agencies and organizations, including Medicaid, before infectious disease emergencies occur is important to prepare all key players and build infrastructure resilience. Cross-agency and cross-sector partnerships and investment in robust disease surveillance and data systems can help states maximize resources to prevent and respond to crises and preserve health, which can, in turn, control costs to state budgets.

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32. 80 FR 62761, <https://www.federalregister.gov/documents/2015/10/16/2015-25595/medicare-and-medicaid-programs-electronic-health-record-incentive-program-stage-3-and-modifications>. See also Ready or Not 2017 and <https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html?redirect=/EHRIncentivePrograms/>.
33. Amy Clary and Trish Riley, Braiding and Blending Funding Streams to Meet the Health-Related Social Needs of Low-Income Persons: Considerations for State Health Policymakers, National Academy for State Health Policy, February 2016, <https://nashp.org/wp-content/uploads/2016/02/Jean1.pdf>.
34. Section 317 vaccine funds are generally used to vaccinate uninsured or underinsured adults and fully insured adults during outbreaks and disasters. For more information, see <https://www.cdc.gov/vaccines/imz-managers/guides-pubs/qa-317-funds.html>.

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