

IMMUNIZATION AND RESPIRATORY DISEASES

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	\$609.809	\$573.105	\$537.766	-\$35.339
PHS Evaluation Transfer	\$12.864	\$0.000	\$0.000	\$0.000
ACA/PPHF	\$160.300	\$210.300	\$210.300	\$0.000
PHSSEF	N/A	\$15.000	\$0.000	-\$15.000
Total Request	\$782.973	\$798.405	\$748.066	-\$50.339
FTEs	625	625	625	0
Immunization Program Level	\$610.847	\$610.847	\$560.508	-\$50.339
-Immunization Program - BA	\$437.683	\$387.683	\$337.344	-\$50.339
-National Immunization Survey - BA	N/A	\$12.864	\$12.864	\$0.000
-National Immunization Survey - PHS Evaluation Transfer	\$12.864	\$0.000	\$0.000	\$0.000
-Immunization Program - PPHF	\$160.300	\$210.300	\$210.300	\$0.000
Influenza/Influenza Planning and Response¹	\$172.126	\$187.558	\$187.558	\$0.000
-PHSSEF (<i>non-add</i>)	N/A	\$15.000	N/A	-\$15.000

¹ FY 2014 amount does not include \$29.124 million in HHS Pan Flu funding (of which \$15.3 million is for International Flu activities).

Summary

CDC prevents disease, disability, and death of children, adolescents, and adults through immunization and control of respiratory and related diseases. These activities are key to CDC's goal to protect Americans from infectious diseases.

Through the discretionary Immunization Program and mandatory Vaccines for Children (VFC) Program, CDC improves access to immunization services for uninsured and underinsured populations in the United States and supports the scientific evidence base for vaccine policy and practices. CDC also provides critical epidemiology and laboratory capacity to detect, prevent, and respond to vaccine-preventable, respiratory, and related infectious disease threats as well as preparedness planning for pandemic influenza.

CDC's FY 2016 request of **\$748,066,000** for immunization and respiratory diseases, including \$210,300,000 from the Affordable Care Act Prevention and Public Health Fund, is \$50,339,000 below the FY 2015 Enacted level. The reduction to the 317 Immunization Program reflects increased insurance coverage for immunization services through public and private health insurance expansion.

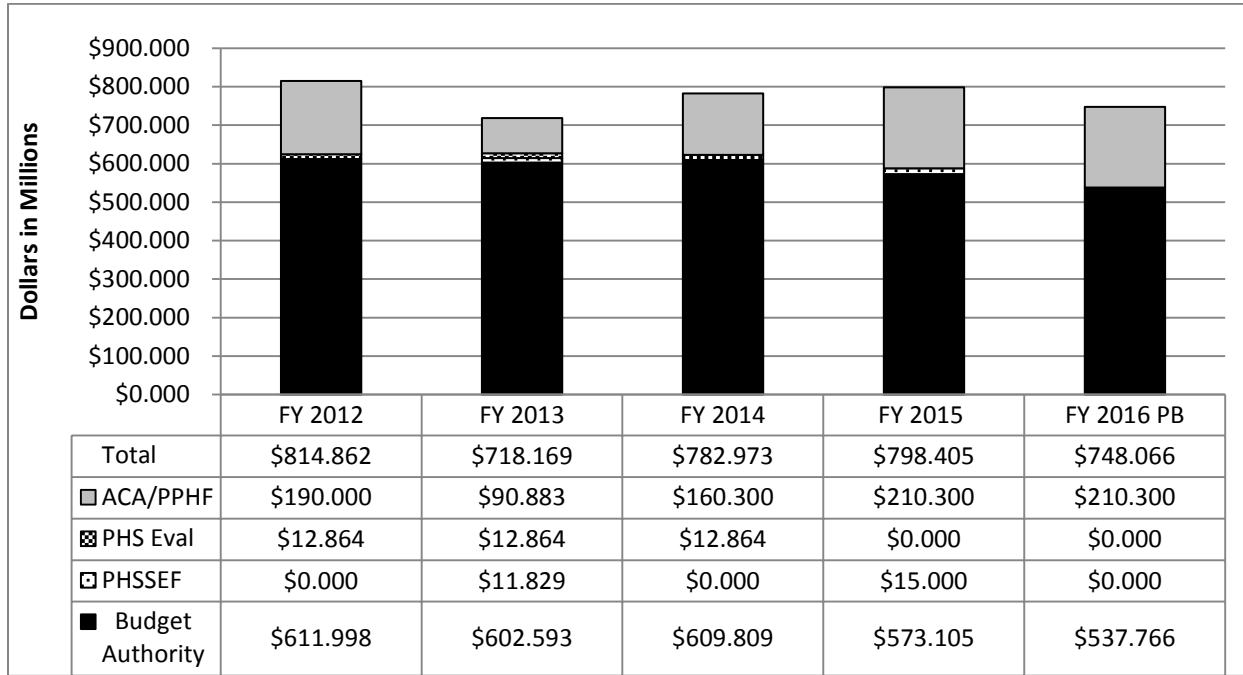
Performance Highlights

- CDC demonstrated rotavirus vaccines are greater than 85 percent effective in preventing severe rotavirus disease in U.S. children with the effectiveness sustained over time. **(Measure 1.2.1i)**
- CDC demonstrated an 88 percent decline in PCV13-type pneumococcal disease among children less than 5 years old in the U.S. **(Measure 1.2.1h)**
- The [Partnership for Influenza Vaccine Introduction](http://www.taskforce.org/our-work/projects/partnership-influenza-vaccine-introduction)¹ (PIVI), a CDC-led collaboration between public and private partners, has successfully vaccinated high-risk populations and healthcare workers against influenza in Lao People's Democratic Republic (PDR) since 2012. In 2013, the project expanded to include Nicaragua and focused vaccination efforts on pregnant women. Partners include Lao PDR's Ministry of Health, the WHO Country Office, Walgreens Co., the United Parcel Service (UPS), Nicaragua

¹ <http://www.taskforce.org/our-work/projects/partnership-influenza-vaccine-introduction>

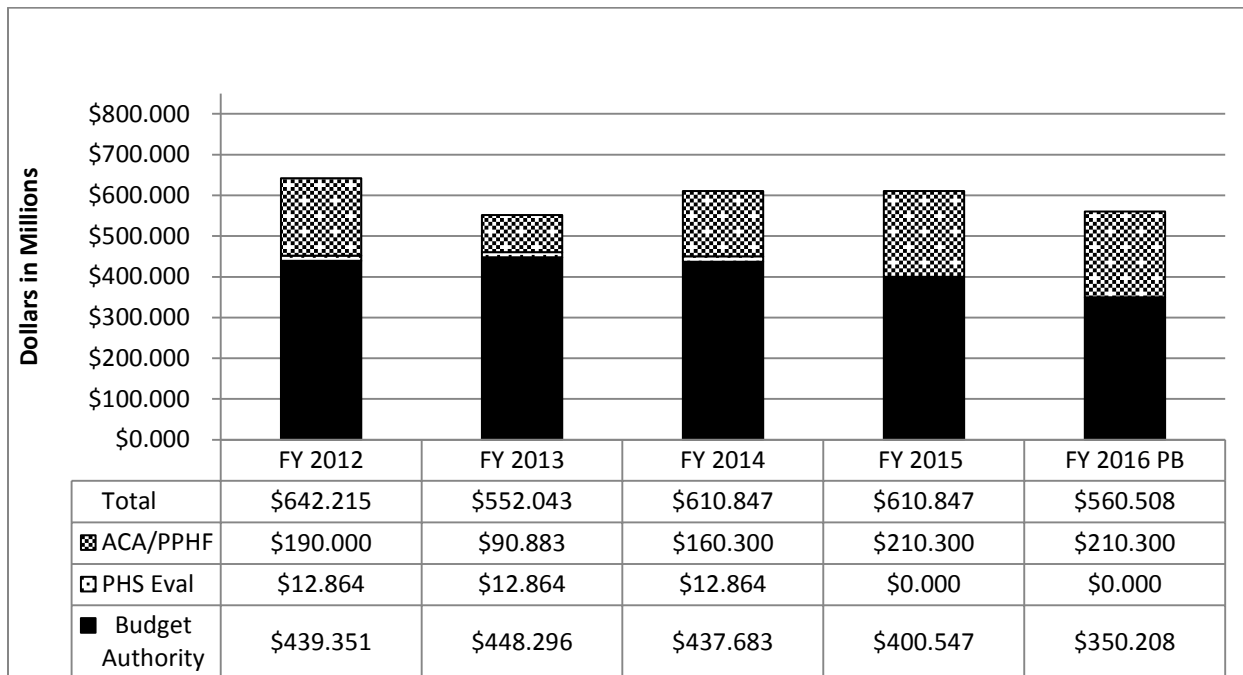
Ministry of Health, the Pan-American Health Organization (PAHO), bioCSL, Becton Dickinson and Company (BD), the U.S. Department of Defense, and the Task Force for Global Health.

Immunization and Respiratory Diseases Funding History¹



¹ FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Immunization Program Funding History¹



¹ FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Immunization Program Funding History¹

Immunization Program ¹	
Fiscal Year	Dollars (in millions)
2006	\$517.199
2007	\$512.804
2008	\$527.359
2009	\$557.359
2009 (ARRA)	\$300.000
2010	\$561.459
2011	\$488.576
2011 (ACA/PPHF)	\$100.000
2012	\$452.215
2012 (ACA/PPHF)	\$190.000
2013	\$461.160
2013 (ACA/PPHF)	\$90.883
2014	\$450.547
2014 (ACA/PPHF)	\$160.300
2015	\$387.683
2015 (ACA/PPHF)	\$210.300

¹ FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Immunization Program Budget Request

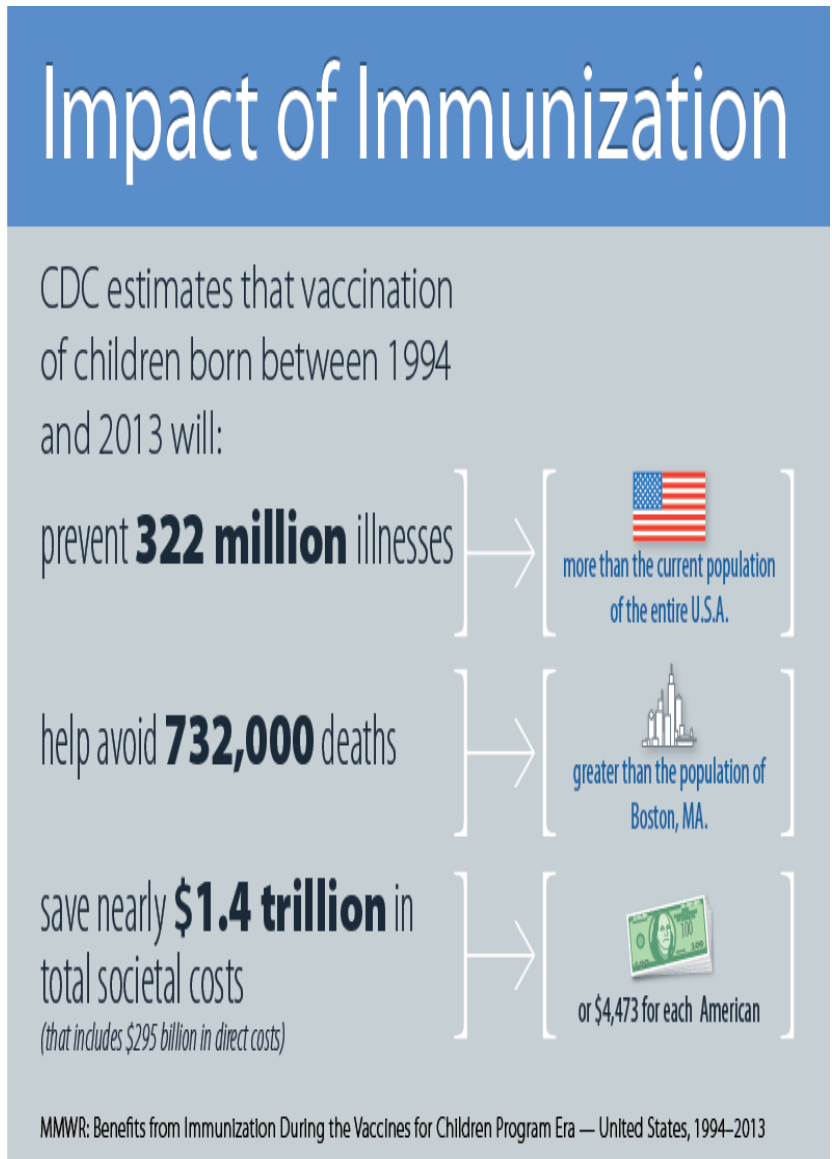
(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	\$437.683	\$400.547	\$350.208	-\$50.339
National Immunization Survey (non-add)	N/A	\$12.864	\$12.864	\$0.000
PHS Evaluation Transfer	\$12.864	\$0.000	\$0.000	\$0.000
ACA/PPHF	\$160.300	\$210.300	\$210.300	\$0.000
Total	\$610.847	\$610.847	\$560.508	-\$50.339

Overview

CDC's national immunization recommendations currently provide guidance for the prevention of 17 vaccine-preventable diseases (VPDs) across the lifespan. The discretionary Immunization Program plays a fundamental role in achieving national immunization goals and sustaining high vaccination coverage rates to prevent death and disability from VPDs.

The Immunization Program provides funds to support the essential public health functions and ensure program effectiveness and scientifically sound immunization policy. A strong public health infrastructure at the national, state, and local levels is vital to sustaining high vaccination coverage levels and low incidence of VPDs. Support also maintains public health preparedness for a response to a vaccine-preventable national emergency, such as a pandemic or biologic attack.

The Immunization Program purchases routinely recommended vaccines to protect at-risk and vulnerable populations not eligible for immunizations through the Vaccines for Children (VFC) Program and to meet urgent public health needs such as controlling VPD outbreaks. The flexibility of the Program is critical: The discretionary Immunization Program allows states to use their purchased vaccines to meet their unique needs and priorities in responding to VPD outbreaks. The Affordable Care Act health insurance-related provisions will improve access to immunization services by requiring new private health plans and most public insurance to cover routinely recommended vaccines without cost-sharing. However, these health insurance provisions do not address the public health functions (e.g., providing a safety net for those who cannot otherwise access immunization services, managing vaccine shortages, monitoring the safety and effectiveness of vaccines and vaccine policies, preventing disease outbreaks and responding early and rapidly should they occur, and



preparing to respond quickly and comprehensively to other urgent vaccine emergencies, such as pandemics) that must be in place to ensure safe and effective national immunization policies and programs, making the discretionary Immunization Program critical in FY 2016 and beyond.

Budget Request

CDC's FY 2016 request of **\$560,508,000** for the Immunization Program, including \$210,300,000 from the Affordable Care Act Prevention and Public Health Fund, is \$50,339,000 below the FY 2015 Enacted level. Health insurance expansion will further increase access to immunizations and is expected to decrease the number of uninsured and underinsured individuals in need of discretionary vaccine for routine immunizations. Since September 2010, new health plans are required to cover vaccines routinely recommended by the Advisory Committee on Immunization Practices (ACIP) without charging a deductible, copayment, or coinsurance. This request includes up to \$8,000,000 to support the capacity of public health departments to bill health insurers for immunization services.

For FY 2016, CDC's priorities for the discretionary Immunization Program are to:

- Preserve core public health immunization infrastructure at the local, state, and federal levels
- Maintain an adequate amount of vaccine purchase to provide a vaccination safety net for uninsured adults, and for response to VPD outbreaks and other vaccine urgent needs
- Make strategic investments to enhance the immunization infrastructure and evidence base and to improve efficiency

Preserving Core Public Health Immunization Infrastructure

The discretionary Immunization Program is responsible for the essential public health workforce and systems at the national, state, and local levels that protect all Americans, regardless of health insurance status, from disability and death from VPDs.

CDC conducts scientific studies that provide the evidence base for national immunization policy, including assessing the burden of disease, vaccine effectiveness and safety, economic analyses, and program feasibility. For example, CDC's vaccine effectiveness research provided critical scientific evidence of waning immunity that informed ACIP's recommendation for a booster dose of meningococcal conjugate vaccine at age 16 to assure protection through the high-risk college years.

In addition, CDC collects, analyzes, and reports scientific data about vaccines as they are used in real-world settings and with larger populations to ensure the effectiveness and safety of our national vaccine programs and policies and to inform policy and program changes. This includes:

- Implementing vaccine safety priority studies by strengthening vaccine safety surveillance for rare vaccine adverse events
- Improving adverse-event reporting through electronic reporting
- Developing vaccine safety profiles for each newly licensed vaccine in collaboration with other federal agencies

CDC's National Immunization Survey (NIS) is essential to assessing national progress, documenting programmatic achievements, and identifying disparities in immunization coverage rates. The 2013 NIS-Teen data, for example, showed there were modest increases in vaccination coverage among U.S. adolescents between the ages of 13 and 17 years for all vaccines routinely recommended for preteens and teens. However, progress is occurring at an unacceptably slow pace for human papillomavirus (HPV) vaccination, identifying the need for targeted efforts to improve HPV vaccination coverage among adolescent girls.

Based on this information, CDC provided funding to support several activities focused on improving HPV vaccination coverage. These included: 11 immunization programs funded to use their Immunization Information Systems (IIS) for reminder/recall for girls 11-18 years of age and to conduct a comprehensive communications campaign; an organization funded to develop and maintain a national network comprised of cancer-prevention organizations that have the capacity to engage clinical and immunization partners at a national, regional, state, tribal, territorial, jurisdictional, and local level; and professional medical organizations funded to strengthen the clinician recommendation of HPV vaccine by direct outreach and education around HPV vaccine to their members and audiences. In FY 2016, CDC will continue to fund the NIS to monitor progress and inform programmatic strategies.

CDC supports science-based communications campaigns and other efforts to convey the benefits of vaccines to the public to aid individuals in making informed vaccine decisions to protect themselves and their loved ones. CDC also conducts outreach to educate healthcare providers about current immunization policy and clinical best practices to help them protect their patients and communities from VPDs. CDC developed and will maintain a [dynamic provider toolkit](#)² for conversations with parents about vaccination that includes evidence-based strategies, print materials, and web-based tools.

In FY 2016, CDC will implement health information technologies to give healthcare providers the necessary immunization information to ensure their patients receive the vaccines they need, when they need them, and will manage vaccine supply disruptions and shortages to ensure the best public health outcomes until vaccine supplies are restored. Funds will also be used to respond to disease outbreaks by:

- Rapidly identifying and investigating cases
- Conducting surveillance and laboratory testing
- Implementing targeted vaccination efforts and other measures to control the spread of disease and prevent future outbreaks

From January 1 to November 29, 2014, CDC received reports of 610 measles cases from 24 states in the United States. This is the highest number of cases reported in the United States, including the largest single measles outbreak, since the Vaccines for Children (VFC) Program was established in 1994. Most of the people who contracted measles were not vaccinated or did not know their vaccination status; 48 brought measles into the United States after becoming infected in other countries. CDC provided epidemiology and laboratory support including advanced molecular diagnostic testing for measles. CDC is prioritizing activities to better define the locations and size of unvaccinated populations that pose high risks of sustaining large measles outbreaks that may threaten maintenance of measles elimination in the United States.

Maintaining an Adequate Amount of Vaccine Purchase

The Immunization Program is responsible for providing federally purchased vaccines to protect uninsured Americans from preventable diseases—and thus protect communities from the dangers of low vaccination rates. CDC estimates that, although it is expected these populations will begin to decrease as implementation of expanded health insurance coverage provisions begin, there will continue to be a need for discretionary vaccines to serve uninsured adults and to provide rapid vaccination response to disease outbreaks and other urgent public health needs. It will be important to maintain a safety net for immunization services. The discretionary Immunization Program is also critical because, unlike the federal VFC Program which has very specific eligibility requirements, discretionary Immunization Program vaccine can be used to vaccinate non-VFC-eligible populations, such as adults or the fully-insured, in a public health emergency. For example, in response to a 2014 measles outbreak, the Ohio immunization program supplied 15,240 doses of discretionary Immunization Program measles, mumps, and rubella (MMR) vaccine to 28 different county health departments. In addition,

² <http://www.cdc.gov/vaccines/hcp.htm>

1,030 doses of discretionary Immunization Program vaccine were distributed in four different counties (five different health departments) for a 2014 mumps outbreak.

In FY 2016, CDC will work collaboratively with its awardees and partners to sustain record-high childhood immunization coverage rates and increase immunization coverage rates for children and adults by improving access to immunizations. Specifically, CDC will work to establish access points at complementary venues such as schools, pharmacies, and retail-based clinics; expand the network of VFC providers through recruitment efforts; purchase and deliver vaccine for at-risk populations; and ensure those with insurance have access to immunization services through an in-network provider.

Making Strategic Investments

In some communities, such as rural areas, health departments serve as a critical access point. Since 2009, CDC has invested funding to expand immunization infrastructure to assist public health clinics that serve fully-insured patients with billing for immunization services. This effort preserves access to life-saving immunizations for fully-insured populations. The purpose of billing is to expand access for fully-insured individuals in areas where there is not adequate in-network provider coverage. As of FY 2014, 38 awardees are developing and/or implementing billing systems in targeted areas within their jurisdictions. CDC will support awardees in this area, including using FY 2014 funds to support approximately 15 awardees for additional billing activities. In FY 2016, the Immunization Program will collaborate with other areas of CDC interested in billing and other public health infrastructure improvements needed in the evolving health care environment. However, while expanded billing capacity in public health departments may help to maintain and improve access to immunization services for the fully-insured, it does not replace the need for discretionary Immunization Program vaccines that provide a critical public health safety net for vaccinating the uninsured and responding to VPD outbreaks and other public health emergencies.

Anticipating the evolving role of public health, CDC strategically directed immunization resources to prepare for the new healthcare environment. CDC made investments in Immunization Information Systems (IIS) that inform and support clinical decision-making and allow interfacing with electronic health records (EHRs) and vaccine ordering systems through a competitive process that provided funds to 56 of the 64 immunization awardees. This helped more than 95% of these 56 CDC awardees to reach full compliance with Health Level Seven (HL7) messaging standards for immunization data transactions. In FY 2016, the Immunization Program will provide funding to immunization awardees and support scientific and programmatic expertise to further develop, enhance, and maintain IIS capable of identifying individuals in need of immunization, measuring vaccination coverage rates, producing reminder and recall notices, and interfacing with EHRs. CDC’s immunization services program and the public health informatics program collaborate to support Immunization Program awardees in enhancing their IIS to be compliant with standards and requirements set by the national Electronic Health Records – Meaningful Use (EHR-MU) Program.

Immunization Summary

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President’s Budget	FY 2016 +/- FY 2015
Immunization Infrastructure ¹	\$241.080	\$241.080	\$241.080	\$0.000
Vaccine Purchase ¹	\$123.480	\$123.480	\$85.980	-\$37.500
Extramural Program Operations	\$188.824	\$188.824	\$176.698	-\$12.126
Intramural Program Operations	\$57.463	\$57.463	\$56.750	-\$0.713
Total	\$610.847	\$610.847	\$560.508	-\$50.339

¹See Immunization Grants for more information.

Advancing Public Health Immunization Priorities

Funding Category	FY 2016 Immunization Program Funding
Immunization Infrastructure	Will be awarded to support essential public health immunization workforce and systems at the state and local levels. Funds will be used to: recruit and educate networks of immunization providers; provide continual quality assurance; promote public awareness of new and expanded vaccine recommendations; manage vaccine shortages; and respond to VPD outbreaks. These awards include core infrastructure/operations funding that goes to all awardees.
Vaccine Purchase	Will be allocated through direct assistance to provide federally purchased vaccines to vaccinate non-VFC-eligible uninsured populations and to meet urgent public health needs such as controlling VPD outbreaks.
Extramural Program Operations	Will support national immunization policies and programs, including: disease surveillance; vaccine coverage assessment; post-marketing evaluation of vaccine effectiveness and safety; immunization information technologies; centralized vaccine ordering and distribution systems; payor of last resort; public awareness campaigns and resources; and provider education and tools.
Intramural Program Operations	Will provide national public health expertise in immunization and VPDs to support national, state, and local vaccination program efforts, including expertise in epidemiology and surveillance, laboratory methods and science, immunology, immunization policy, health communications science, vaccine management, and program implementation.

Supporting State and Territorial Immunization Programs

In FY 2016, CDC will provide infrastructure funding to 64 awardees—including all 50 states; Washington, D.C.; five large cities; five territories; and three Freely Associated States—through a non-competitive, formula-based, discretionary cooperative agreement program that provides financial assistance for state and local immunization operations. Through population-based awards and collaboration, the discretionary Immunization Program established a comprehensive immunization system providing:

- Public sector vaccine ordering and distribution
- Continual quality assurance
- Provider recruitment and enrollment in the VFC Program
- Provider education and public awareness focused on new and expanded vaccine recommendations
- Management of vaccine shortages

In addition, CDC will provide its 64 awardees with direct assistance for vaccine purchased from the federal contracts. As part of the new five-year funding cycle that began in FY 2013, CDC adopted a vaccine use policy that Immunization Program—purchased vaccines cannot be used for routine vaccination of fully insured individuals. Assuring that public funds are not subsidizing insured benefits allows CDC to target its resources more effectively to meet public health priorities. In alignment with the vaccine use policy and to assure that public funds are not subsidizing insured benefits, the FY 2016 budget continues to allocate vaccine direct assistance based on the estimated number of uninsured adults within each awardee’s jurisdiction. For each fiscal year’s allocation of vaccine direct assistance to U.S state and city awardees, CDC uses the most currently available U.S. Census data for uninsured adults ages 19 to 64 years as its base population and allocates vaccine to each awardee based on their proportion of the uninsured adult population, as done since FY 2014. The

allocation to awardees is adjusted as necessary to minimize large fluctuations--supporting an orderly transition to the new vaccine allocation formula, limiting disruption to the Immunization Program, and ensuring that all awardees receive some amount of discretionary vaccine to provide a safety net. CDC monitors spend plans developed by awardees, and makes further adjustments as needed throughout the year so that no vaccine goes to waste. The allocation of vaccine to the five U.S. Territories and three Freely Associated States was not changed.

CDC provides national public health expertise in VPDs that supports the 64 awardees, including expertise in:

- Epidemiology and surveillance
- Laboratory methods and science
- Immunology
- Immunization policy
- Health communications science
- Vaccine management
- Program implementation

Immunization Cooperative Agreements^{1, 2, 3}

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	64	64	64	64	64	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	64	64	64	64	64	0
Average Award	\$7.745	\$5.315	\$4.350	\$5.778	\$4.991	-\$0.787
Range of Awards	\$0.417-\$55.710	\$0.572-\$37.773	\$0.456-\$26.600	\$0.609-\$32.983	\$0.539-\$30.018	N/A
Total Awards	\$557.870	\$340.138	\$278.402	\$369.767	\$319.428	-\$50.339

¹This table includes Immunization Program budget authority and Prevention and Public Health Funds. It does not include funds from the former program implementation line.

²Immunization operations awards and vaccine direct assistance are included in the table. In FY 2013, CDC awarded a new five-year cooperative agreement for Immunization Program funding.

³These funds are awarded by formula.

Influenza Planning and Response Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	\$172.126	\$172.558	\$187.558	+\$15.000
PHSSEF	N/A	\$15.000	N/A	-\$15.000
Total¹	\$172.126	\$187.558	\$187.558	\$0.000

¹ FY 2014 amount does not include \$29.124 million in HHS Pan Flu funding (of which \$15.3 million is for International Flu activities).

Overview

CDC’s influenza planning and response activities ensure a comprehensive response for seasonal influenza as well as the ability to respond to an influenza pandemic. CDC’s influenza program works to detect, respond to, and prevent influenza disease that can cause mild to severe illness, and at times, death. Some populations—such as older adults, young children, and people with certain health conditions—are at higher risk for serious influenza complications. Over a period of 30 years, between 1976 and 2006, annual estimates of influenza-associated deaths in the United States ranged from a low of 3,000 to a high of 49,000 people. On average, influenza causes more than 200,000 hospitalizations annually, and a [study³](#) published in 2007 estimated direct medical costs for hospitalizations and outpatient visits from seasonal influenza-related complications at more than \$10 billion annually. Not only can influenza infections be severe, but influenza seasons are unpredictable—requiring constant vigilance from CDC and its domestic and international public health partners. CDC provides leadership and a cutting-edge scientific and programmatic foundation for the diagnosis, prevention, and control of influenza domestically and internationally. CDC’s annual seasonal influenza activities improve preparedness by:


- Strengthening surveillance and diagnostic capacity
- Improving public awareness and provider knowledge about influenza and the importance of vaccination, other prevention measures, and early treatment
- Enhancing our international, federal, state, and local partnerships to respond quickly to influenza epidemics

Prevention of seasonal influenza requires an annual reassessment of virus strains contained in the vaccine—an assessment based on CDC surveillance data. The vaccine must be produced and administered annually to account for seasonal variations.

the **benefits** of **flu vaccination**

The estimated number of influenza-associated illnesses prevented by flu vaccination during the 2012-2013 season:


6.6 million



or the population of the state of **Arizona**

The estimated number of flu-associated medical visits prevented by vaccination during the 2012-2013 season:


3.2 million



or the passengers of **1,067** mega cruise ships

The estimated number of flu hospitalizations prevented during the 2012-2013 season:

79,000



or all the fans in a **FULL** NFL stadium

DATA: Morbidity and Mortality Weekly Report (MMWR), December 13, 2013.

get **vaccinated**

³ <http://download.thelancet.com/flatcontentassets/H1N1-flu/epidemiology/epidemiology-14.pdf>

Since 2010, the Advisory Committee on Immunization Practices (ACIP) has recommended influenza vaccine for all Americans aged six months and older. To implement this recommendation, CDC works to educate providers and raise public awareness. CDC makes special efforts to reach high-risk individuals, such as pregnant women, and provides further outreach to subspecialty medical providers to increase vaccination of persons at especially high risk of severe illness or death from influenza. CDC also promotes vaccination at non-traditional venues—such as retail pharmacies—to increase access to vaccine services outside of clinic settings and hours.

Budget Request

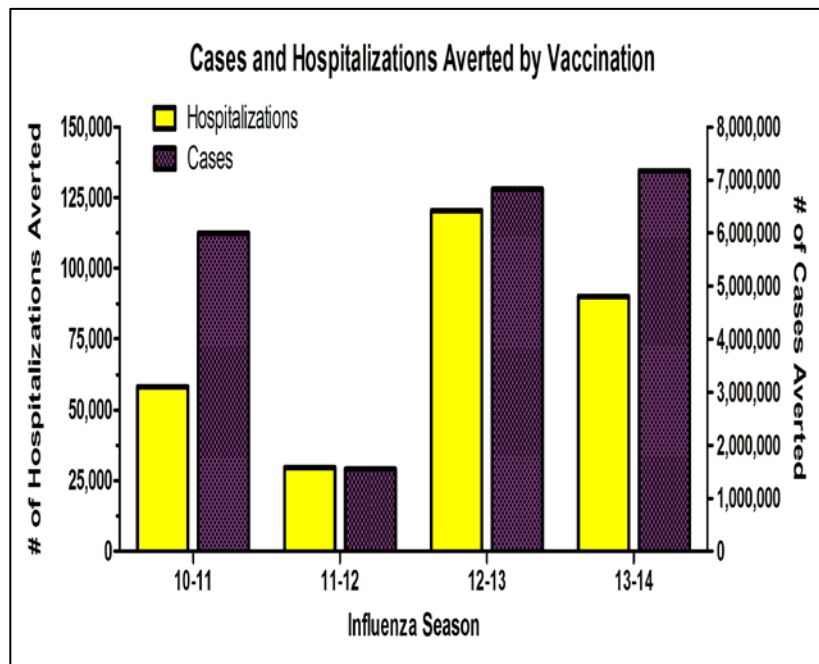
CDC’s FY 2016 request of **\$187,558,000** for influenza planning and response is level with the FY 2015 Enacted level. FY 2016 funding will support the following activities:

- Influenza Prevention
- Detection and Monitoring of Influenza
- State/Municipality/Territorial Laboratory Capacity Support
- Response to Influenza Pandemics

Influenza Prevention

In FY 2016, CDC will support efforts to prevent influenza through vaccination. CDC focuses on increasing demand with healthcare providers for influenza vaccination each season through investments in health communication with providers and the general public, targeted outreach to high-risk populations, and partnerships with pharmacists as a means to extend the reach of influenza vaccination. Annual vaccination campaigns help reach the Healthy People 2020 influenza vaccination goals, including those for minority and high-risk populations, and they also help build capacity for vaccination efforts in the event of an influenza pandemic.

CDC studies published in [June 2013](#)³ and [December 2013](#)⁴ estimated influenza illness and hospitalizations averted by influenza vaccination in the [United States](#)^{4,5}. These studies showed that influenza vaccination programs in the United States produce a substantial health benefit in terms of averted cases, clinic visits, and hospitalizations. However, opportunities for improvement were discovered. It was found that there was a potential for additional disease prevention through increased vaccination coverage, particularly among nonelderly adults, and increased vaccine effectiveness, particularly among the elderly. CDC will continue to examine the level of effectiveness of the influenza program by measuring aversion of illness and death, as well as costs saved to the American public.



⁴ <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0066312>

⁵ http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6249a2.htm?s_cid=mm6249a2_w

To complement national efforts, resources will be available to all 64 immunization awardees to increase demand for seasonal influenza—including school-located vaccination clinics—and to improve influenza coverage rates among priority populations (school-aged children, high-risk adults, and racial and ethnic groups). CDC will measure vaccination coverage, with particular attention to racial and ethnic minority populations with historically low coverage rates. These surveys guide outreach efforts that result in improvement of influenza vaccination rates, particularly among children.

The Partnership for Influenza Vaccine Introduction (PIVI) is a growing CDC-led collaboration between public and private partners. PIVI supplies donated influenza vaccine to low- and middle-income countries that are otherwise ready to establish or expand their influenza vaccination programs, and assists with vaccination program evaluation and sustainability planning. In 2014, PIVI’s partners made the Lao People’s Democratic Republic (PDR) annual flu vaccination campaign possible for a third year in a row, and expanded vaccination of pregnant women in Nicaragua for a second year in a row. Vaccination donation programs were launched in 2014 in Morocco and Armenia.

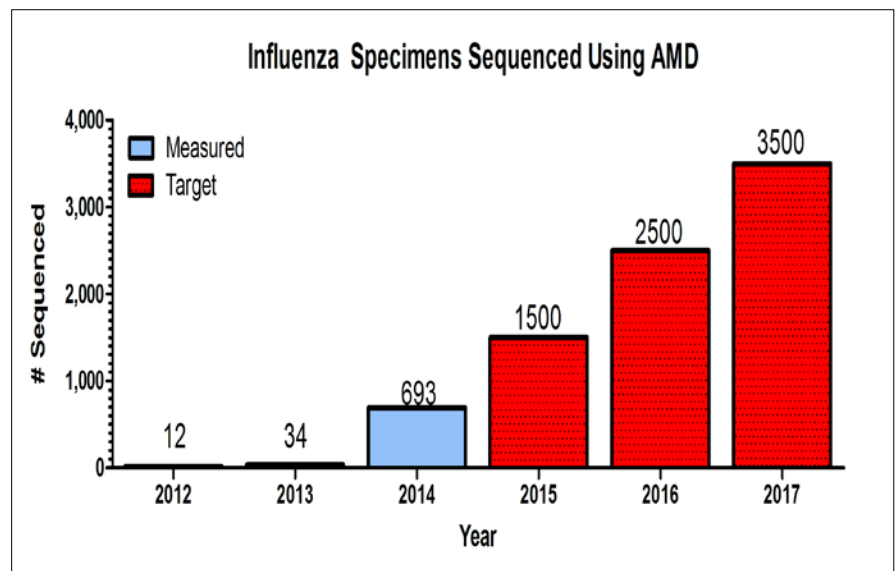
Detection and Monitoring of Influenza

Detection and monitoring of influenza involves a network of laboratories at the state level and internationally that are routinely testing samples to:

- Determine severity of the [influenza season](#)⁶
- Identify viruses that are causing disease and may pose a pandemic threat
- Determine the effectiveness of the influenza vaccine and other interventions

Ongoing work to improve laboratory and surveillance methods ensures that CDC can adequately respond to unusual cases. To build capacity for influenza surveillance, CDC continues to train public health laboratory workers at state laboratories that have similar responsibilities during foodborne outbreaks.

In FY 2016, CDC will serve as a World Health Organization (WHO) Collaborating Center to rapidly detect, identify, and characterize emerging influenza viruses so vaccine-candidate viruses used to produce vaccines for seasonal and novel viruses are rapidly selected. CDC receives and characterizes approximately 11,000 influenza virus specimens each year. During the 2013/2014 influenza season, CDC was able to fully characterize nearly 700 virus specimens using a new deep sequencing method known as Advanced Molecular Detection (AMD). AMD uses advanced molecular sequencing



tools along with cutting-edge information technologies and bioinformatics experts to enable faster and more effective infectious disease prevention and control. The number of influenza virus specimens received and characterized fluctuates by year depending on the severity and burden of the disease. Worldwide characterization of these specimens is essential to the production of each season’s influenza vaccine. It also aids

⁶ <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

in informing vaccine policies and recommendations as well as decisions regarding potential vaccines for novel viruses with pandemic potential. Effective influenza control depends on shortening the time between identification of novel influenza viruses and delivery of effective vaccines.

CDC will work with domestic and international partners in the intersection of human and animal health to improve surveillance, conduct swift outbreak responses, and complete threat assessments for emerging influenza viruses with pandemic potential. Pandemics emerge when a virus that is predominantly transmitted among animals develops the ability to be transmitted among humans. Each human case of infection with an animal influenza virus represents the potential for a pandemic. CDC will conduct research to understand better the complex factors that determine how and when these novel influenza viruses develop the ability to be transmitted from person to person.

Because novel influenza viruses can emerge anywhere in the world, CDC will support the international monitoring of influenza and evaluate countries' core capacities to conduct surveillance, perform laboratory testing, and prepare to respond to influenza pandemics.

CDC's influenza program funds WHO regional offices as well as partner nations through cooperative agreements. CDC will continue this support by funding more than 40 countries, with emphasis on countries that continue to experience animal outbreaks and human cases of H5N1 and H7N9 influenza. Core activities funded through these agreements include:

- Establishing, expanding, and maintaining influenza surveillance and laboratory capacity
- Developing global and local pandemic plans and influenza prevention policies
- Supporting targeted research projects to address critical needs
- Building the evidence base for decisions on influenza vaccine program expansion

CDC's international support resulted in twice as many countries reporting to WHO FluNet since 2005 when the number of countries from which specimens were processed was 59; as of 2013, 121 countries report to WHO FluNet. CDC will work on expanding virus sample sharing among countries so that vaccines and diagnostic tests for viruses with pandemic potential can be produced.

Domestically, CDC will support the capability of state and local health departments to conduct influenza laboratory testing. CDC will provide training and consultation to maintain the number of public health laboratories able to perform testing for resistance to antiviral medications and to participate in CDC evaluations of new influenza diagnostic tests.

Supporting State/Municipality/Territorial Laboratory Capacity

The Epidemiology and Laboratory Capacity for Infectious Diseases cooperative agreement (ELC) assists states and eligible local public health agencies—strengthening their basic epidemiologic and laboratory capacity to address infectious disease threats. CDC funds 50 states, five municipalities, and one territory through the ELC to conduct influenza surveillance and diagnostic activities with funding from the Influenza Planning and Response budget line.

In FY 2016, public health departments will be funded to improve detection of novel human influenza virus infections, such as the H3N2v and H7N9 influenza virus. Rapid and thorough investigations determined the H3N2v virus caused 308 human cases in the United States in 2012. Collaboration between the state and local health authorities and CDC is essential for risk assessment and response to similar novel viruses. In addition, these funds support seasonal influenza surveillance consisting of eight interrelated systems. This network of systems provides data on:

- Influenza viruses

- Outpatient influenza-like illness
- Influenza-associated hospitalizations
- Influenza-associated deaths
- Geographic distribution of the viruses

The network also forms the foundation for pandemic influenza surveillance.

CDC provides ELC awardees with the reporting websites and other materials necessary to report influenza surveillance data throughout the year from public health laboratories, outpatient influenza-like illness surveillance sites, and vital statistics offices. CDC updates awardees on the current influenza season and any pertinent developments in influenza surveillance during monthly conference calls, yearly in-person meetings, and individually as needed. Awardees also rely on CDC’s epidemiologic, laboratory, and programmatic assistance during investigations of outbreaks or unusual cases of influenza (e.g., pediatric deaths, human infections with novel influenza A viruses, and antiviral resistant influenza infections or outbreaks).

Influenza Planning and Response ELC Grants^{1,2}

(dollars in millions)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	2016
	Actual	Actual	Final	Estimate	President’s Budget	+/-2015
Number of Awards	56	56	56	56	56	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	56	56	56	56	56	0
Average Award	\$0.117	\$0.107	\$0.107	\$0.107	\$0.107	\$0.000
Range of Awards	\$0.016–\$0.232	\$0.016–\$0.232	\$0.016–\$0.232	\$0.016–\$0.232	\$0.016–\$0.232	N/A
Total Grant Awards	\$6.526	\$6.000	\$6.000	\$6.000	\$6.000	\$0.000

¹This table only reflects Influenza Planning and Response funding that goes out through the ELC, which also funds other infectious disease activities.

²These funds are not awarded by formula.

Response to Influenza Pandemics

In FY 2016, CDC will work to ensure the availability and effectiveness of medical countermeasures and equipment in the event of an influenza pandemic. Scientific experts will update or develop guidance that will inform purchasing countermeasure requirements. Examples of countermeasures include antiviral drugs, respirators or masks, and ventilators to assist patients with breathing. CDC also will develop and evaluate solutions to lessen the impact of an influenza pandemic through non-pharmaceutical interventions or actions that people and communities can take to help slow the spread of influenza. In addition, CDC is developing a nationwide system of triage call centers that would be activated during a severe pandemic to provide advice to ill individuals and thereby reduce the burden on hospitals, healthcare facilities, and public health departments. CDC also is collaborating with the National Association of County and City Health Officials (NACCHO), the Association of State and Territorial Health Officials (ASTHO), and national associations that represent pharmacies, pharmacists, and pharmaceutical distributors on efforts to improve antiviral distribution and dispensing at the local level during a pandemic.

CDC will sustain the nation’s ability to respond to influenza pandemics by ensuring well-trained staff are in place for pandemic response. CDC will also provide scientific and programmatic expertise to help CDC’s Public Health Emergency Preparedness (PHEP) Cooperative Agreement Program and HHS’ Hospital Preparedness Program (HPP) Cooperative Agreement awardees meet all hazard requirements of the Pandemic and All Hazards Preparedness Reauthorization Act of 2013. CDC collaborates with awardees to determine their jurisdictional priorities for capability development and sustainment, along with related performance measures. The pandemic influenza capabilities include Public Health Surveillance & Epidemiological Investigation, Public Health Laboratory Testing, Medical Countermeasure Dispensing, and Emergency Operations Coordination. In addition, CDC will support planning efforts among health departments, hospitals, and emergency responders. Coordination among these groups will result in more integrated emergency response plans prior to a public

health disaster to ensure a rapid, efficient, and effective response at the community level. CDC will test its response capabilities with federal, state, and local partners in FY 2015 and FY 2016 with multiple exercises using techniques such as virtual tabletop and functional exercises to evaluate and improve its response plans based on lessons from previous responses and exercises.

Affordable Care Act Prevention and Public Health Fund

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
ACA/PPHF	\$160.300	\$210.300	\$210.300	\$0.000

In FY 2016, CDC’s request of **\$210,300,000** from the Affordable Care Act Prevention and Public Health Fund will be used in conjunction with requested budget authority to support immunization activities and advance modernization of CDC’s immunization infrastructure and evidence base. CDC will also use these funds to support vaccine purchase, state operations, and communications.

In FY 2016, the Immunization Program will remain responsible for the essential public health workforce and systems at the national, state, and local levels that protect all Americans, regardless of health insurance status, from disability and death from vaccine-preventable diseases. CDC will conduct scientific studies that provide the evidence base for national immunization policy, including assessing burden of disease, vaccine effectiveness and safety, economic analyses, and program feasibility. The Immunization Program will continue to be responsible for providing federally purchased vaccines to protect uninsured Americans from preventable diseases and will also provide funding to immunization awardees and support scientific and programmatic expertise to further develop, enhance, and maintain Immunization Information Systems.

State Table: Discretionary (Section 317)^{1,2,3}

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Alabama	\$4,220,523	\$5,610,013	\$4,843,407	-\$766,606
Alaska	\$1,327,869	\$1,655,882	\$1,500,509	-\$155,372
Arizona	\$5,654,141	\$7,219,254	\$6,425,255	-\$793,999
Arkansas	\$2,404,085	\$2,857,199	\$2,686,561	-\$170,639
California	\$26,599,778	\$32,983,425	\$30,018,106	-\$2,965,319
Colorado	\$4,422,150	\$5,856,363	\$5,070,161	-\$786,202
Connecticut	\$3,238,098	\$4,330,516	\$3,721,627	-\$608,889
Delaware	\$984,879	\$1,193,879	\$1,105,597	-\$88,283
District of Columbia (D.C.)	\$1,403,607	\$1,849,156	\$1,607,220	-\$241,936
Florida	\$14,193,063	\$19,078,243	\$16,333,165	-\$2,745,077
Georgia	\$7,866,150	\$10,335,698	\$9,001,385	-\$1,334,313
Hawaii	\$1,626,995	\$2,007,318	\$1,833,913	-\$173,405
Idaho	\$1,664,657	\$2,146,689	\$1,896,224	-\$250,466
Illinois	\$5,393,447	\$6,344,907	\$6,013,256	-\$331,651
Indiana	\$4,822,902	\$6,324,174	\$5,516,190	-\$807,985
Iowa	\$2,908,022	\$3,837,027	\$3,331,135	-\$505,892
Kansas	\$2,505,855	\$3,101,248	\$2,826,602	-\$274,645
Kentucky	\$3,604,983	\$4,722,140	\$4,122,127	-\$600,013
Louisiana	\$2,616,273	\$3,244,399	\$2,952,543	-\$291,855
Maine	\$1,709,560	\$2,038,174	\$1,911,799	-\$126,375
Maryland	\$3,916,948	\$4,899,550	\$4,429,415	-\$470,134
Massachusetts	\$5,677,344	\$7,800,711	\$6,569,583	-\$1,231,127
Michigan	\$8,449,960	\$11,500,465	\$9,754,458	-\$1,746,007
Minnesota	\$4,482,996	\$5,935,745	\$5,139,667	-\$796,077
Mississippi	\$3,029,524	\$3,954,412	\$3,461,137	-\$493,275
Missouri	\$4,592,034	\$6,135,257	\$5,276,464	-\$858,793
Montana	\$1,101,539	\$1,434,141	\$1,257,685	-\$176,456
Nebraska	\$1,840,748	\$2,371,803	\$2,096,390	-\$275,413
Nevada	\$2,356,569	\$3,073,710	\$2,691,816	-\$381,895
New Hampshire	\$1,422,481	\$1,840,794	\$1,621,729	-\$219,065
New Jersey	\$6,437,266	\$8,417,324	\$7,357,544	-\$1,059,781
New Mexico	\$2,322,718	\$3,012,755	\$2,649,557	-\$363,198
New York	\$7,998,180	\$10,179,752	\$9,082,051	-\$1,097,701
North Carolina	\$7,443,828	\$10,043,245	\$8,574,217	-\$1,469,028
North Dakota	\$945,361	\$1,233,390	\$1,079,921	-\$153,469
Ohio	\$8,754,034	\$11,753,835	\$10,071,171	-\$1,682,665
Oklahoma	\$3,706,945	\$5,025,036	\$4,274,913	-\$750,123
Oregon	\$3,271,148	\$4,250,551	\$3,733,070	-\$517,481
Pennsylvania	\$8,638,697	\$12,057,123	\$10,036,415	-\$2,020,709
Rhode Island	\$1,851,822	\$2,665,417	\$2,168,715	-\$496,701
South Carolina	\$3,967,026	\$5,236,146	\$4,544,607	-\$691,539
South Dakota	\$1,555,206	\$2,169,931	\$1,806,688	-\$363,244

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Tennessee	\$5,620,229	\$7,575,923	\$6,472,216	-\$1,103,707
Texas	\$20,572,037	\$28,064,495	\$23,761,993	-\$4,302,501
Utah	\$2,527,274	\$3,198,726	\$2,865,933	-\$332,793
Vermont	\$1,218,482	\$1,690,883	\$1,413,541	-\$277,342
Washington	\$8,244,729	\$12,341,317	\$9,756,996	-\$2,584,322
West Virginia	\$1,888,192	\$2,563,636	\$2,178,362	-\$385,274
Wisconsin	\$5,095,514	\$6,966,474	\$5,888,876	-\$1,077,599
Wyoming	\$843,276	\$1,082,416	\$959,504	-\$122,912
Cities				
Chicago	\$3,250,962	\$4,018,543	\$3,666,046	-\$352,497
Houston ⁴	\$2,034,625	\$2,393,097	\$2,268,344	-\$124,753
New York City	\$8,016,769	\$10,738,329	\$9,217,504	-\$1,520,825
Philadelphia	\$1,767,705	\$2,296,254	\$2,017,172	-\$279,083
San Antonio	\$1,508,142	\$1,773,855	\$1,681,384	-\$92,471
Territories				
American Samoa	\$506,287	\$608,580	\$567,243	-\$41,337
Guam	\$2,087,309	\$3,195,631	\$2,485,387	-\$710,245
Marshall Islands	\$2,514,810	\$3,871,840	\$2,999,059	-\$872,781
Micronesia	\$5,169,144	\$8,535,275	\$6,287,803	-\$2,247,472
Northern Mariana Islands	\$1,520,276	\$2,243,962	\$1,792,352	-\$451,610
Puerto Rico	\$3,806,074	\$5,298,558	\$4,418,975	-\$879,583
Republic Of Palau	\$456,308	\$679,087	\$539,161	-\$139,926
Virgin Islands	\$876,022	\$1,032,503	\$977,109	-\$55,394
Subtotal States	\$244,888,044	\$323,081,484	\$280,510,461	-\$42,571,023
Subtotal Cities	\$16,578,203	\$21,220,079	\$18,850,450	-\$2,369,629
Subtotal Territories	\$16,936,230	\$25,465,437	\$20,067,089	-\$5,398,348
Total States/Cities/Territories	\$278,402,477	\$369,767,000	\$319,428,000	-\$50,339,000
Total Resources	\$278,402,477	\$369,767,000	\$319,428,000	-\$50,339,000

¹CFDA NUMBER: 93.268, Discretionary

²This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial awardees). For a more comprehensive view of grant and cooperative agreement funding to awardees by jurisdiction, visit <http://www.cdc.gov/FundingProfiles/FundingProfilesRIA/>.

³Includes vaccine direct assistance and immunization infrastructure/operations grant funding.

⁴Immunization infrastructure/operations grant funding only; vaccine direct assistance for Houston is included with Texas.

State Table: Vaccines for Children^{1,2}

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Alaska	\$10,711,791	\$13,250,460	\$14,112,491	\$862,031
Arizona	\$80,306,071	\$91,478,193	\$97,608,602	\$6,130,409
Arkansas	\$46,842,934	\$52,943,050	\$56,491,838	\$3,548,788
California	\$422,835,814	\$478,052,923	\$510,096,650	\$32,043,727
Colorado	\$44,051,071	\$50,849,033	\$54,255,377	\$3,406,344
Connecticut	\$32,067,690	\$38,506,596	\$41,083,267	\$2,576,670
Delaware	\$9,912,439	\$12,353,191	\$13,178,974	\$825,783
District of Columbia (D.C.)	\$9,215,073	\$11,565,812	\$12,338,815	\$773,003
Florida	\$209,310,910	\$235,490,317	\$251,277,417	\$15,787,099
Georgia	\$118,840,403	\$135,089,209	\$144,142,762	\$9,053,554
Hawaii	\$14,677,105	\$19,668,359	\$20,980,694	\$1,312,336
Idaho	\$16,226,399	\$18,966,955	\$20,237,085	\$1,270,130
Illinois	\$80,860,664	\$93,307,347	\$99,558,007	\$6,250,660
Indiana	\$63,249,685	\$72,657,520	\$77,525,478	\$4,867,958
Iowa	\$26,891,801	\$31,649,954	\$33,768,996	\$2,119,042
Kansas	\$23,009,027	\$27,055,973	\$28,867,482	\$1,811,509
Kentucky	\$44,147,114	\$50,085,866	\$53,442,765	\$3,356,898
Louisiana	\$64,029,433	\$72,117,098	\$76,951,619	\$4,834,522
Maine	\$12,317,804	\$15,918,780	\$16,981,905	\$1,063,124
Maryland	\$65,420,005	\$74,002,360	\$78,962,636	\$4,960,276
Massachusetts	\$55,942,305	\$65,310,889	\$69,684,611	\$4,373,722
Michigan	\$85,312,778	\$98,472,482	\$105,069,101	\$6,596,619
Minnesota	\$41,465,150	\$48,066,665	\$51,286,231	\$3,219,566
Mississippi	\$38,722,580	\$43,992,058	\$46,940,413	\$2,948,356
Missouri	\$53,046,118	\$60,511,584	\$64,566,599	\$4,055,016
Montana	\$8,384,393	\$10,180,777	\$10,861,816	\$681,039
Nebraska	\$17,466,815	\$20,425,956	\$21,793,771	\$1,367,815
Nevada	\$29,873,880	\$35,071,438	\$37,419,723	\$2,348,285
New Hampshire	\$8,987,025	\$11,415,886	\$12,178,628	\$762,742
New Jersey	\$64,740,239	\$75,743,875	\$80,815,964	\$5,072,088
New Mexico	\$33,997,955	\$39,768,826	\$42,431,908	\$2,663,081
New York	\$81,680,133	\$98,045,786	\$104,606,588	\$6,560,802
North Carolina	\$106,833,120	\$121,785,603	\$129,946,887	\$8,161,285
North Dakota	\$6,034,246	\$7,489,797	\$7,990,527	\$500,730
Ohio	\$103,648,960	\$116,308,889	\$124,106,751	\$7,797,862
Oklahoma	\$54,461,248	\$62,882,814	\$67,095,260	\$4,212,446
Oregon	\$30,402,979	\$36,120,482	\$38,538,200	\$2,417,718
Pennsylvania	\$77,435,872	\$91,300,907	\$97,413,419	\$6,112,511
Rhode Island	\$10,123,715	\$12,844,597	\$13,702,824	\$858,227
South Carolina	\$55,736,476	\$64,426,511	\$68,742,231	\$4,315,720
South Dakota	\$9,284,479	\$11,188,321	\$11,936,914	\$748,594
Tennessee	\$70,026,622	\$79,291,220	\$84,605,848	\$5,314,629
Texas	\$362,540,692	\$408,954,344	\$436,368,238	\$27,413,895

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Utah	\$24,156,801	\$28,669,237	\$30,588,264	\$1,919,027
Vermont	\$6,000,936	\$8,414,601	\$8,975,433	\$560,832
Virginia	\$59,679,982	\$67,164,060	\$71,666,651	\$4,502,591
Washington	\$75,424,480	\$89,860,649	\$95,874,986	\$6,014,337
West Virginia	\$19,966,535	\$23,273,116	\$24,831,734	\$1,558,618
Wisconsin	\$41,613,587	\$47,984,613	\$51,199,169	\$3,214,556
Wyoming	\$5,630,047	\$7,072,404	\$7,545,078	\$472,674
Cities				
Chicago	\$45,441,851	\$53,644,671	\$57,236,008	\$3,591,336
Houston ³	\$712,576	\$2,613,517	\$2,785,156	\$171,639
New York City	\$124,479,281	\$142,187,749	\$151,715,697	\$9,527,948
Philadelphia	\$25,169,625	\$30,656,054	\$32,706,606	\$2,050,553
San Antonio	\$612,485	\$2,246,412	\$2,393,942	\$147,530
Territories				
American Samoa	\$1,562,898	\$1,860,778	\$1,984,317	\$123,539
Guam	\$2,614,555	\$3,595,470	\$3,831,536	\$236,066
Northern Mariana Islands	\$1,780,260	\$2,250,598	\$2,399,448	\$148,850
Puerto Rico	\$48,192,976	\$56,143,626	\$59,903,665	\$3,760,039
Virgin Islands	\$2,030,342	\$4,114,640	\$4,386,876	\$272,236
Subtotal States	\$3,090,929,537	\$3,552,098,484	\$3,790,057,748	\$237,959,264
Subtotal Cities	\$196,415,818	\$231,348,403	\$246,837,409	\$15,489,006
Subtotal Territories	\$56,181,030	\$67,965,113	\$72,505,843	\$4,540,730
Total States/Cities/Territories	\$3,343,526,385	\$3,851,412,000	\$4,109,401,000	\$257,989,000
Other Adjustments ⁴	\$213,205,048	\$129,838,000	\$94,000	\$129,932,000
Total Resources⁵	\$ 3,556,731,433	\$3,981,250,000	\$4,109,307,000	\$128,057,000

¹CFDA Number: 93.268, Mandatory

²This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit <http://www.cdc.gov/FundingProfiles/FundingProfilesRIA/>.

³Funding for Houston only includes funding for operations, not the cost of vaccines. Funding for Texas includes the cost of vaccines for Houston.

⁴Other adjustments include vaccine that is in inventory at the centralized distribution center but has not been ordered by immunization providers, funds for centralized vaccine distribution activities, developing a new centralized vaccine ordering system, pediatric stockpile, influenza stockpile, stockpile storage and rotation, and program support services.

⁵Total resources for FY 2014 reflect Actuals; total resources for FY 2015 and FY 2016 are based on the OMB-approved FY 2016 VFC PB 10 Year Table.