HUMAN DRUGS

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Human Drugs	**1,338,599**	**1,369,889**	**1,394,827**	**1,408,023**	**13,196**
Budget Authority	***482,287***	***482,243***	***491,503***	***491,503***	---
User Fees	***856,312***	***887,646***	***903,324***	***916,520***	***13,196***
Center	1,135,258	1,193,483	1,189,531	1,200,581	11,050
Budget Authority	346,080	346,045	355,296	354,856	-440
User Fees	789,178	847,438	834,235	845,725	11,490
Prescription Drug (PDUFA)	*561,252*	*588,892*	*601,643*	*608,835*	7,192
Generic Drug (GDUFA)	*211,625*	*256,254*	*215,867*	*219,740*	3,873
Biosimilars (BsUFA)	*15,900*	*1,896*	*16,298*	*16,706*	408
Outsourcing Facility	*401*	*396*	*427*	*444*	17
Field	203,341	176,406	205,296	207,442	2,146
Budget Authority	136,207	136,198	136,207	136,647	440
User Fees	67,134	40,208	69,089	70,795	1,706
Prescription Drug (PDUFA)	*11,453*	*6,028*	*12,276*	*12,423*	147
Generic Drug (GDUFA)	*54,083*	*34,180*	*55,167*	*56,158*	991
Biosimilars (BsUFA)	*1,348*	---	*1,382*	*1,416*	34
Outsourcing Facility	*250*	---	*264*	*277*	13
International Courier	---	---	---	*521*	521
FTE	**5,341**	**5,299**	**5,530**	**5,539**	**9**

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); Public Health Service Act of 1944 (42 U.S.C. 201); Federal Advisory Committee Act (FACA) of 1972 as amended; Orphan Drug Act of 1983 (21 U.S.C. 360ee); Drug Price Competition and Patent Term Restoration Act of 1984 (Section 505(j) 21 U.S.C. 355(j)) (a.k.a. "Hatch Waxman Act"); Prescription Drug Marketing Act (PDMA) of 1987 (21 U.S.C. 353); Anti-Drug Abuse Act of 1988; Clinical Laboratory Improvement Amendments of 1988 (42 U.S.C. 201); Orphan Drug Amendments of 1988; Generic Drug Enforcement Act of 1992; Prescription Drug User Fee Act (PDUFA) of 1992; FDA Export Reform and Enhancement Act of 1996; Food and Drug Administration Modernization Act (FDAMA) of 1997; Public Health Security and Bioterrorism Preparedness and Response Act of 2002; Best Pharmaceuticals for Children Act (BPCA) of 2002; Freedom of Information Act (FOIA) as amended in 2002 (5 U.S.C. § 552); Pediatric Research Equity Act (PREA) of 2003; Project Bioshield Act of 2004 (21 U.S.C. 360bbb-3); Food and Drug Administration Amendments Act (FDAAA) of 2007; Public Health Service Act of 2010 (42 U.S.C. 262); Protecting Patients and Affordable Care Act of 2010; Food and Drug Administration Safety and Innovation Act of 2012 (FDASIA); Drug Quality and Security Act (2013); Sunscreen Innovation Act (2014); Adding Ebola to the FDA Priority Review Voucher Program Act (2014)

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

FDA's Human Drugs Program is responsible for ensuring the safety and efficacy of new, generic, and over-the-counter (OTC) drug products, monitoring marketed drug products to ensure patient safety, and monitoring drug quality. The Center for Drug Evaluation and Research (CDER) and the Office of Regulatory Affairs (ORA) field drugs program are the components of FDA's Human Drugs Program, which operates with funding from budget authority and user fees.

The Program's mission is to promote and protect public health by helping to ensure that human drugs are safe and effective for their intended use, that they meet established quality standards, and that they are available to patients. The Human Drugs Program supports the FDA priorities of improving health care quality and reducing health care costs.

The following selected accomplishments demonstrate the Human Drugs Program's delivery of its regulatory and public health responsibilities within the context of current priorities.

Improve and Safeguard Access

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priorities including Regulatory Science, Globalization, Safety and Quality, and Smart Regulation.

The goal of the Human Drugs Program is to promote the public health by ensuring that prescription and over the counter (OTC) human drug products, including brand and generic products, are safe and effective. In addition, FDA aims to ensure that novel prescription drugs become available in a timely manner without compromising high standards of safety and efficacy.

In calendar year 2015, FDA's CDER approved 45 novel new drugs. From 2006 through 2014, CDER has averaged about 28 novel new drug approvals per year. Novel new drugs are often innovative products that serve previously unmet medical needs or otherwise significantly help to advance patient care and public health.

The Human Drugs Program employs a variety of regulatory tools including FDA's expedited development and review programs – fast track, priority review, accelerated approval, and new breakthrough therapy designation. Early and repeated communications with sponsors have also been helpful in expediting these products to market.

FDA is working to increase the speed and efficiency in several areas in the clinical trial phase of drug development. FDA's efforts include:

- accepting flexible clinical development designs
- meeting frequently and working closely with industry sponsors throughout the development process to plan efficient clinical trial programs and agree on needed data
- helping create clinical trial networks and "master protocols," where appropriate, to greatly reduce the cost of conducting clinical trials and reduce the time needed to carry them out.

FDASIA Implementation

FDA's recent accomplishments include implementing several components of the Food and Drug Safety and Innovation Act of 2012 (FDASIA). Accomplishments include publishing a final rule implementing Section 708 of FDASIA in FY 2015. This authority allows FDA to protect the public health by providing an administrative process for the description of certain drugs refused for import into the United States, thus increasing the integrity of the drug supply chain.

Accomplishments also include publishing the Strategic Plan for Preventing and Mitigating Drug Shortages.[16]

[16] http://www.fda.gov/downloads/Drugs/DrugSafety/DrugShortages/UCM372566.pdf

Drug shortages can delay or deny needed care for patients. Drugs in short supply may also lead health care professionals to rely on alternative drug products, which may be less effective or associated with higher risks than the drug in shortage.

In March 2015, as a part of the Strategic Plan for Preventing and Mitigating Drug Shortages, FDA launched the agency's first mobile application specifically designed to speed public access to valuable information about drug shortages. The mobile application, developed to improve public access to information, identifies current drug shortages, resolves drug shortages and discontinuations of drug products.

FDA has continued implementation of two user fee programs under FDASIA – the Generic Drug User Fee Amendments (GDUFA) and the Biosimilars User Fee Act (BsUFA) – as well as the fifth authorization of the Prescription Drug User Fee Act (PDUFA V). GDUFA and BsUFA continue to deliver tremendous public health benefits resulting from the availability of generic drugs and biosimilar biological products which provide patients with more affordable treatments. PDUFA V ensures FDA will continue to receive consistent funding from FY 2013 through FY 2017, enhancing its capacity to fulfill its mission of bringing novel drug products for patients to the market.

One of the key programs under PDUFA V has been the new molecular entity (NME) review program (the Program). Under PDUFA V, FDA has established a modified review program for NME New Drug Applications (NDAs) and original Biologics License Application (BLAs) received from October 1, 2012, through September 30, 2017. The goals of the Program are to increase the efficiency and effectiveness of the first review cycle and decrease the number of review cycles necessary for approval. The Program provides new opportunities for communication between applicants and the FDA review team during the FDA's review of these highly complex applications and additional review time for FDA and applicants to address review activities that occur late in the review cycle.

As of September 30, 2014, FDA has received more than 100 applications through the Program, which involves a more interactive review with applicants. All of the FY 2014 program cohort applications that received actions by September 30, 2014, were acted on within the goal date. The FY 2013 program cohort is nearly closed, and 96 percent of applications were acted on within the goal date. FDA will continue to focus on these highly innovative products that represent important new medicines for the American people.

Generic Drug Review

Generic drug review is a high priority for the Human Drugs Program, and the review function supports the larger FDA mission of promoting and protecting public health. With increasing healthcare costs, many Americans face challenges in accessing medically necessary drug products.

The passage of the Generic Drug User Fee Amendments of 2012 (GDUFA) brought high expectations for the timely review of human generic drug applications, creating risk-based parity between inspections of domestic and foreign firms, and reducing the backlog (i.e., applications pending prior to the implementation of GDUFA on October 1, 2012) of human generic drug applications. Pursuant to GDUFA's design, FDA has restructured the generic drug program. The GDUFA restructuring through FY 2015, was a deep, foundational transformation which has

prepared FDA to meet the goal dates for generic drug applications received.[17] The restructuring of the program included the hiring and training of many new employees, replacing fragmented information technology systems with a new integrated system, and substantially enhancing review and business processes.

FDA's efforts to lay the foundation for a modern generic drug program have positioned the Agency to meet goals through the end of GDUFA I, September 30, 2017. FDA has acted on over 80 percent of the GDUFA backlog applications and should achieve the 90 percent goal before the end of the program. FDA has not missed a GDUFA goal to date, and the Agency has gone above and beyond what was agreed upon in the GDUFA Commitment Letter,[18] exceeding some goals and providing additional guidance and communications to industry.

FDA will continue modernizing the generic drug program by focusing efforts on improving the efficiency, quality, and predictability of the human generic drug program ensuring that Americans have timely access to safe, effective, high quality, and low cost human generic drugs.

Biosimilars

BsUFA supports the review process for biosimilar biological products. The Biosimilar Product Development (BPD) Program was created as a part of BsUFA to provide a mechanism and structure for the collection of development-phase user fees to support FDA's biosimilar review program activities. BsUFA also includes the collection of original and supplemental application user fees, and product and establishment fees. As of November 30, 2015, 59 programs were in the Biosimilar Product Development (BPD) Program. CDER has received meeting requests to discuss the development of biosimilar products for 18 different reference products. In March 2015, FDA approved Zarxio, the first biosimilar product approved in the United States. Zarxio, which is biosimilar to the biological product Neupogen, is a medication that boosts the production of white blood cells and helps to ward off infection in patients receiving strong chemotherapy for some tumors. This significant accomplishment represents the next step to increasing treatment options for patients.

In FY 2015, FDA finalized three guidances: "Scientific Considerations in Demonstrating Biosimilarity to a Reference Product;" "Quality Considerations in Demonstrating Biosimilarity of a Therapeutic Protein Product to a Reference Product;" and "Biosimilars: Questions and Answers Regarding Implementation of the Biologics Price Competition and Innovation Act of 2009." These were published in April 2015 and are part of the series to implement the BPCI. FDA also issued draft guidance in May 2015, "Biosimilars: Additional Questions and Answers Regarding Implementation of the Biologics Price Competition and Innovation Act of 2009," providing new and revised questions and answers from sponsors interested in developing proposed biosimilar products.

In addition, FDA issued in August 2015 draft guidance for industry, "Nonproprietary Naming of Biological Products," which, when finalized, will describe how biological products licensed under the Public Health Service Act (PHS Act) should be named. The draft guidance describes FDA's current thinking that shared nonproprietary names are not appropriate for all biological products. FDA believes that both previously licensed and newly licensed originator biological

[17] http://www.fda.gov/downloads/ForIndustry/UserFees/GenericDrugUserFees/UCM282505.pdf.
[18] For a full description of the FDA's goals see the GDUFA Commitment Letter. For a full description of FDA's performance under GDUFA, see http://www.fda.gov/ForIndustry/UserFees/GenericDrugUserFees/default.htm
for the annual Performance Reports to the Congress on the Generic Drug User Fee Amendments.

products (such as the reference product), related biological products, and biosimilar products should have nonproprietary (or proper) names that include a core drug substance name and, in order to better identify each product, an FDA-designated suffix that is unique for each product. FDA sought comment on whether the nonproprietary name of interchangeable biological products should include a distinct suffix or should share the same suffix as its reference product.

Along with the draft guidance, FDA issued a proposed rule, "Designation of Official Names and Proper Names for Certain Biological Products." This proposed rule would designate nonproprietary names that include a suffix for six previously licensed biological products.

Ebola Response

Since August 2014, FDA has collaborated with other Department of Health and Human Services partner Agencies, product developers, and international partners to respond to the Ebola Virus Disease epidemic in West Africa by contributing to policy development, providing regulatory guidance and feedback on proposals for clinical trials, expediting the review of Investigational New Drug Applications (INDs), and working to uphold product quality and to carry out monitoring and enforcement activities related to potential counterfeit products. FDA worked to contribute to access to investigational Ebola medical countermeasures, including drugs, vaccines, and diagnostic tests, including encouraging development of appropriate clinical trials, authorizing the use of nine investigational diagnostic tests for Ebola under FDA's Emergency Use Authorization authority, and assisting with access to investigational treatments under expanded access, if appropriate, when clinical trials were not otherwise available to evaluate these products.

Opioids

Opioids are powerful medications that can help manage pain when prescribed for the right condition and when used properly. But when physicians prescribe these medications to patients who should not receive them, or when these medications are used improperly or for recreational purposes, they can cause serious harm including overdose and death. FDA continues to encourage the development of opioid products with abuse-deterrent properties and believes that these products have promise to help reduce prescription drug abuse. Additionally, the Agency is encouraging development of non-opioid therapies for chronic pain, and has approved a number of them. FDA remains committed to ensuring that patients with pain have appropriate access to opioid analgesics where they are the best option.

In April 2015, FDA issued the final guidance "Abuse-Deterrent Opioids – Evaluation and Labeling." The science of abuse-deterrent technology is still relatively new and evolving and the final guidance is intended to assist drug makers who wish to develop opioid drug products with potentially abuse-deterrent properties.

In October 2014, FDA hosted a public meeting to discuss the development, assessment, and regulation of abuse-deterrent opioid medications. The meeting focused on scientific and technical issues related to the development and in vitro assessment of these products, as well as FDA's approach towards assessing the benefits and risks of all opioid medications, including those with abuse-deterrent properties.

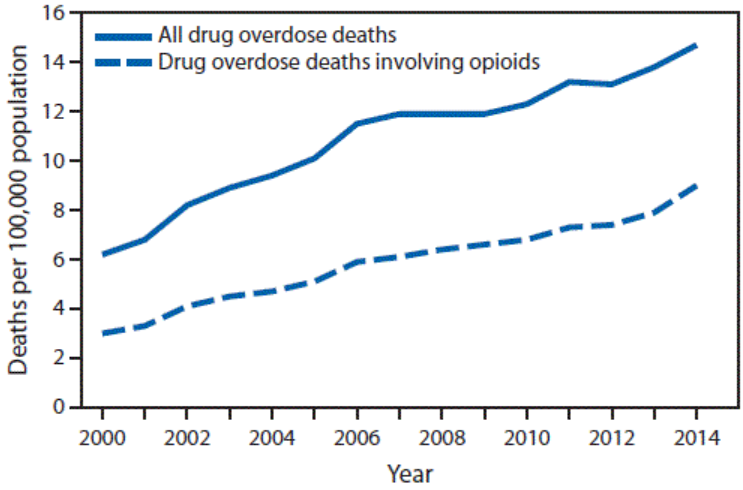
Since 2012, FDA has had in place an approved Risk Evaluation and Mitigation Strategy (REMS) for extended-release/long-acting (ER/LA) Opioid Analgesic intended to reduce serious adverse outcomes resulting from inappropriate prescribing. The central component of the ER/LA opioid analgesics REMS is an education program for prescribers (e.g., physicians, nurse practitioners,

physician assistants). Prescriber education includes drug information on ER/LA opioid analgesics; information on assessing patients for treatment with these drugs; initiating therapy, modifying dosing, and discontinuing use of ER/LA opioid analgesics; managing therapy and monitoring patients; and counseling patients and caregivers about the safe use of these drugs.

FDA is working with many drug makers to support advancements in this area and helping them navigate the regulatory path to market as quickly as possible. In working with industry, FDA will take a flexible, adaptive approach to the evaluation and labeling of potentially abuse-deterrent products.

FDA also remains committed to facilitating access to naloxone, a drug that rapidly reverses the effects of opioid overdose. In April 2014, the Agency approved the first auto-injector naloxone product, Evzio, and in November, 2015, FDA approved the first intranasal formulation of naloxone. Traditionally, approved forms of naloxone had been administered by trained personnel via syringe in ambulance or emergency care settings. The approved auto-injector product, however, may be administered by family members or caregivers, and thus may enable rapid and more wide-spread access to this lifesaving drug. Additionally, in July 2015, FDA held a scientific workshop to initiate a public discussion about issues surrounding the uptake of naloxone in certain medical settings – such as on ambulances and in association with prescriptions for opioids – as well as outside of conventional medical settings to reduce the incidence of opioid overdose fatalities. At the meeting, stakeholders explored legal, regulatory, logistical and clinical aspects related to making naloxone more widely available, and discussed how public health groups can work together to use naloxone to reduce the risk of overdose.

Age-adjusted rate[19] of drug overdose deaths[20]† and drug overdose deaths involving opioids[21, 22] — United States, 2000–2014



Source: National Vital Statistics System, Mortality file.

19 Age-adjusted death rates were calculated by applying age-specific death rates to the 2000 U.S. standard population age distribution.
20 Drug overdose deaths are identified using International Classification of Diseases, Tenth Revision underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14.
21Drug overdose deaths involving opioids are drug overdose deaths with a multiple cause-of-death code of T40.0, T40.1, T40.2, T40.3, T40.4, or T40.6. Approximately one fifth of drug overdose deaths lack information on the specific drugs involved. Some of these deaths might involve opioids.
22 Opioids include drugs such as morphine, oxycodone, hydrocodone, heroin, methadone, fentanyl, and tramadol.

Combating Antibiotic Resistant Bacteria

Antibiotic resistance is poised to worsen due to the selective pressure from the use of existing antibacterial drugs, coinciding with a marked decline in innovative antibacterial drug development. Patients and clinicians are increasingly confronting infections caused by pathogens resistant to many or all antibacterial drugs in both the inpatient and outpatient settings. Antibacterial products face high development costs, particularly for late-stage clinical trials, but additional factors can complicate conduct of clinical trials for antibacterial drugs. For example, patients with serious infections are likely to be acutely ill and in need of urgent therapy, which can preclude efficient consent and timely trial enrollment procedures. In addition, many patients with serious drug-resistant infections have significant comorbidities that may render them less likely to meet inclusion criteria, thus precluding study enrollment.

Advancing the science of clinical trials for antibacterial drugs can have an impact in facilitating as well as stimulating development of needed, new therapies. FDA will continue its efforts to:

- streamline clinical trial protocols
- continue endpoint development
- develop novel clinical trial designs
- facilitate the establishment of a clinical trial network.

Important to this work will be engaging stakeholders in the area of antibacterial drug development. In addition, sustained funding would allow CDER to explore pharmacological strategies in drug development to prevent the emergence of resistance to new antibacterial drugs and continue refining ways to increase efficiencies of and knowledge gained from clinical trials.

Guidances

Below are notable guidances issued by FDA in 2015. These guidances help address various issues. This list reflects the guidances published most recently and does not represent any degree of importance or priority ranking among the published guidances.[23]

Date	#	Title	Description
Nov 2015	FDA-2015-D-3990	Sunscreen Innovation Act: Section 586C(c) Advisory Committee Process	Includes recommendations related to requests seeking a determination on whether a nonprescription sunscreen active ingredient is generally recognized as safe and effective and should be included in the OTC sunscreen drug monograph.
Nov 2015	FDA-2015-D-4021	Over-The-Counter Sunscreens: Safety and Effectiveness Data Guidance for Industry	Addresses FDA's current thinking about the safety and effectiveness data needed to determine whether a nonprescription sunscreen active ingredient is generally recognized as safe and effective (GRASE) and not misbranded when used under specified conditions.

[23] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.

Date	#	Title	Description
Nov 2015	FDA-2015-D-4012	Sunscreen Innovation Act: Withdrawal of a 586A Request or Pending Request	Informs manufacturers of nonprescription drug products containing acetaminophen that FDA will not object to inclusion of a liver warning if the warning appears as described in the guidance.
Nov 2015	FDA-2015-D-4033	Nonprescription Sunscreen Drug Products - Content and Format of Data Submissions to Support a GRASE Determination Under the Sunscreen Innovation	Addresses FDA's current thinking on how we will determine whether a sponsor's submission of safety and efficacy data is sufficiently complete to support a substantive review and determination that an active ingredient is or is not generally recognized as safe and effective for use in nonprescription sunscreen products.
Nov 2015	FDA-2013-D-0286	Formal Meetings Between the FDA and Biosimilar Biological Product Sponsors or Applicants	Provides recommendations to industry on formal meetings between FDA and sponsors or applicants relating to the development and review of biosimilar biological products.
Nov 2015	FDA-2012-D-0529	Organ-Specific Warnings: Internal Analgesic, Antipyretic, and Antirheumatic Drug Products for Over-the-Counter Human Use-Labeling for Products That Contain Acetaminophen	Informs manufacturers of certain nonprescription drug products that contain acetaminophen of the circumstances for which FDA does not intend to object to the inclusion of a liver warning that differs from that required under FDA regulations, provided the warning appears as described in the guidance.
Nov 2015	FDA-2013-D-0589	Human Immunodeficiency Virus-1 Infection: Developing Antiretroviral Drugs for Treatment	Assists sponsors in all phases of development of antiretroviral drugs and therapeutic biologic products for the treatment of HIV-1 infection.

Product Approvals

Below are some of CDER's product approvals that occurred in 2015. This list does not represent any degree of importance or priority ranking of products.[24]

Disease State	Approved	Product Name	Generic Name	FDA-approved use on approval date
Heart Disease	Apr 2015	Corlanor	ivabradine	To reduce hospitalization from worsening heart failure.
	Jul 2015	Entresto	sacubitril/valsartan	To treat heart failure
	Jul 2015	Praluent	alirocumab	To treat certain patients with high cholesterol
	Aug 2015	Repatha	evolocumab	To treat certain patients with high cholesterol
Multiple Myeloma	Feb 2015	Farydak	panobinostat	To treat patients with multiple myeloma
	Nov 2015	Darzalex	daratumumab	To treat patients with multiple myeloma who have received at least three prior treatments.
	Nov 2015	Empliciti	elotuzumab	To treat people with multiple myeloma who have received one to three prior medications
	Nov 2015	Ninlaro	ixazomib	To treat people with multiple myeloma who have received at least one prior therapy
Cancer	Sep 2015	Lonsurf	trifluridine and tipiracil	To treat patients with an advanced form of colorectal cancer who are no longer responding to other therapies
	Oct 2015	Yondelis	trabectedin	To treat specific soft tissue sarcomas (STS) – liposarcoma and leiomyosarcoma – that cannot be removed by surgery(unresectable) or is advanced (metastatic).
	Nov 2015	Tagrisso	osimertinib	To treat certain patients with non-small cell lung cancer
	Nov 2015	Cotellic	cobimetinib	To be used in combination with vemurafenib to treat advanced melanoma that has spread to other parts of the body or can't be removed by surgery, and that has a certain type of abnormal gene (BRAF V600E or V600K mutation)
	Dec 2015	Alecensa	alectinib	To treat ALK-positive lung cancer

24 For more information on product approvals and designations visit http://www.fda.gov/NewsEvents/ProductsApprovals/

Disease State	Approved	Product Name	Generic Name	FDA-approved use on approval date
Other Diseases	Feb 2015	Avycaz	ceftazidime-avibactam	To treat adults with complicated intra-abdominal infections (cIAI), in combination with metronidazole, and complicated urinary tract infections (cUTI), including kidney infections (pyelonephritis), who have limited or no alternative treatment options.
	Mar 2015	Cresemba	isavuconazonium sulfate	To treat adults with invasive aspergillosis and invasive mucormycosis, rare but serious infections
	May 2015	Vibrerzi	eluxadoline	To treat irritable bowel syndrome with diarrhea (IBS-D) in adult men and women.
	Jul 2015	Daklinza	daclatasvir	To treat chronic hepatitis C virus (HCV) genotype 3 infections
	Oct 2015	Veltassa	patiromer for oral suspension	To treat hyperkalemia, a serious condition in which the amount of potassium in the blood is too high.

Rules

Below is a rule recently published by CDER. Rules help address various issues. This list does not represent any degree of importance or priority ranking among the published rules.[25]

Date	#	Purpose or Benefit
Aug 2015	FDA-2015-N-0648	Designation of Official Names and Proper Names for Certain Biological Products

Enhance Oversight

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priorities on Globalization, Safety and Quality, and Smart Regulation.

The Human Drugs Program provides comprehensive regulatory coverage of the production and distribution of drug products and manages inspection programs designed to minimize consumer exposure to defective or harmful drug products. FDA evaluates the findings from inspections and examines the conditions and practices in facilities where drugs are manufactured, packed, tested, and stored. FDA also monitors the quality of finished drug products in distribution through sampling and analysis.

FDA's postmarket safety surveillance activities exist to monitor the safety of drugs that are currently available to consumers. FDA aims to identify and communicate risks associated with approved drugs. The ongoing postmarket safety activities allow FDA to discover risks associated with drug products that could not have been discovered during premarket review. The goal of safety activities is to protect patients from adverse events or improper use of drug products that could result in potentially harmful effects.

[25] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Sentinel

The Food and Drug Administration Amendments Act (FDAAA) required FDA to establish an active surveillance system for monitoring drugs using data from electronic healthcare information. In response to the FDAAA requirement, FDA launched the Sentinel Initiative. The Sentinel Initiative provides significant public health benefits by developing new approaches and methods to monitor the safety of marketed medical products to complement existing FDA surveillance capabilities. These improvements includes access to large quantities of data that enhance FDA's ability to detect and understand safety signals to better inform patients and healthcare providers on the safe use of regulated products.

In FY 2015, the Human Drugs Program expanded surveillance to 182 million patients, which an increase of 4 million patients from FY 2014. In February 2015, FDA held the seventh annual "Sentinel Initiative Public Workshop" to bring together stakeholders who are engaged and interested in the work of the Sentinel Initiative. This meeting, among other things, engaged stakeholders to discuss current and emerging Sentinel projects. To date, the Sentinel Initiative has contributed to multiple safety communications and labeling changes to better inform patients and providers about safe use of drugs and vaccines.

Drug Quality and Security Act

In November 2013, President Obama signed into law the Drug Quality and Security Act (DQSA), Public Law 113-54, which provides FDA with additional responsibilities to oversee compounding activities. During fiscal year 2014, FDA:

- continued to conduct inspections of compounding facilities, including outsourcing facilities
- issued numerous warning letters
- initiated several enforcement actions
- continued to develop the framework to implement the new law.

As of January 1, 2016, 53 firms were registered as outsourcing facilities.

Since the law was passed in November 2013, FDA issued numerous policy documents to implement both section 503A of the Federal Food, Drug, and Cosmetic Act, as amended by the DQSA to remove uncertainty regarding its validity, as well as the new section 503B. Since enactment of the DQSA, and as of January 5, 2016, FDA has issued: 12 draft guidance documents (5 of which were finalized), a proposed rule, and a draft memorandum of understanding that FDA would enter into with individual states. For example, FDA issued draft and final guidances concerning pharmacy compounding of human drug products under section 503A, draft and final guidances concerning registration of human drug compounding outsourcing facilities under section 503B, a draft guidance on current good manufacturing practice requirements for outsourcing facilities, and draft guidances concerning repackaging of certain human drug products by pharmacies and outsourcing facilities and mixing, diluting, and repackaging of biologics outside the scope of a biologics license application.

FDA continues to work on numerous additional rules and guidances. In addition, FDA established a Pharmacy Compounding Advisory Committee which will provide advice on scientific, technical, and medical issues concerning drug compounding under sections 503A and 503B, and held three meetings of the Committee.

Title II of the DQSA, the Drug Supply Chain Security Act, outlines critical steps to build an electronic, interoperable system to identify and trace certain prescription drugs as they are distributed in the United States. By 2023, the system will facilitate the exchange of information at the individual package level about where a drug has been in the supply chain. FDA has published several draft guidances to support implementation of the DSCSA and is continuing to implement the law and further enhance the safety of the drug supply chain.

Guidances

Below are guidances issued by FDA in 2015. These guidances help address various issues. This list does not represent any degree of importance or priority ranking among the published guidances.[26]

Date	#	Title	Description
Nov 2015	FDA-2015-D-2270	DSCSA Implementation: Product Tracing Requirements for Dispensers – Compliance Policy Guidance for Industry	Announces FDA's intention with regard to enforcement of certain product tracing requirements of the Federal Food, Drug, and Cosmetic Act (FD&C Act) added by the Drug Supply Chain Security Act (DSCSA)
Jun 2015	FDA-2014-D-0248	Allowable Excess Volume and Labeled Vial Fill Size in Injectable Drug and Biological Products	Provides the pharmaceutical industry with CDER's and CBER's current thinking on allowable excess volume and labeled vial fill size in injectable drug and biological products

Rules

Below are final rules published by FDA in 2015. These rules help address various issues. This list does not represent any degree of importance or priority ranking among the published rules. [27]

Date	#	Purpose or Benefit
Jul 2015	FDA-2011-N-0898	Permanent Discontinuance of Interruption in Manufacturing of Certain Drug or Biological Products

[26] For more information on guidances please visit http://www.fda.gov/RegulatoryInformation/Guidances/.
[27] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Promote Informed Decisions

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priority on Safety and Quality.

FDA is responsible for protecting the public health by assuring prescription drug information that healthcare professionals and consumers receive is truthful, balanced, and accurate. This is accomplished through a comprehensive surveillance, enforcement, and education program, and by fostering better communication of labeling and promotional information directed to both healthcare professionals and consumers.

Strengthen Organizational Excellence

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priority on Stewardship.

The Human Drugs Program supports FDA's objective to recruit, develop, retain, and strategically manage a world-class workforce, improving the overall operation and effectiveness of FDA. Specifically, the Center for Drug Evaluation and Research (CDER) employs a lean management approach to streamline operations in order to meet public health responsibilities and uphold CDER's public health mission with limited resources. CDER analyzes business operations and processes to maximize business modernization to accomplish as much as possible within budget constraints.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$1,040,607,000	$438,550,000	$602,057,000
FY 2014 Actual	$1,210,709,000	$466,303,000	$744,406,000
FY 2015 Actual	$1,369,889,000	$482,243,000	$887,646,000
FY 2016 Enacted	$1,394,827,000	$491,503,000	$903,324,000
FY 2017 President's Budget	$1,408,023,000	$491,503,000	$916,520,000

BUDGET REQUEST

The FY 2017 Budget Request is $1,048,023,000, of which $491,503,000 is budget authority and $916,520,000 is user fees. The budget authority is flat compared to the FY 2016 Enacted level and user fees increase by $13,196,000. The Center for Drug Evaluation and Research (CDER) amount in this request is $1,200,581,000. The Office of Regulatory Affairs amount is $207,442,000. The FY 2017 Budget allows the Human Drugs Program to uphold its public health mission of ensuring that new, generic, and OTC drugs are safe and effective.

Over half of CDER's budget authority is required to support its user fee programs to meet the minimum spending requirements from appropriations for PDUFA, GDUFA, and BsUFA. The remaining budget authority is necessary to support other activities that cannot be supported by user fees. The FY 2017 Budget is critical to sustain the Human Drugs Program's ability to continue base operations and conduct activities that are essential to protecting public health.

The FY 2017 Budget will enable FDA to continue to carry out rigorous science-based premarket drug reviews of new, generic, and biosimilar biological drug products. Identifying and developing new scientific methods, models, and tools to improve the quality, safety, predictability, and efficiency of new drug development is a core mission of FDA. FDA will continue to promote patient and health professional awareness of drug benefits and risks through effective communication of drug information.

FDA will continue to conduct postmarket surveillance to enable early detection of drug safety signals. FDA oversees drug promotion and marketing to help ensure that marketed drug labeling and advertising are truthful and not misleading. FDA will also continue its efforts related to opioids with abuse-deterrent properties. FDA is committed to making progress on setting and applying appropriate regulatory incentives and expectations regarding opioids with abuse-deterrent properties.

FDA will continue oversight of human drug compounding through inspections and enforcement, policy development and implementation, and state collaboration and coordination. The FY 2017 Budget will also support FDA's ability to improve the integrity of the drug supply chain. FDA will continue to establish the regulatory framework to support the implementation of the Drug Supply Chain Security Act by developing policy and programs, drafting proposed rules, drafting guidance documents and conducting public meetings.

The FY 2017 Budget will support FDA's efforts to minimize public health risks associated with counterfeit and substandard drugs. FDA is educating consumers and the health care community about the risks of, and minimizing exposure to, counterfeit and substandard drug products in addition to implementing regulatory and enforcement tools to improve the security of the drug supply chain.

In FY 2017, CDER, in coordination with the Office of Orphan Products Development will continue to support $2.5 million in additional grant funding and in associated administrative work. Additional information for the Orphan Product Grants Program can be found in the Office of Orphan Products Development request.

BUDGET AUTHORITY

Medical Product Safety and Availability: $491.5 million (+$1.0 million)

Compounding: +$1.0 million
Center: +$.56 million / Field: +$.44 million

The requested FY 2017 funding will allow FDA to improve oversight of human drug compounding through increased inspection and enforcement activities, policy development and implementation, and state collaboration and coordination. Increased efforts in these areas will help to prevent outbreaks that could result in deaths of or injuries to patients who receive compounded drugs.

FDA's budget request for compounding is critical to uphold its mission of promoting and protecting public health. Even after the 2012 fungal meningitis outbreak that killed over 60 people and injured over 750, outbreaks associated with contaminated compounded drugs continue to occur. For example, in 2013, twenty-six patients in seventeen states experienced infections after administration of contaminated preservative-free methylprednisolone acetate compounded by Main Street Family Pharmacy in Newbern, TN. FDA and CDC identified bacteria and fungi in unopened vials of the compounded product. A few months later, Specialty

Compounding of Cedar Park, TX, initiated a nationwide recall after 17 patients developed bacterial bloodstream infections after receiving an infusion of compounded calcium gluconate. Two of these patients died. FDA laboratory analysis of the calcium gluconate identified bacterial contamination.

FDA continues to identify serious insanitary conditions at compounding facilities. For example, in May 2015, FDA recommended that a compounder cease operations and recall all sterile products within expiry when, during a surveillance inspection, FDA investigators identified the use of non-sterile drinking water dispensed from a top-loaded bottled water dispenser for use in making injectable drug products; the use of non-sterile, non-pharmaceutical grade ingredients in making an injectable drug product; and dog beds, dog feces, and dog hairs within the facility, including in close proximity to the compounding room.

Since the fungal meningitis outbreak in October 2012, FDA has issued a Form FDA 483 list of inspectional observations at the close of almost all of its inspections of sterile compounders citing deviations from adequate sterile practices. Many of these pharmacies were obtaining prescriptions for at least some of the drugs they were compounding, and most were shipping drugs across state lines placing patients across the country at risk of significant harm. Continued FDA oversight of these facilities is necessary to protect the public health. Close oversight of these facilities is critical to protecting patients.

USER FEES

Current Law User Fees: +$13.2 million

The Human Drugs Program request includes an increase of $13.2 million for current law user fees, which will enhance FDA's capacity to uphold its mission of promoting and protecting the public health by ensuring safe and effective drugs are available to patients.

PERFORMANCE

The Human Drugs Program's performance measures focus on premarket and post market activities, generic drug review actions, and drug safety in order to ensure that human drugs are safe and effective and meet established quality standards, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
223210: Review and act on 90 percent of standard NME NDA and original BLA submissions within 10 months of the 60 day filing date. *(Output)*	FY 2014: 95% Target: 90% (Target Exceeded)	90%	90%	maintain
223211: Review and act on 90 percent of priority NME NDA and original BLA submissions within 6 months of the 60 day filing date. *(Output)*	FY 2014: 96% Target: 90% (Target Exceeded)	90%	90%	maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
223212: Review and act on 90 percent of standard non-NME original NDA submissions within 10 months of receipt. *(Output)*	FY 2014: 97% Target: 90% (Target Exceeded)	90%	90%	maintain
223213: Review and act on 90 percent of priority non-NME original NDA submissions within 6 months of receipt. *(Output)*	FY 2014: 80% Target: 90% (Target Not Met)	90%	90%	maintain
223215: Review and act on original Abbreviated New Drug Application (ANDA) submissions within the established time frame. *(Output)*	N/A New Goal	75% within 15 months	90% within 10 months	+15%
224201: Number of foreign and domestic high-risk human drug inspections. *(Output)*	FY 2015: 835 Target: 750 (Target Exceeded)	750	750	maintain
292202: Number of people for whom FDA is able to evaluate product safety through Mini-Sentinel/Sentinel system. *(Outcome)*	FY 2015: 182 million Target: 180 million (Target Exceeded)	185 million	190 million	+5 million

The following selected items highlight notable results and trends detailed in the performance table.

Review Goals

The New Drug Review performance measures focus on ensuring that the public has access to safe and effective new treatments as quickly as possible. The goal of the PDUFA V program is to increase the efficiency and effectiveness of the first review cycle and decrease the number of review cycles necessary for approval. Although the Agency met three out of the four PDUFA performance goals, the Agency fell slightly short on the measure to review and act on 90 percent of priority non-NME original NDA submissions within six months of receipt. A total of ten applications were submitted, but two applications were reviewed and acted on after the six month goal date, resulting in missing the target for that measure. The Agency will continually work to meet or exceed the review performance targets moving forward.

The Generic Drug Review performance measure focuses on process enhancements resulting from the GDUFA program. The goal of the GDUFA program is to enhance efficiency in the generic drug review process, promote transparency between FDA and generic drug sponsors, and enhance access to high-quality, lower cost generic drugs. This investment in the Generic Drug Review program is reflected in the performance target which increases from 75% of Abbreviated

New Drug Application (ANDA) submissions reviewed in 15 months in FY 2016 to 90% reviewed in 10 months in FY 2017.

Sentinel

The Sentinel program provides essential public health benefits by enabling FDA to quickly assess the safety of FDA-approved medical products in near real time. The Sentinel program evaluates drug safety issues that may require regulatory action. In FY 2015, FDA expanded surveillance to 182 million patients, which is an increase of 4 million patients from FY 2014. FDA is in the process of transitioning from the Mini-Sentinel pilot to a sustained active surveillance system, the Sentinel System, which will ensure FDA continues to have the tools necessary to continue to conduct active safety surveillance work.

PROGRAM ACTIVITY DATA

Human Drugs Program Activity Data (PAD)

CDER Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
New Drug Review			
Workload – Submissions/Filings/Requests			
New Drug Applications/Biologic Licensing Applications (NDA/BLA)	140	140	140
Efficacy Supplements	160	160	160
Manufacturing Supplements	1,789	1,789	1,789
Commercial INDs (Drugs and Biologics) with Activity	6,903	6,903	6,903
Sponsor Requests: IND-Phase Formal Meetings	2,426	2,426	2,426
Sponsor Requests: Review of Special Study Protocols	224	224	224
Submissions of Promotional Materials	93,084	95,000	98,000
Outputs – Reviews/Approvals			
Reviews: Priority NDA/BLA	36	36	36
Reviews: Standard NDA/BLA	111	111	111
Approvals: Priority NDA/BLA	32	32	32
Approvals: Standard NDA/BLA	75	75	75
Mean time from Receipt to Approval: Priority NDA/BLAs (in months)	10	10	10
Mean time from Receipt to Approval: Standard NDA/BLAs (in months)	21	21	21
Median time from Receipt to Approval: Priority NDA/BLAs (in months)	8	8	8
Median Time from Receipt to Approval: Standard NDA/BLAs (in months)	12	12	12
Reviews: NDA Supplementals	2,812	2,812	2,812
Reviews: Clinical Pharmacology/ Bio-Pharmaceutic	4,855	5,098	5,353
Biologic Therapeutics Review			
Workload – Submissions/Filings/Requests			
Receipts: Commercial IND/IDE (Biologics Only)	157	157	157
Receipts: IND/IDE Amendments (Biologics Only)	27,188	27,188	27,188
Outputs – Reviews/Approvals			
Reviews: Total Original License Application (PLA/ELA/BLA)	7	7	7
Approvals: PLA/BLA	7	7	7
Reviews: License Supplement (PLA/ELA/BLA)	331	331	331
Generic Drug Review			
Workload – Submissions/Filings/Requests			
Receipts: Abbreviated New Drug Applications (ANDA)	539	750	750
Outputs – Reviews/Approvals			
Actions – ANDA	1,958	2,200	2,200
Approval Actions - ANDA (both Tentative and Full Approvals)	612	650	650
Median Review Time from ANDA Receipt to Approval (months)	42	36	36
Actions - ANDA Supplementals (Labeling and Manufacturing)	7,246	6,600	6,600
Over-the-Counter Drug Review			
OTC Monographs Under Development*	25	25	25
OTC Monographs Published*	9	5	6
*Category includes Proposed Rules, Final Rules, and Proposed and Final Orders under the Sunscreen Innovation Act			

CDER Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Best Pharmaceuticals for Children Act			
Labels Approved with New Pediatric Information	20	14	14
New Written Requests Issued	19	16	16
Pediatric Exclusivity Determinations made	12	8	8
Post Exclusivity Safety Report	9	9	9
Patient Safety			
Workload – Submissions/Filings/Requests			
Submissions: Adverse Event Reports	1,616,545	1,982,995	2,432,342
Electronic Submissions: % of Total Adverse Drug Reaction Reports	95%	95%	95%
Electronic Submissions: % of Serious/Unexpected Adverse Drug Reaction Reports	94%	94%	94%
Submissions: Drug Quality Reports	12,976	13,500	14,000
Outputs – Reviews/Approvals			
Safety reviews completed by Office of Surveillance & Epidemiology	4,847	5,332	5,865
Number of drugs with Risk Communications	413	455	470
Administrative/Management Support			
Workload			
Number of Advisory Committee Meetings	29	40	40
Number of FOI Requests	3,131	3,000	3,000
Number of FOI Requests Processed	3,130	3,050	3,050
Number of Citizen Petitions Submitted (excluding suitability petitions and OTC monograph-related petitions)	75	90	90
Number of Citizen Petitions Pending on Last Day of Fiscal year (excluding suitability petitions and OTC monograph-related petitions)	176	174	174
Number of Citizen Petitions Completed [1] (excluding suitability petitions and OTC monograph-related petitions)	78	93	93

[1] Citizen Petitions completed may include petitions filed in prior years.

Field Human Drugs Program Activity Data (PAD)

Field Human Drugs Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC HUMAN DRUG ESTABLISHMENT INSPECTIONS	***1,775***	***1,856***	***1,856***
Pre-Approval Inspections (NDA)	112	171	171
Pre-Approval Inspections (ANDA)	122	216	216
Bioresearch Monitoring Program Inspections	573	563	563
Drug Processing (GMP) Program Inspections	713	591	591
Compressed Medical Gas Manufacturers Inspections	201	295	295
Adverse Drug Events Project Inspections	92	120	120
OTC Monograph Project and Health Fraud Project Inspections	42	79	79
Compounding Inspections[1]	115	130	130
Domestic Laboratory Samples Analyzed	1,450	1,450	1,450
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN HUMAN DRUG ESTABLISHMENT INSPECTIONS [2]	***1072***	***999***	***999***
Foreign Pre-Approval Inspections (NDA) incl PEPFAR	107	98	98
Foreign Pre-Approval Inspections (ANDA) incl PEPFAR	194	83	83
Foreign Bioresearch Monitoring Program Inspections incl PEPFAR	221	255	255
Foreign Drug Processing (GMP) Program Inspections	814	843	843
Foreign Adverse Drug Events Project Inspections	10	15	15
TOTAL UNIQUE COUNT OF FDA HUMAN DRUG ESTABLISHMENT INSPECTIONS	***2,847***	***2,855***	***2,855***
IMPORTS			
Import Field Exams/Tests	8,437	7,200	7,200
Import Laboratory Samples Analyzed	586	490	490
Import Physical Exam Subtotal	**9,023**	**7,690**	**7,690**
Import Line Decisions	688,208	734,654	784,234
Percent of Import Lines Physically Examined	1.31%	1.05%	0.98%
STATE WORK			
UNIQUE COUNT OF STATE PARTNERSHIP HUMAN DRUG ESTABLISHMENT INSPECTIONS [3]	***0***	***0***	***0***
State Partnership Inspections: Compressed Medical Gas Manufacturers Inspections	0	0	0
State Partnership Inspections: GMP Inspections	0	0	0
GRAND TOTAL HUMAN DRUG ESTABLISHMENT INSPECTIONS	***2,847***	***2,855***	***2,855***

[1] The number of compounding inspections includes inspections of compounding pharmacies and outsourcing facilities under sections 503A and 503B respectively.

[2] The FY 2015 actual unique count of foreign inspections includes 69 OIP inspections (24 for China, 36 for India, & 9 for Latin America).

[3] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles.