HUMAN DRUGS

(Dollars in Thousands)	FY 2016 Final	FY 2016 Actuals	FY 2017 Annualized CR	FY 2018 President's Budget	FY 2018 President's Budget +/- FY 2017 CR
Human Drugs	**1,390,656**	**1,451,570**	**1,324,422**	**1,611,504**	**287,082**
Budget Authority	***487,332***	***487,299***	***486,398***	***179,139***	***-307,259***
User Fees	***903,324***	***964,271***	***838,024***	***1,432,365***	***594,341***
Center	1,185,398	1,267,547	1,119,903	1,414,764	294,861
Budget Authority	351,163	351,135	350,488	94,353	-256,135
User Fees	834,235	916,412	769,415	1,320,411	550,996
Prescription Drug (PDUFA)	*601,643*	*617,004*	533,134	*795,071*	*261,937*
Generic Drug (GDUFA)	*215,867*	*286,312*	219,018	*451,771*	*232,753*
Biosimilars (BsUFA)	*16,298*	*12,007*	16,706	*72,976*	*56,270*
Outsourcing Facility	*427*	*1,089*	557	*593*	*36*
Field	205,258	184,023	204,519	*196,740*	*-7,779*
Budget Authority	136,169	136,164	135,910	84,786	-51,124
User Fees	69,089	47,859	68,609	111,954	43,345
Prescription Drug (PDUFA)	*12,276*	*8,662*	10,878	*37,391*	*26,513*
Generic Drug (GDUFA)	*55,167*	*38,403*	55,973	*71,717*	*15,744*
Biosimilars (BsUFA)	*1,382*	*400*	1,416	*2,485*	*1,069*
Outsourcing Facility	*264*	*394*	342	*361*	*19*
FTE	**5,681**	**5,681**	**5,935**	**6,472**	**537**

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); 21st Century Cures Act (Cures Act) (2016)

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 OTC human drug products, including brand-name 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 2016, CDER approved 22 novel new drugs. From 2007 through 2015, CDER has averaged about 30 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). 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.

Drug Shortages

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. With the passage of FDASIA, regulations were put in place which allowed FDA to begin to gain control over these staggeringly high numbers and effectively hold industry accountable to require early notification of discontinuances or interruptions in manufacturing of all covered prescription drugs. These

requirements have helped FDA to work with industry early on to address problems before shortages occur and have resulted in decreasing numbers of new shortages in recent years.

FDA continues to make significant progress in reducing the number of drug shortages, from a high of 251 new shortages in 2011 to just 23 new shortages in 2016. Currently, FDA is working to resolve over 46 shortages that began prior to 2016 and persisted through the end of 2016, which is a decrease from over 64 ongoing shortages tracked at the end of 2015.

During 2016, FDA launched an external collaboration portal for industry. The CDER Direct NextGen Collaboration Portal enables sponsors to submit drug shortage notifications to FDA based on FDA-validated product information, such as National Drug Code (NDC), active ingredient, and product name. The Portal allows industry users to log in, enter their shortage information, and submit notifications directly into the CDER Shortage Tracker. This online capability will help to minimize manual data entry and track notifications for better drug shortage monitoring and mitigation.

User Fees

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 ensured FDA continued 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.

New Drug Review

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, 2016 FDA has received 216 applications through this Program since its inception, which involves a more interactive review with applicants. All of the FY 2015 program cohort applications that received actions by September 30, 2015, were acted on within the goal date. The FY 2015 program cohort is nearly closed, and 95 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 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 executed a deep, foundational restructuring of the generic drug program including 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 is on track to meet and in many cases exceed its GDUFA goals.[18] For example, FDA achieved GDUFA's 90 percent goal well ahead of schedule. 2016 marked the highest number of generic drug approvals and tentative approvals ever – more than 800.

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 April 21, 2017, 66 programs were in the BPD Program. CDER has received meeting requests to discuss the development of biosimilar products for 23 different reference products. (Note: A biosimilar product is no longer in the BPD program after a 351(k) BLA is accepted for review (i.e., filed). FDA has licensed five biosimilar products to date: Zarxio (filgrastim-sndz), which has been determined to be biosimilar to Neupogen; Inflectra (infliximab-dyyb) and Renflexis (infliximab-abda), which have been determined to be biosimilar to Remicade; Erelzi (etanercept-szzs), which has been determined to be biosimilar to Enbrel; and Amjevita (adalimumab-atto) which has been determined to be biosimilar to Humira. These significant accomplishments represent the next step to increasing treatment options for patients.

In April 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." In December 2016, FDA finalized the guidance, "Clinical Pharmacology Data to Support a Demonstration of Biosimilarity to a Reference Product." These guidances are part of the series to implement the BPCI Act. 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.

[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.

FDA also issued draft guidance for industry in April 2016, "Labeling for Biosimilar Products," which, when finalized, will assist applicants in developing draft labeling for submission in applications for proposed biosimilar products under section 351(k) of the PHS Act.

In addition, in January 2017 FDA finalized the guidance for industry, "Nonproprietary Naming of Biological Products," which describes how biological products licensed under the Public Health Service Act (PHS Act) should be named. The final guidance describes the FDA's current thinking and intention to designate a nonproprietary name for originator (reference) biological products, related biological products, and biosimilar products licensed under the PHS Act (351(a) and 351(k)) that includes a suffix composed of four lowercase letters attached with a hyphen to the core name each product. As stated in the final guidance, FDA is continuing to consider the appropriate suffix format for interchangeable products.

FDA issued a proposed rule in August 2015, "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. FDA is continuing to consider comments on the proposed rule, including comments on the appropriate timeframe for implementing the changed nonproprietary name in product labeling.

On January 17, 2017, the FDA issued a Draft Guidance for Industry: "Considerations in Demonstrating Interchangeability With a Reference Product." The guidance provides an overview of important scientific considerations in demonstrating interchangeability of a proposed therapeutic protein product with a reference product for the purposes of submitting a marketing application or supplement under section 351(k) of the PHS Act. This guidance is specific to interchangeable products.

21st Century Cures

The Cures Act supports the Agency's innovation and evidence framework to expedite the delivery, discovery, development, and evaluation of beneficial new medical products for the American public. The Cures Act authorizes FDA to prioritize and enhance ongoing activities including efforts to facilitate greater patient engagement in drug development, advance innovative clinical trials through the adoption of adaptive designs and novel statistical modeling, foster the generation of evidence derived from clinical experience and evaluate its applicability to drug development, and qualify new drug development tools. Additionally, it provides the Agency authority to increase public engagement, enhance internal and external communications, and expedite clinical decision-making.

By providing new hiring authorities to FDA, the Cures Act greatly improves the Agency's ability to compete with industry and academia in hiring and retaining scientific experts. One of FDA's ongoing challenges has been recruiting and retaining the experts it needs in specialized areas to get its work done rapidly and in a consistent manner and to meet its growing list of responsibilities. This is an especially important need given the tremendous advances in biological sciences, engineering, information technology, and data science.

Opioids

Opioids are powerful medications that can help manage pain when prescribed for the right condition and used properly. But when physicians prescribe these medications to patients who should not receive them, or when they are used improperly, such as for recreational purposes, they can cause serious harm including overdose and death. FDA has many ongoing activities aimed at reducing these harms, including continued efforts to improve opioid prescribing

practices through prescriber training and better labeling, work to broaden access to overdose treatments such as naloxone, and work to encourage the development of opioid products with abuse-deterrent properties.

In February 2016, FDA announced its comprehensive action plan for reducing the impact of opioid misuse and abuse on American families and communities. As part of this plan, FDA will work more closely with its advisory committees before making critical product and labeling decisions; enhance safety labeling; require new data on long-term opioid use; and seek to improve treatment of both addiction and pain. At the same time, FDA will re-examine the risk-benefit paradigm for opioids and ensure that the Agency continues to consider appropriately the wider public health effects of prescription opioids. FDA is committed to taking all of these steps transparently and in close cooperation with other Federal agencies and stakeholders, and participates actively in the groups coordinating those activities both within HHS and across all the relevant agencies of the U.S. government.

Successfully confronting the ongoing epidemic is challenging. Throughout the year, through concerted efforts to take swift regulatory action in support of the Action Plan, engage the public and key opinion leaders in open discussion on key issues, we continue to reexamine the agency's policies in the regulation of opioids. The role of the agency continues to include the thoughtful regulation of the drugs and devices used in the treatment of pain, as well as opioid addiction and overdose, to assure that the actions we take are in the best interest of public health.

Combating Antibiotic Resistant Bacteria

Antibiotic resistance continues to erode our therapeutic armamentarium due to the selective pressure from the use of existing antibacterial drugs. Over the last few decades, there has been 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 are challenging to develop because of the need to study a new therapy in the setting of an acute serious disease and the limited economic returns from an antibacterial drug. For example, patients with serious infections are likely to be acutely ill and in need of urgent therapy, which results in challenges obtaining informed consent and timely completion of trial enrollment procedures. In addition, many patients with serious infections have significant comorbidities that may render them less likely to be enrolled in a clinical trial.

Advancing the science of clinical trials for antibacterial drugs can have an impact facilitating as well as stimulating development of needed, new therapies. CDER is supporting the following research:

- A clinical study and development of tools to improve enrollment in clinical trials of new drugs in patients with hospital acquired / ventilator associated bacterial pneumonia
- Clinical studies needed for the final step in the development of Patient Reported Outcome questionnaires for use in pneumonia and skin infection clinical trials
- The development of a method using electronic medical records from patients with blood infections to update laboratory standards for reporting drug resistance
- Clinical and animal model studies to more quickly develop antibacterial drug dosing recommendations for newborns with meningitis and other serious infections
- Animal model studies that should help in the development of new antibacterial drugs targeting high priority resistant pathogens

The work being performed addresses some important gaps in knowledge for antibacterial drug development. There are still other important areas of work that are needed to provide dependable pathways for studying new antibacterial drugs. Sustained funding would allow CDER to continue efforts to advance the science of clinical trials for new antibacterial drugs. This is the type of work that is essential to the field, but will not be performed by a single drug company.

Guidances

Below are notable guidances recently issued by FDA. 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.[19]

Date	#	Title	Description
Oct 2016	FDA-2015-D-3990	Sunscreen Innovation Act: Section 586C(c) Advisory Committee Process	Explains the process by which FDA intends to convene advisory committees to provide recommendations on requests submitted under the SIA.
Oct 2016	FDA-2008-D-0530	Tropical Disease Priority Review Vouchers	Explains to stakeholders how FDA is implementing the provisions of the priority review voucher section in the Federal Food, Drug, and Cosmetic Act.
Nov 2016	FDA-2015-D-4021	Nonprescription Sunscreen Drug Products – Safety and Effectiveness Data	Addresses FDA's thinking on data needed to determine whether nonprescription sunscreen active ingredient or combination of active ingredients is generally recognized as safe and effective.
Nov 2016	FDA-2012-D-0880	Generic Drug User Fee Amendments of 2012: Questions and Answers Related to User Fee Assessments	Provides updated answers to common questions from the generic drug industry and other interested parties involved in the development and/or testing of generic drug products.

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

Product Approvals

Below are some of CDER's recent product approvals. This list does not represent any degree of importance or priority ranking of products.[20]

Disease State	Approved	Generic Name	Reference Listed Drug	FDA-approved use on approval date
Cancer	Mar 2016	Bendamustine Injection	Treanda	To treat chronic lymphocytic leukemia (CLL)
	Jun 2016	Dasatinib Tablets	Sprycel	To treat Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia (CML)
Heart Disease	Apr 2016	Rosuvastatin Tablets	Crestor	To treat high cholesterol
	Jun 2016	Dofetalide Capsules	Tikosyn	To treat atrial fibrillation/flutter
	Oct 2016	Olmesartan Tablets	Benicar	To treat high blood pressure
Mental Health	Sept 2016	Memantine Extended-Release Capsules	Namenda	To treat moderate to severe dementia of the Alzheimer's type
	Nov 2016	Quetiapine Extended-Release Tablets	Seroquel XR	To treat schizophrenia; bipolar disorder, manic or mixed episodes; bipolar disorder, depressive episodes; or major depressive disorder
Infectious Disease	Feb 2016	Efavirenz Tablets	Sustiva	To treat human immunodeficiency virus (HIV)
	Aug 2016	Oseltamaivir Capsules	Tamiflu	To treat uncomplicated flu in patients who have are symptomatic for less than 48 hours
Other Diseases	Mar 2016	Sildenafil Tablets	Viagra	To treat erectile dysfunction
	Mar 2016	Mometasone Nasal Spray	Nasonex	To treat nasal symptoms of seasonal allergies
	Apr 2016	Lacosamide Tablets	Vimpat	To treat partial-onset seizures as an Adjunctive therapy
	May 2016	Rufinamide Tablets	Banzel	To treat seizures associated with Lennox-Gastaut Syndrome (LGS) as an Adjunctive therapy

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

Rules

Below are rules recently published by FDA. Rules help address various issues. This list does not represent any degree of importance or priority ranking among the published rules.[21]

Date	#	Purpose or Benefit
Sep 2016	FDA-1975-N-0012	Safety and Effectiveness of Consumer Antiseptics; Topical Antimicrobial Drug Products for Over-the-Counter Human Use - Consumer Wash
Oct 2016	FDA-2011-N-0830	Abbreviated New Drug Applications and 505 (b)(2) Applications
Oct 2016	FDA-2015-N-1355	Use of Ozone Depleting Substances - Sterile Aerosol Talc and Metered Dose Atropine Sulfate
Nov 2016	FDA-2011-N-0697	Amendments to Regulations on Citizen Petitions, Petitions for Stay of Action and Submission of Documents to Dockets
Nov 2016	FDA-2005-N-0343	Medical Gas Containers and Closures; Current Good Manufacturing Practice Requirements

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.

Sentinel

The 2007 Food and Drug Administration Amendments Act (FDAAA) required FDA to establish a postmarket risk identification and analysis (ARIA) system to analyze drug and biologic safety data from multiple sources. In response to this requirement, FDA launched the Sentinel Initiative in 2008, which led to the development and implementation of the Sentinel System. The Sentinel Initiative provides significant public health benefits by developing new approaches and methods to actively monitor the safety of marketed medical products to complement existing FDA surveillance capabilities. The Sentinel System includes access to large quantities of electronic healthcare data and enhances the FDA's ability to detect and better understand safety signals to better inform patients and healthcare providers on the safe use of regulated medical products.

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

In FY 2016, the Sentinel System expanded surveillance to 193 million patients, which is an increase of 11 million patients from FY 2015. In February 2016, FDA held the Eighth Annual Sentinel Initiative Public Workshop to bring the stakeholder community together to discuss a variety of topics on active medical product surveillance and current and emerging Sentinel projects. Additionally, FDA formally announced the transition of the Mini-Sentinel Pilot to the Sentinel System and the official launch of its ARIA subcomponent. 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, after a fungal meningitis outbreak linked to contaminated compounded drugs caused more than 60 deaths and 750 cases of illness, the Drug Quality and Security Act (DQSA) was enacted, providing FDA with additional authorities to oversee compounding. The DQSA added a new section 503B to the Federal Food, Drug, and Cosmetic Act (FD&C Act), creating a new category of compounders known as outsourcing facilities. As of March 23, 2017, 62 firms are registered with FDA as outsourcing facilities. The DQSA also amended section 503A of the FD&C Act to remove provisions that the U.S. Supreme Court held to be unconstitutional in 2002.

Following the enactment of the DQSA, FDA has acted quickly to increase its drug compounding oversight though inspections and enforcement, develop policies regarding the compounding provisions of federal law, convene and obtain input from an advisory committee, collaborate and coordinate with state regulators, and conduct stakeholder outreach.

Inspections and Enforcement: FDA has conducted over 350 inspections since enactment of the DQSA. Many of these inspections have been for-cause, generally based on reports of serious adverse events or product quality issues. Following these inspections, FDA has issued more than 130 warning letters describing significant violations of the law that could put patients at risk and more than 30 letters referring inspectional findings to state regulatory agencies. FDA also has overseen about 100 recalls involving compounded drugs. In addition, FDA has worked with the Department of Justice on civil and criminal enforcement actions.

Policy Development: Between enactment of the DQSA and March 23, 2017, FDA has issued 21 draft guidance documents (11 of which have been finalized), three proposed rules (one of which has been finalized), and a draft memorandum of understanding that, when finalized, FDA would enter into with individual states. The policy documents address many significant compounding provisions of the FD&C Act and are an important part of FDA's efforts to communicate with stakeholders about its regulatory policies, and to protect patient health from the risks associated with compounded drugs.

Advisory Committee: FDA re-established the Pharmacy Compounding Advisory Committee, which provides advice on scientific, technical, and medical issues concerning drug compounding under sections 503A and 503B of the FD&C Act. As of March 23, 2017, FDA has held six Committee meetings.

State Collaboration and Coordination: FDA has held four intergovernmental working meetings with states in addition to numerous one-on-one meetings and interactions. FDA also invites state regulators to accompany its investigators on inspections.

Stakeholder Outreach: FDA has held four sets of listening sessions with more than 75 stakeholders, including pharmacy, hospital, long-term care, and other medical organizations; consumer and patient advocacy groups; insurers; and outsourcing facilities.

These efforts, which are ongoing, are critical to protect the public health. FDA continues to receive reports of serious adverse events associated with compounded drugs and to identify poor drug production practices that could cause widespread patient harm.

Title II of the DQSA, the Drug Supply Chain Security Act (DSCSA), outlines critical steps to build an electronic, interoperable system to identify and trace certain prescription drugs as they are distributed in the United States. Since enactment of the DSCSA, FDA has issued five draft guidance documents and four final guidances, and FDA is working to develop standards, policy, and programs to implement the law. Along with FDA, prescription drug manufacturers, wholesale distributors, repackagers, and many dispensers (primarily pharmacies) will collaborate toward the development of the new system for enhanced drug distribution security by 2023. The new system will continuously evolve toward an ultimate goal of identification of each individual prescription drug package, enabling better methods for verification of product legitimacy, detection and notification of illegitimate products in the supply chain, and facilitation of recalls.

Rules

Below are rules recently published by FDA. These rules help address various issues. This list does not represent any degree of importance or priority ranking among the published rules.[22]

Date	#	Purpose or Benefit
Mar 2016	FDA-2016-N-0001	Advisory Committee: Pharmaceutical Science and Clinical Pharmacology Advisory Committee
Aug 2016	FDA-2005-N-0464	Requirements for Foreign and Domestic Establishment Registration and Listing for Human Drugs; Including Drugs that are Regulated Under a Biologics License Application and Animal Drugs
Nov 2016	FDA-2016-N-0543	Food and Drug Administrative Review and Action on Over-the-Counter Time and Extent Applications

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.

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

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, 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 2014 Actual	$1,210,709,000	$466,303,000	$744,406,000
FY 2015 Actual	$1,338,599,000	$482,243,000	$856,356,000
FY 2016 Actuals	$1,451,570,000	$487,299,000	$964,271,000
FY 2017 Annualized CR	$1,324,422,000	$486,398,000	$838,024,000
FY 2018 President's Budget	$1,611,504,000	$179,139,000	$1,432,365,000

BUDGET REQUEST

The FY 2018 Budget Request for the Human Drugs Program is $1,611,504,000, of which $179,139,000 is budget authority and $1,432,365,000 is user fees. This level provides a net increase of $287,082,000. Budget authority decreases by $307,259,000 compared to the FY 2017 Annualized CR level and user fees increase by $594,341,000. The Center for Drug Evaluation and Research (CDER) amount in this request is $1,414,764,000. The Office of Regulatory Affairs amount is $196,740,000.

The FY 2018 Budget allows the Human Drugs Program to uphold its public health mission of ensuring that new, generic, biosimilar, and OTC drugs are safe and effective. The FY 2018 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, obtaining input from an advisory committee, state

collaboration and coordination, and stakeholder outreach. The FY 2018 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 2018 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.

BUDGET AUTHORITY

Reductions (-$17.8 million)

Center: -$11.2 million (Medical Product Safety & Availability)
Proposed budget reductions will require CDER to reprioritize and refocus how it promotes and protects public health. These proposed budget reductions will include some contracts that promote drug safety and research studies, investments in innovation and research, and training and development opportunities for personnel. It is FDA's goal to minimize the impact of these reductions on FDA's core mission activities.

Field: -$6.6 million (Medical Product Safety & Availability)
ORA will apply strategic reductions to its programs in order to preserve the highest priority activities and operations in support of protecting public health. ORA will reduce existing workforce levels through attrition.

In order to continue operations under the FY 2018 request levels, ORA will apply the necessary program reductions to areas such as training, IT and lab equipment, and across all program office operating budgets while protecting resources for inspections and compliance activities.

Medical Product Budget Authority Recalibration (-$289.4 million)

Center: -$244.9 million / Field: -$44.5 million (Medical Product Safety & Availability)
The FY 2018 President's Budget recalibrates FDA funding for medical product review and approval processes from budget authority to user fees.

USER FEES

Medical Product User Fee Recalibration and Regulatory Efficiencies (+$594.3 million)

Center: +$551.0 million / Field: +$43.3 million (Medical Product Safety & Availability)
The FY 2018 President's Budget recalibrates FDA funding for medical product review and approval processes from budget authority to user fees. The budget also includes a package of administrative actions designed to achieve greater regulatory efficiency and speed the availability of innovative, safe, and effective medical products in the market. These actions include the improvements are described in the PDUFA VI, GDUFA II, and BSUFA II commitment letters submitted to Congress in January 2017.

In FY 2018, CDER will work closely with the Agency to effectively implement and leverage the Cures Act which aims to help accelerate medical product innovation while reducing regulatory and administrative burden. The Breakthrough Therapy program is one of the most popular components of the human drug review program with requests and designations far exceeding expectations and has been instrumental in bringing forward innovative therapies for patients. CDER will continue to leverage the breakthrough therapy designation efforts with the goal of expediting the development and review of drug and biological products, alone or in combination, for serious or life-threatening diseases or conditions when preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies.

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 2017 Target	FY 2018 Target	FY 2018 +/- FY 2017
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 2015: 100% 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 2015: 92% Target: 90% (Target Exceeded)	90%	90%*	Maintain
223212: Review and act on 90 percent of standard non-NME original NDA submissions within 10 months of receipt. *(Output)*	FY 2015: 95% 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 2015: 100% Target: 90% (Target Exceeded)	90%	90%*	Maintain
223215: Review and act on 90 percent of standard original Abbreviated New Drug Application (ANDA) submissions within 10 months of receipt. *(Output)*	FY 2015: 97% Target: 60% (Target Exceeded)	90%	90%*	Maintain
223216: Review and act on 90 percent of priority original Abbreviated New Drug Application (ANDA) submissions within 8 months of receipt. *(Output)*	New Goal	N/A	90%*	N/A
224211: Percentage of planned foreign and domestic high-risk human drug inspections (approximately 560 in total). *(Output)*	FY 2016: 698 Target: 560 (Target Exceeded)	64%	64%	Maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2017 Target	FY 2018 Target	FY 2018 +/- FY 2017
292202: Number of people for whom FDA is able to evaluate product safety through Mini-Sentinel/Sentinel system. *(Outcome)*	FY 2016:193 million Target: 182 million (Target Exceeded)	195 million	198 million	+3 million

* Anticipated performance targets under PDUFA VI or GDUFA II

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 program is to increase the efficiency and effectiveness of the first review cycle and decrease the number of review cycles necessary for approval. The Agency will continually work to meet or exceed the review performance goals when possible 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 percent of Abbreviated New Drug Application (ANDA) submissions reviewed in 15 months in FY 2016 to 90 percent reviewed in 10 months in FY 2017 and FY 2018. The anticipated FY 2018 targets for the review goals align to the PDUFA VI and GDUFA II performance commitments.

Sentinel

The FDA's Sentinel Initiative provides essential public health benefits by enabling FDA to quickly assess the safety of FDA-approved medical products in near real time. Through the Sentinel System the FDA is able to evaluate drug safety issues that may require regulatory action. In FY 2016, FDA expanded surveillance to 193 million patients, which is an increase of 11 million patients from FY 2015. During the February 3rd, 2016 8th Annual Sentinel Initiative Public Workgroup Public Meeting, the FDA announced the transition from the Mini-Sentinel pilot to a sustained active surveillance system, the Sentinel System. The Sentinel System ensures FDA will continue to have the tools necessary to conduct active safety surveillance work.

PROGRAM ACTIVITY DATA TABLES

CDER Workload and Outputs	FY 2016 Actual	FY 2017 Annualized CR	FY 2018 President's Budget
New Drug Review			
Workload – Submissions/Filings/Requests			
New Drug Applications/Biologic Licensing Applications (NDA/BLA)	124	124	124
Efficacy Supplements	170	170	170
Manufacturing Supplements	1,669	1,669	1,669
Commercial INDs (Drugs and Biologics) with Activity	6,831	6,831	6,831
Sponsor Requests: IND-Phase Formal Meetings	2,547	2,547	2,547
Sponsor Requests: Review of Special Study Protocols	212	212	212
Submissions of Promotional Materials	97,780	102,000	106,000
Outputs – Reviews/Approvals			
Reviews: Priority NDA/BLA	40	40	40
Reviews: Standard NDA/BLA	150	150	150
Approvals: Priority NDA/BLA	30	30	30
Approvals: Standard NDA/BLA	86	86	86
Mean time from Receipt to Approval: Priority NDA/BLAs (in months)	12.8	12.8	12.8
Mean time from Receipt to Approval: Standard NDA/BLAs (in months)	15.3	15.3	15.3
Median time from Receipt to Approval: Priority NDA/BLAs (in months)	8.0	8.0	8.0
Median Time from Receipt to Approval: Standard NDA/BLAs (in months)	10.3	10.3	10.3
Reviews: NDA Supplementals	2,851	2,851	2,851
Reviews: Clinical Pharmacology/ Bio-Pharmaceutic	4,593	4,823	5,064
Biologic Therapeutics Review			
Workload – Submissions/Filings/Requests			
Receipts: Commercial IND/IDE (Biologics Only)	119	119	119
Receipts: IND/IDE Amendments (Biologics Only)	28,010	28,010	28,010
Outputs – Reviews/Approvals			
Reviews: Total Original License Application (PLA/ELA/BLA)	14	14	14
Approvals: PLA/BLA	13	13	13
Reviews: License Supplement (PLA/ELA/BLA)	329	329	329
Generic Drug Review			
Workload – Submissions/Filings/Requests			
Receipts: Abbreviated New Drug Applications (ANDA)	852	750	850
Outputs – Reviews/Approvals			
Actions – ANDA	2,808	2,900	3,000
Approval Actions - ANDA (both Tentative and Full Approvals)	835	850	875
Median Review Time from ANDA Receipt to Approval (months)	39.42	38.25	37.00
Actions - ANDA Supplementals (Labeling and Manufacturing)	6,554	6,750	7,000
Over-the-Counter Drug Review			
OTC Monographs Under Development*	25	25	25
OTC Monographs Published*	3	4	4
*Category includes Proposed Rules, Final Rules, and Proposed and Final Orders under the Sunscreen Innovation Act			

CDER Workload and Outputs	FY 2016 Actual	FY 2017 Annualized CR	FY 2018 President's Budget
Best Pharmaceuticals for Children Act			
Labels Approved with New Pediatric Information	4	11	11
New Written Requests Issued	20	18	19
Pediatric Exclusivity Determinations made	3	7	7
Post Exclusivity Safety Report	7	8	8
Patient Safety			
Workload – Submissions/Filings/Requests			
Submissions: Adverse Event Reports	1,709,290	1,807,356	1,911,048
Electronic Submissions: % of Total Adverse Drug Reaction Reports	97%	97%	97%
Electronic Submissions: % of Serious/Unexpected Adverse Drug Reaction Reports	97%	97%	97%
Submissions: Drug Quality Reports	13,763	14,000	14,400
Outputs – Reviews/Approvals			
Safety reviews completed by Office of Surveillance & Epidemiology	7,100	7,455	7,828
Number of drugs with Risk Communications	250	260	270
Administrative/Management Support			
Workload			
Number of Advisory Committee Meetings	36	35	35
Number of FOI Requests	3,221	3,000	3,000
Number of FOI Requests Processed	3,239	3,025	3,025
Number of Citizen Petitions Submitted (excluding suitability petitions and OTC monograph-related petitions)	90	83	83
Number of Citizen Petitions Pending on Last Day of Fiscal year (excluding suitability petitions and OTC monograph-related petitions)	164	170	170
Number of Citizen Petitions Completed [1] (excluding suitability petitions and OTC monograph-related petitions)	101	90	90

[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 2016 Actuals	FY 2017 Annualized CR	FY 2018 President's Budget
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC HUMAN DRUG ESTABLISHMENT INSPECTIONS	***1,846***	***1,767***	***1,767***
Pre-Approval Inspections (NDA)	88	135	135
Pre-Approval Inspections (ANDA)	92	215	215
Bioresearch Monitoring Program Inspections	616	550	550
Drug Processing (GMP) Program Inspections	805	650	650
Compressed Medical Gas Manufacturers Inspections	97	50	50
Adverse Drug Events Project Inspections	88	88	88
OTC Monograph Project and Health Fraud Project Inspections	51	70	70
Compounding Inspections[1]	135	130	130
Domestic Laboratory Samples Analyzed	1,301	1,300	1,300
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN HUMAN DRUG ESTABLISHMENT INSPECTIONS	***1231***	***1275***	***1275***
Foreign Pre-Approval Inspections (NDA) incl PEPFAR	100	98	98
Foreign Pre-Approval Inspections (ANDA) incl PEPFAR	173	190	190
Foreign Bioresearch Monitoring Program Inspections incl PEPFAR	214	255	255
Foreign Drug Processing (GMP) Program Inspections	909	900	900
Foreign Adverse Drug Events Project Inspections	7	10	10
TOTAL UNIQUE COUNT OF FDA HUMAN DRUG ESTABLISHMENT INSPECTIONS	***3,077***	***3,042***	***3,042***
IMPORTS			
Import Field Exams/Tests	10,053	10,000	10,000
Import Laboratory Samples Analyzed	1,009	620	620
Import Physical Exam Subtotal	**11,062**	**10,620**	**10,620**
Import Line Decisions	739,309	776,274	815,088
Percent of Import Lines Physically Examined	1.50%	1.37%	1.30%
STATE WORK			
UNIQUE COUNT OF STATE PARTNERSHIP HUMAN DRUG ESTABLISHMENT INSPECTIONS [2]	***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	***3,077***	***3,042***	***3,042***

[1] The number of compounding inspections includes inspections of compounders that are and are not registered with FDA as outsourcing facilities.

[2] The FY 2016 actual unique count of foreign inspections includes 82 OIP inspections (41 for China, 35 for India, & 6 for Latin America).

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

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