# REPORT TO CONGRESS

## Premarket Approval of Pediatric Uses of Devices – Fiscal Year 2014

## Submitted Pursuant to Section 515A of the Federal Food, Drug, and Cosmetic Act

## U.S. Department of Health and Human Services

## Food and Drug Administration

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## Executive Summary

Section 515A(a)(3) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) requires the Food and Drug Administration (FDA) to submit an annual report to Congress that provides information concerning premarket approvals of devices labeled for pediatric use or devices for which there is a pediatric subpopulation that suffers from the disease that the device is intended to treat, diagnose, or cure. This is FDA's fifth report pursuant to this requirement. The report uses information from FDA's Center for Devices and Radiological Health and reflects approvals made during fiscal year (FY) 2014. In addition, this report provides background information about FDA's activities to facilitate the development of safe and effective pediatric devices or, for humanitarian use devices (HUDs), devices where the probable benefits outweigh the probable risk of injury or illness from their use. This report highlights the following information for FY 2014:

- FDA approved 33 original and panel track supplement premarket approval applications (PMAs) and 4 humanitarian device exemption (HDE) applications.

- Among the 37 total approvals, 16 PMAs were approved for the treatment, diagnosis, or cure of a disease or condition which occurs within a pediatric subpopulation.

- Of the eight PMAs and HDEs, three were exempt from user fees because the devices were intended solely for pediatric use.

- Among the 37 total approvals, FDA approved 6 PMA devices and 2 HDE devices indicated for use in a pediatric population or subpopulation.

- Information about each FY 2014 pediatric device approval, including review time and the pediatric population for which it is indicated, appears in this report in Appendix A.

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## I. Introduction

The Food and Drug Administration Amendments Act of 2007 (FDAAA) (Public Law 110-85) amended section 515A of the FD&C Act, "Pediatric Uses of Devices" (21 U.S.C. 360e-1). Section 515A(a) of the FD&C Act requires persons who submit certain medical device applications to include, if readily available, a description of any pediatric subpopulations that suffer from the disease or condition that the device is intended to treat, diagnose, or cure, and the number of affected pediatric patients. Such information assists in developing this report. Section 515A(a)(3) of the FD&C Act requires FDA to submit an annual report to Congress that provides information concerning premarket approvals of devices labeled for pediatric use or devices for which there is a pediatric subpopulation that suffers from the disease or condition that the device is intended to treat, diagnose, or cure.

Specifically, section 515A(a)(3) of the FD&C Act states that:

> *Not later than 18 months after the date of the enactment of this section and annually thereafter, the Secretary shall submit to the Committee on Health, Education, Labor, and Pensions of the Senate and the Committee on Energy and Commerce of the House of Representatives a report that includes:*
> *(A) the number of devices approved in the year preceding the year in which the report is submitted, for which there is a pediatric subpopulation that suffers from the disease or condition that the device is intended to treat, diagnose, or cure;*
> *(B) the number of devices approved in the year preceding the year in which the report is submitted, labeled for use in pediatric patients;*
> *(C) the number of pediatric devices approved in the year preceding the year in which the report is submitted that were exempted from a fee pursuant to section 738(a)(2)(B)(v); and*
> *(D) the review time for each device described in subparagraphs (A), (B), and (C).*

This is FDA's fifth report pursuant to section 515A(a)(3) of the FD&C Act since FDAAA's enactment. The report provides the data and information required under section 515A(a)(3) of the FD&C Act for approvals made during FY 2014, as well as background information regarding section 515A of the FD&C Act and FDA's implementation of that provision.

## II. Background

Section 515A of the FD&C Act and other provisions in FDAAA are intended to encourage the development of devices for use in pediatric patients. The House Report for FDAAA described the need for the legislation as follows:

> *Pediatric medical devices are used to treat or diagnose diseases and conditions in patients from birth through age 21 years. Some products are designed specifically for children, while others are borrowed from adult applications or produced for more general use.*
>
> *Children have specific medical needs that must be considered when medical and surgical devices are prescribed. Devices that have not been studied for use in children may not accommodate the unique needs of children, such as allowing for expandable growth and accommodating their active lifestyles and differing metabolism.*[1]

For purposes of this report, pediatric use devices are those which are indicated for use in pediatric patients or intended to treat, diagnose, or cure diseases from which pediatric patients suffer. In addition, for purposes of this report, the pediatric population is defined as those younger than 22 years of age (i.e., inclusive of the patient's 21st year of life). Pediatric subpopulations are defined in section 520(m)(6)(E)(ii) (and adopted by reference in section 515A(c) of the FD&C Act) to mean one of the following populations: neonates, infants, children, and adolescents.

Age ranges for these pediatric subpopulations are:

- Neonates (birth to 1 month of age);[2]
- Infants (older than 1 month to 2 years of age);
- Children (older than 2 years to 12 years of age); and
- Adolescents (older than 12 years through 21 years of age).

On January 10, 2014, FDA issued a final rule (79 FR 1735) amending the PMA regulations to require inclusion of information relating to pediatric subpopulations that suffer from the disease or condition that a device is intended to treat, diagnose, or cure, and the number of affected pediatric patients. These requirements are mandated by section 515A of the FD&C Act as added by FDAAA.[3]

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[1] House Committee on Energy and Commerce, "Food and Drug Administration Amendments Act of 2007," H. Rept. 100-225, 110th Congress, 1st Session, on page 8.

[2] See *Pediatrics* 2011; 128:177-181; American Academy of Pediatrics; American College of Obstetrics and Gynecology: Appendix D: standard terminology for reporting reproductive health statistics. In: *Guidelines for Perinatal Care.* 6th ed. Elk Grove Village, Il: American Academy of Pediatrics; 2007: 389-404.

[3] "21 CFR Part 814; Medical Devices; Pediatric Uses of Devices; Requirement for Submission of Information on Pediatric Subpopulations That Suffer From a Disease or Condition That a Device Is Intended To Treat, Diagnose, or Cure," 79 Fed Reg 7 (10 Jan. 2014), pp. 1735-1741 (79 FR 1735).

On May 1, 2014, FDA issued a final guidance document titled "Providing Information about Pediatric Uses of Medical Devices."[4] The Final Guidance provides information for applicants regarding the pediatric information requirement in a question-and-answer format.

## III. Summary of Information Required Under Section 515A(a)(3) of FD&C Act

In summary, in FY 2014:

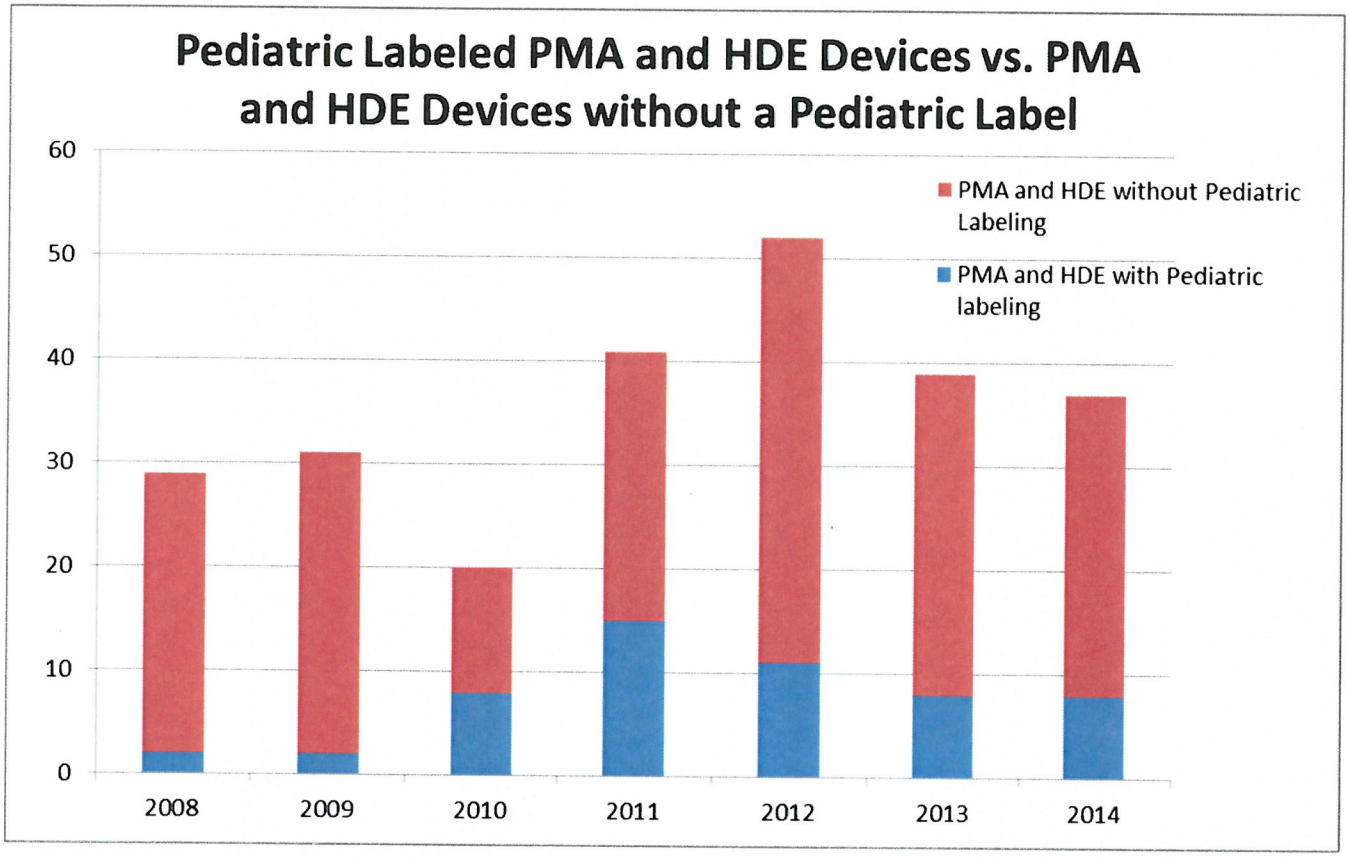
- FDA approved 33 original and panel track supplement PMAs and 4 humanitarian device exemption (HDE) applications.
- Among the 37 approvals, 16 PMA devices were approved for the treatment, diagnosis, or cure of a disease or condition which occurs within a pediatric subpopulation.
- Among the 37 approvals, FDA approved 6 PMA and 2 HDE devices indicated for use in a pediatric population or subpopulation.
    I. Among the 6 PMA and 2 HDE devices indicated for use in a pediatric population there was a median of 177 FDA review days.
    II. Among the 6 PMA and 2 HDE devices indicated for use in a pediatric population there was a median of 389 total review days for approval
- Of the eight PMAs and HDEs, three were exempt from user fees because the devices were intended solely for pediatric use.

The table below depicts the percentage of PMAs and HDEs approved since FY 2008 that were indicated for use in a pediatric population or subpopulation.

| Approved/Indicated PMA and HDE Devices – FY 2008-2014 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **FY Year** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** |
| **Total Approved PMA and HDE Devices** | 29 | 31 | 20 | 41 | 52 | 39 | 37 |
| **Percentage of Pediatric Indicated PMA and HDE Devices** | 2 (6.9%) | 2 (6.5%) | 8 (40.0%) | 15 (36.6%) | 11 (21.2%) | 8 (20.5%) | 8 (21.6%) |

[4] http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm339162.htm

The largest number of devices approved for a pediatric indication was in 2011. The average over 7 years has been 36 PMAs and HDEs approved each year. There was an average over the 7 years of 8 devices, or 22.2 percent of PMAs and HDEs, indicated for pediatric patients; there were no apparent trends in numbers or percentages.




## IV. Conclusion

Information about each FY 2014 pediatric device approval, including the review times and the pediatric population for which it is indicated, appears in this report within Appendix A. The information contained in this FY 2014 report includes information and accounting with respect to the approval of devices that are indicated for use in pediatric patients or intended to treat, diagnose, or cure diseases from which pediatric patients suffer for FY 2014, as required by section 515A of the FD&C Act.

## Appendix A
## FY 2014 Device Approvals Indicated for Use in Pediatric Patients with Review Times

| FY 2014 | |
|---|---|
| **PMA Device Information** | |
| Restylane Silk Injectable Gel<br><br>The Restylane Silk Injectable Gel is a transparent hyaluronic acid gel that is injected into patients' lips and wrinkles around the mouth. Hyaluronic acid is a protective and lubricating gel that is produced naturally by the body. The product works by temporarily adding volume to the lips and smoothing wrinkles around the mouth. The effect lasts for about 6 months. | |
| Manufacturer | Valeant Pharmaceuticals North America LLC/Medicis |
| Number | P040024/S072 |
| Filing Date | 10/22/2013 |
| Approval Date | 6/13/2014 |
| Approved, Indicated Pediatric Subpopulation: | 21 and older |
| Exempt from User Fees because intended solely for pediatric use? | No |
| FDA Review Days | 179 |
| Total Review Days | 234 |
| NeuroPace RNS System<br><br>The RNS System helps reduce the frequency of seizures in epilepsy patients who have frequent, disabling, partial-onset seizures and have not responded well to medications. It consists of a stimulator implanted in the skull under the scalp and leads implanted in the brain. | |
| Manufacturer | NeuroPace, Inc. |
| Number | P100026 |
| Filing Date | 11/9/2010 |
| Approval Date | 11/14/2013 |
| Approved, Labeled Pediatric Subpopulation: | 18 and older |
| Exempt from User Fees because intended solely for pediatric use? | No |
| FDA Review Days | 700 |
| Total Review Days | 1101 |
| Juvéderm Voluma XC<br><br>The Juvéderm Voluma XC is a sterile, biodegradable, viscoelastic gel implant that is injected into facial tissue to temporarily restore volume and fullness to the areas of the mid-face, which include the cheeks and nearby regions confined to the middle portion of the face. | |
| Manufacturer | Allergan |
| Number | P110033 |
| Filing Date | 8/29/2011 |
| Approval Date | 10/22/2013 |
| Approved, Labeled Pediatric Subpopulation: | 21 and older |
| Exempt from User Fees because intended solely for pediatric use? | No |
| FDA Review Days | 522 |
| Total Review Days | 785 |

Dexcom G4 PLATINUM (Pediatric) Continuous Glucose Monitoring System

The Dexcom G4 PLATINUM (Pediatric) Continuous Glucose Monitoring System (Pediatric CGM System) is an externally-worn glucose sensor that continuously measures and displays glucose values. In addition to reporting glucose values every 5 minutes, the system reports trending information in real-time for up to 7 days (the life of each sensor).

| | |
|---|---|
| Manufacturer | Dexcom Inc. |
| Number | P120005/S002 |
| Filing Date | 2/19/2013 |
| Approval Date | 2/3/2014 |
| Approved, Labeled Pediatric Subpopulation: | 2-17 years old |
| Exempt from User Fees because intended solely for pediatric use? | No[i] |
| FDA Review Days | 174 |
| Total Review Days | 349 |

Nucleus Hybrid L24 Cochlear Implant System

The Nucleus Hybrid L24 Cochlear Implant System (also referred to as "Hybrid L24") is a cochlear implant system used to treat certain hearing losses caused by a defective inner ear function. The Hybrid L24 is designed to allow patients to hear in two ways: electrically (similar to approved cochlear implants) for severe to profound hearing loss at mid and high frequencies, and acoustically (similar to hearing aids) for normal to moderate hearing loss at low frequencies.

| | |
|---|---|
| Manufacturer | Cochlear Americas |
| Number | P130016 |
| Filing Date | 6/3/2013 |
| Approval Date | 3/20/2014 |
| Approved, Labeled Pediatric Subpopulation: | 18 and Older |
| Exempt from User Fees because intended solely for pediatric use? | No |
| FDA Review Days | 290 |
| Total Review Days | 290 |

ADVIA CENTAUR HBSAGII

This product is used with the ADVIA Centaur or ADVIA Centaur XP Instrument Systems to identify certain virus proteins associated with hepatitis B virus (HBV). If these virus proteins are present, then the patient is likely to be infected with HBV.

| | |
|---|---|
| Manufacturer | Siemens Healthcare Diagnostics |
| Number | P110041 |
| Filing Date | 12/22/2011 |
| Approval Date | 5/16/2014 |
| Approved, Labeled Pediatric Subpopulation: | Neonatal and Older |
| Exempt from User Fees because intended solely for pediatric use? | No |
| FDA Review Days | 175 |
| Total Review Days | 876 |

| **HDE Device Information** | |
|---|---|
| Pleximmune | |
| Pleximmune is a laboratory blood test that aids in the prediction of the risk of a transplant rejection, known as Acute Cellular Rejection, in patients under 21 years who have undergone liver or small bowel transplants. | |
| Manufacturer | Plexision, Inc. |
| Number | H130004 |
| Filing Date | 8/14/2013 |
| Approval Date | 8/26/2014 |
| Approved, Labeled Pediatric Subpopulation: | 21 and under |
| Exempt from User Fees because intended solely for pediatric use? | No[ii] |
| FDA Review Days | 150 |
| Total Review Days | 377 |
| Annual Distribution Number | 4000 |
| Liposorber LA-15 System | |
| The Liposorber LA-15 System is a blood processing system that is used outside the body. It includes disposable components and a control/monitor unit. The device works by removing certain lipoproteins from a patient's blood. The Liposorber LA-15 System is used to treat pediatric patients with primary focal segmental glomerulosclerosis (FSGS) either before transplant, or after kidney (renal) transplantation in which there is recurrence of FSGS. | |
| Manufacturer | Kaneka Pharma America LLC |
| Number | H120005 |
| Filing Date | 9/04/2012 |
| Approval Date | 10/10/2013 |
| Approved, Labeled Pediatric Subpopulation: | 2 and older (21 kg) |
| Exempt from User Fees because intended solely for pediatric use? | No[ii] |
| FDA Review Days | 159 |
| Total Review Days | 401 |
| Annual Distribution Number | 48000 |
| | |

[i] PMA one-time waiver of the fee that would otherwise apply. Section 738(d)(1), FD&C Act.
[ii] HDEs are not subject to user fees. Section 738(a)(1)(B)(i), FD&C Act.