REPORT TO CONGRESS

Premarket Approval of Pediatric Uses of Devices – FY 2013

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 (the 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 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 fourth 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) 2013, including original and panel track supplement premarket approval applications (PMAs) and humanitarian device exemption (HDE) applications. An original premarket approval application is a private license granted to the applicant for marketing a particular medical device. A panel-track is a significant change in design or performance of a device, or a new indication for use of a device, for which clinical data is generally necessary to provide a reasonable assurance of safety and effectiveness. A humanitarian device exemption (HDE) application, submitted to obtain approval for a humanitarian use device (HUD), is similar in both form and content to a premarket approval application, but is exempt from the effectiveness requirements of a premarket approval application. A HUD is a device intended to benefit patients by treating or diagnosing a disease or condition that affects or is manifested in fewer than 4,000 individuals in the United States per year. In addition, this report provides background information about FDA's activities to facilitate the development of safe and effective pediatric devices. This report highlights the following information:

In FY 2013:

- FDA approved 38 original and panel track supplement PMAs and one HDE application.
- Among the 38 approvals, 11 PMAs were approved for the treatment, diagnosis, or cure of a disease or condition which occurs within a pediatric subpopulation.[i]
- FDA approved eight PMA devices labeled for use in a pediatric population or subpopulation.
- None of the eight PMAs were exempt from user fees because the device is intended solely for pediatric use.
- Information about each FY 2013 device approval labeled for pediatric use, including its review time and the pediatric population for which it is labeled, appears in this report at Appendix A.

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I. Introduction

The Food and Drug Administration Amendments Act of 2007 (FDAAA) (Public Law 110-85) was signed into law on September 27, 2007. Section 302 of FDAAA amended section 515A of the FD&C Act, "Pediatric Uses of Devices" (21 U.S.C. 360e-1). 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 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:*
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> *(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).*

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.

This is FDA's fourth 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 2013, including original and panel track supplement premarket approval applications (PMAs) and humanitarian device exemption (HDE) applications. An original premarket approval application is a private license granted to the applicant for marketing a particular medical device. A panel-track is a significant change in design or performance of a device, or a new indication for use of a device, for which clinical data is generally necessary to provide a reasonable assurance of safety and effectiveness. A

humanitarian device exemption (HDE) application, submitted to obtain approval for a humanitarian use device (HUD), is similar in both form and content to a premarket approval application, but is exempt from the effectiveness requirements of a premarket approval application. A HUD is a device intended to benefit patients by treating or diagnosing a disease or condition that affects or is manifested in fewer than 4,000 individuals in the United States per year.. In addition, this report provides background information about FDA's activities to facilitate the development of safe and effective pediatric devices.

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 labeled 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 be: 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 amending the PMA regulations to require inclusion of information relating to pediatric subpopulations that suffer from the disease or condition that a

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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.

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, added by FDAAA.[3]

On May 1, 2014, FDA issued a final version of the guidance document "Providing Information about Pediatric Uses of Medical Devices."[4] This 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 the FD&C Act

In summary, in FY 2013:

- FDA approved 38 original and panel track supplement PMAs and one humanitarian device exemption (HDE) application.
- Among the 38 approvals, 11 PMA devices (30 percent) were approved for the treatment, diagnosis, or cure of a disease or condition which occurs within a pediatric subpopulation.
- FDA approved eight PMA devices (21 percent of approved PMAs) labeled for use in a pediatric population or subpopulation.
- None of the eight PMAs labeled for pediatric use were exempt from user fees because the device is intended solely for pediatric use.

[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 Federal Register 7 (10 January 2014), pp. 1735-1741.

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

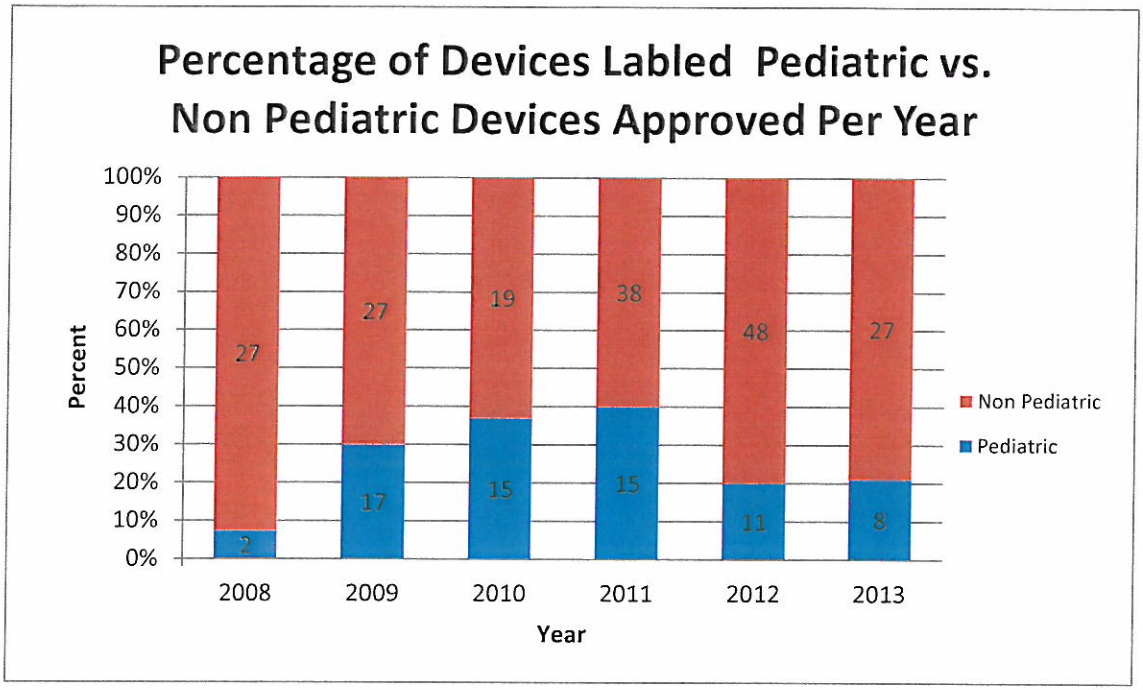

Figure 1. The above graph shows the percentage of PMAs and HDEs that were approved for devices labeled for pediatric use over a 6-fiscal year period. The peak year for devices approved with pediatric labeling was in 2011. The average over 6 years has been 41 PMAs approved each year. There was an average over the 6 years of 10 devices or 24 percent of PMAs labeled for pediatric use. For each fiscal year the numbers of devices have been included as well. The non-pediatric devices are labeled for 22 years and above. The non- pediatric devices in this chart not approved for the treatment, diagnosis, or cure of diseases or condition which occurs within a pediatric population. The non-pediatric devices referenced in this chart include all devices that were approved for the treatment or diagnosis of a disease or condition that does not occur in a pediatric population.

IV. Conclusion

Information about each FY 2013 pediatric device approval, including the review times and the pediatric population for which it is labeled, appears in this report at Appendix A. Over the past 6 years, the average total FDA time for review was 267 days and the average total review time for approval was 510 days, with no clear trend over time in either. The number of PMAs labeled for pediatric use over the past 6 years averaged 10. The information contained in this FY 2013 report provides information and accounting with respect to the approval of devices that are

labeled for use in pediatric patients or intended to treat, diagnose, or cure diseases from which pediatric patients suffer for FY 2013, as required by section 515A of the FD&C Act.

Appendix A
FY 2013 Device Approvals Labeled for Use in Pediatric Patients with Review Times

FY 2013	
PMA Device Information	
Allegretto Wave-Eye The Wavelight ALLEGRETTO WAVE® Eye-Q Excimer Laser System is an ophthalmic laser system for refractive surgery[ii] of the cornea designed to correct the vision of patients with a variety of refractive errors (nearsightedness or farsightedness with or without astigmatism[iii]) by Laser Assisted In-Situ Keratomileusis (LASIK[iv]).	
Manufacturer	Alcon Laboratories, Inc.
Number	P020050/S012
Filing Date	4/3/2013
Approval Date	9/27/2013
Approved, Labeled Pediatric Subpopulation:	18 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	177
Total Review Days	177
Sedasys Computer The SEDASYS System is a computer-assisted personalized sedation device that delivers the drug propofol[v] for minimal-to-moderate sedation.	
Manufacturer	Ethicon Endo-Surgery, Inc.
Number	P080009
Filing Date	3/25/2008
Approval Date	5/3/2013
Approved, Labeled Pediatric Subpopulation:	18 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	809
Total Review Days	1865
VALIANT THORACIC STENT GRAFT WITH THE CAPTIVIA DELIVERY SYSTEM The Valiant Thoracic Stent Graft with the Captivia Delivery System is an artificial endovascular stent graft[vi] and is used to treat vessel damage caused by disease or trauma (isolated lesions), excluding dissections, of the descending thoracic aorta[vii] during endovascular repair.	
Manufacturer	MEDTRONIC IRELAND
Number	P100040/S008
Filing Date	4/30/2012
Approval Date	10/26/2012
Approved, Labeled Pediatric Subpopulation:	18 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	179
Total Review Days	179

PMA Device Information	
ExAblate The ExAblate is a Magnetic Resonance guided Focused Ultrasound Surgery (MRgFUS) device that non-invasively targets and destroys tissues.	
Manufacturer	Insightec
Number	P110039
Filing Date	12/5/2011
Approval Date	10/18/2012
Approved, Labeled Pediatric Subpopulation:	18 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	247
Total Review Days	318
Dexcom G4 Platinum The Dexcom G4 PLATINUM Continuous Glucose Monitoring (CGM) System continuously measures and displays glucose values.	
Manufacturer	Dexcom, Inc.
Number	P120005
Filing Date	4/9/2012
Approval Date	10/5/2012
Approved, Labeled Pediatric Subpopulation:	18 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	179
Total Review Days	179
Minimed 530G System The MiniMed 530G System is an externally worn system that continuously measures and displays glucose values, and also continuously delivers basal insulin to the user.	
Manufacturer	Medtronic Inc.
Number	P120010
Filing Date	6/5/2012
Approval Date	9/26/2013
Approved, Labeled Pediatric Subpopulation:	16 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	178
Total Review Days	478

NIDEK 2000 EC-5000 EXCIMER LASER SYSTEM

The Nidek 2000 EC-5000 Excimer Laser System is an ophthalmic laser system for refractive surgery of the cornea designed to correct the vision of patients with refractive errors (nearsightedness and astigmatism) by laser assisted in-situ keratomileusis (LASIK).

Manufacturer	NIDEK, INC.
Number	P970053/S011
Filing Date	3/30/2007
Approval Date	9/30/2013
Approved, Labeled Pediatric Subpopulation:	21 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	353
Total Review Days	1643

Aptima HPV 16 18/45

The APTIMA® HPV 16 18/45 Genotype Assay is used with the TIGRIS® DTS® System to identify human papillomavirus (HPV)[viii] RNA[ix] from high-risk genital HPV genotypes 16, 18, and/or 45.

Manufacturer	Gen-Probe Incorporation
Number	P120007
Filing Date	4/19/2012
Approval Date	10/12/2012
Approved, Labeled Pediatric Subpopulation:	21 and older
Exempt from User Fees because intended solely for pediatric use?	No
FDA Review Days	176
Total Review Days	176

The Food and Drug Administration Amendments Act of 2007 (FDAAA)[1] (Pub. L. 110-85) amended the Federal Food, Drug, and Cosmetic Act (the FD&C Act) by adding section 515A of the FD&C Act (21 U.S.C. 360e-1). Section 515A 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. The final rule amending the regulations on premarket approval of medical devices to include these requirements became effective on April 10, 2014 (see https://www.federalregister.gov/articles/2014/01/10/2014-00267/medical-devices-pediatric-uses-of-devices-requirement-for-submission-of-information-on-pediatric). Under this rule, any request for a humanitarian device exemption (HDE), premarket approval application (PMA), supplement to a PMA, or product development protocol (PDP) must include readily available pediatric use information. Before implementation of the rule, some medical devices that were approved to treat diseases or conditions that may affect

pediatric patients (but may not have carried specific pediatric indications) may not have been readily apparent and thus were not included in the previously reported numbers of approved pediatric devices. With the information provided to the FDA pursuant to the rule, CDRH is able to better identify which approved PMA and HDE devices may be used to treat diseases or conditions that affect pediatric patients and this is reflected in this report.

[ii] http://www.geteyesmart.org/eyesmart/glasses-contacts-lasik/refractive-surgery.cfm

[iii] http://www.nei.nih.gov/health/errors/astigmatism.asp

[iv] http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/SurgeryandLifeSupport/LASIK/default.htm

[v] http://www.accessdata.fda.gov/drugsatfda_docs/label/2008/019627s046lbl.pdf

[vi] http://www.vascularweb.org/vascularhealth/Pages/endovascular-stent-graft.aspx

[vii] http://www.merriam-webster.com/medlineplus/thoracic%20aorta

[viii] http://www.nlm.nih.gov/medlineplus/hpv.html

[ix] http://www.cancer.gov/dictionary?CdrID=46568