State of California—Health and Human Services Agency
California Department of Public Health

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TO: California Vaccines for Children (VFC) Program Providers

FROM: John Talarico, D.O., M.P.H., Interim Chief
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SUBJECT: ROTARIX® (LIVE, ATTENUATED ROTAVIRUS VACCINE) IS NOW AVAILABLE FROM VFC

This memo is divided into sections to enable you to quickly access the information you need:

SUMMARY

In April 2008, the United States Food and Drug Administration (FDA) licensed Rotarix™ (GlaxoSmithKline), a new live, attenuated rotavirus vaccine given to infants in an oral, two-dose regimen. Rotarix™ is now available from VFC in California. This document summarizes information about the use of Rotarix™ in the VFC program. Each office should ensure that staff involved in administering Rotarix™ are appropriately trained and competent in the relevant details of this letter.

BACKGROUND AND COMPOSITION

Rotavirus infection has been the leading cause of severe diarrhea in infants and young children. Most rotavirus infections occur during winter in children younger than 5 years old. The most severe cases occur among infants and young children between 6 months and 24 months of age. In the United States before the use of rotavirus vaccines, rotavirus disease caused annually 20-60 deaths, >50,000 hospitalizations, >200,000 emergency department visits, and 410,000 outpatient visits. The associated annual costs for health care and lost-productivity were estimated at $1 billion. Preliminary reports suggest that after the introduction of rotavirus vaccines in the U.S., the incidence of rotavirus disease has been delayed in onset and lower in magnitude (*MMWR* 2008. 57 (25): 697-700).

Another licensed rotavirus vaccine, RotaTeq™ (Merck & Co., Inc.), has been recommended since February 2006. This letter summarizes the ACIP's harmonized, provisional recommendations for the prevention of rotavirus gastroenteritis and provides updates to the August 2006 published ACIP recommendations for the prevention of rotavirus gastroenteritis. It is anticipated that the final ACIP recommendations will be published in the MMWR by early 2009. This letter also updates certain recommendations regarding the ages for administration of RotaTeq™.

Rotarix™ is a live, attenuated, rotavirus vaccine from a human strain belonging to the G1P[8] type. Rotarix™ is indicated for the prevention of rotavirus gastroenteritis caused by G1 and non-G1 types (G3, G4, and G9) in infants and children. Rotarix™ requires reconstitution and is administered as a two-dose series in infants.

Rotarix™ contains no preservatives. The tip cap and the rubber plunger of the oral applicator contain dry natural latex rubber. The vial stopper and transfer adapter are latex-free.

Rotarix™ was shown to be highly efficacious against severe rotavirus disease through two rotavirus seasons.

RECOMMENDATIONS FOR VACCINE USE

Eligible Groups for Receipt of VFC Supplies of Rotarix™

VFC supplies of Rotarix™ may be given to VFC-eligible infants aged 6 weeks to 8 months.

Licensed Dosing Schedule

Rotarix™ is recommended as a two-dose series administered orally at 2 months and 4 months of age. The other currently-licensed rotavirus vaccine, Rotateq™, is recommended for routine oral immunization as a three-dose series at 2 months, 4 months, and 6 months.

ACIP recommends that the rotavirus series be completed with the same product whenever possible. However, if the previous product is unavailable or unknown, immunization should not be deferred. Providers should continue or complete the series with the available formulation. Interchangeability of products is allowed and considered valid. If any dose in the series was Rotateq™ or unknown, a total of three doses of rotavirus vaccine should be given.

ACIP Provisional Recommendations Regarding Ages and Intervals for RotaTeq™ and Rotarix™

- Minimum age for first dose is 6 weeks
- Maximum age for first dose is 14 weeks and 6 days
- Minimum interval between doses: 4 weeks
- Maximum age for last dose 8 months 0 days

Vaccine Storage

Vials of lyophilized Rotarix™ should be stored at 2º to 8ºC (35º to 46ºF). The diluent may be stored at a room temperature of 20º to 25ºC (68º to 77ºF). Do not freeze diluent. Protect vials from light.

Reconstitution and Administration

Rotarix™ should be reconstituted with the diluent supplied with the vaccine. The diluent should be inspected visually prior to administration. The vaccine should not be administered if there is particulate matter or discoloration.

Instructions (see Rotarix™ website at www.rotarix.com or package insert for videos and illustrations):

1. Remove plastic cover from vial of lyophilized vaccine.
2. Connect transfer adapter onto vial by pushing it downwards until the transfer adapter is properly and securely in place.
3. Shake the oral applicator containing the liquid diluent vigorously. The shaken suspension will appear as a cloudy liquid with a slow settling white deposit.
4. Remove the protective tip cap from the oral applicator.
5. Connect the oral applicator into the transfer adapter by pushing it firmly on the device.
6. Transfer the entire content of the oral applicator into the vial of lyophilized vaccine.
7. With oral applicator still attached, shake the vial and examine for complete suspension. The reconstituted vaccine will appear more turbid than the diluent alone. This appearance is normal.
8. Withdraw the entire mixture back into the oral applicator.
9. Remove the oral applicator from the transfer adapter.
10. The infant should be seated in a reclining position. Administer orally the entire content of the oral applicator (on the inside of the cheek). Dispose of applicator and vaccine vial in biohazard waste container.

Rotarix™ should be administered within 24 hours of reconstitution. Reconstituted vaccine may be refrigerated at 2º to 8ºC (35º to 46ºF) or stored at room temperature up to 25ºC (77ºF), after reconstitution. Discard reconstituted vaccine in biohazard waste container if not used within 24 hours.

Administration with other vaccines

Rotarix™ may be given at the same time as other recommended vaccines. When Rotarix™ was administered at the same time as Pediarix™ (DTaP-hepatitis B-IPV), pneumococcal conjugate vaccine, and Hib vaccine, no evidence of decreased immune response to any of the antigens was found.

POTENTIAL VACCINE REACTIONS (ROTARIX™)

Vaccine reactions were compared between Rotarix™ and placebo after the first and second doses. The risk of intussusception was evaluated in over 63,000 infants (vaccination and placebo groups). No increased risk of intussusception or other serious adverse events during both the 31 day period and the 14 day period after vaccination with Rotarix™ were found. Solicited adverse events (fussiness/irritability, cough/runny nose, fever, loss of appetite, vomiting, diarrhea) within 8 days of vaccination were similar between recipients of Rotarix™ and placebo.

Solicited Adverse Events within 8 days of Dose 1 of Rotarix or Placebo-
(Rates after Dose 2 similar or lower)

	Rotarix N=3,284	**Placebo N=2,013**
	%	%
Fussiness/irritability	52	52
Cough/runny nose	28	30
Fever	25	33
Loss of appetite	25	25
Vomiting	13	11
Diarrhea	4	3

Report suspected reactions to Rotarix™ or other vaccines to the Vaccine Adverse Events Reporting System (VAERS) at 800-822-7967 (toll-free) or http://vaers.hhs.gov.

CONTRAINDICATIONS TO ROTARIX™ AND ROTATEQ™

- History of serious allergic reaction to a previous dose of rotavirus vaccine or to a vaccine component
- Latex rubber is contained in the Rotarix™ oral applicator (tip cap and rubber plunger), so infants with a history of anaphylaxis to latex should not receive Rotarix™. The Rotateq™ dosing tube is latex-free.

PRECAUTIONS TO BOTH ROTARIX™ AND ROTATEQ™

- Altered immunocompetence
  - Infants with primary and acquired immunodeficiency states, including cellular immune deficiencies, and hypogammmaglobulinemic and dysgammaglobulinemic states.
  - Infants with blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic system.
  - Infants on immunosuppressive therapy (including high-dose systemic corticosteroids).
  - HIV-exposed or infected infants.
- Acute gastroenteritis
- Moderate to severe illness

- Preexisting chronic gastrointestinal disease
- Previous history of intussusception

HOW SUPPLIED

Rotarix™ is provided as a vial of lyophilized vaccine, a prefilled oral applicator of liquid diluent (1 mL) with a plunger stopper, and a transfer adapter for reconstitution. Each package contains 10 vials.

ORDERING AND BILLING (ROTARIX)

How to order
VFC Providers may order Rotarix™ using the attached revised order form (DHS 8501 (11/08). Remember to complete all the boxes in the four columns of the order form. Maintain a copy of your order forms for your office files. Please be aware that your orders of Rotarix™ may be adjusted, especially during this introductory phase.

We suggest you include your initial vaccine request along with your routine vaccine order and according to the assigned order frequency for your practice. When placing you initial request, keep in mind that 1) your order should be based on a 2- dose regimen and 2) you clinic should decrease current rotavirus vaccine doses on-hand prior to placing your new request.

Billing Information for VFC Vaccine
CHDP: Claims may be submitted for doses of Rotarix™ administered on or after September 15, 2008. The CHDP administration fee is $9.00 using CHDP code 81. However, providers should wait until notified by CHDP to submit claims. CHDP Provider Information Notices can be found at: http://www.dhcs.ca.gov/services/chdp/Pages/CHDPPLPIN.aspx.

Medi-Cal Fee-For-Service (FFS): The CPT code for administration of Rotarix™ for Medi-Cal is **90681-SL.**

Other codes for the use of Rotarix™ that is not supplied by VFC:
- The CPT code for Rotarix™ is 90681.
- The ICD-9-CM code for Rotarix™ is V04.89.

NDC 58160-805-11 (package of 10).

ABBREVIATIONS

Rotavirus vaccines have been abbreviated as “Rota” or “RV.” To distinguish between the two rotavirus vaccines, Rotarix™ may be abbreviated as “RV1,” and Rotateq™ may be abbreviated as “RV5.”

DOCUMENTATION

Updated Rotavirus Vaccine Information Statement (VIS) and fact sheet (8/08): http://www.cdc.gov/vaccines/pubs/vis/default.htm. This VIS includes information about both rotavirus vaccines. Additional information on rotavirus disease and rotavirus vaccines can be found at: http://www.cdc.gov/vaccines/vpd-vac/rotavirus/default.htm .

Product Insert: http://www.fda.gov/cber/products/rotarix.htm.

Updated VFC resolution No. 6/08-1 (Vaccines to Prevent Rotavirus Gastroenteritis): http://www.cdc.gov/vaccines/programs/vfc/acip-vfc- resolutions.htm.

ACIP and AAP recommendations: ACIP recommendations for rotavirus vaccines will later be updated and published at http://www.cdc.gov/mmwr. This letter is based on the ACIP Provisional Recommendations for the Prevention of Rotavirus Gastroenteritis Among Infants and Children at http://www.cdc.gov/vaccines/recs/provisional/downloads/roto-7-1-08-508.pdf. AAP vaccine recommendations and other information about vaccines are available to AAP members at http://www.cispimmunize.org/ .

General Recommendations on Immunization (minimum and maximum ages have been updated for rotavirus vaccines): http://www.cdc.gov/mmwr/PDF/rr/rr5515.pdf

Vaccine Injury Compensation Program (VICP): Rotarix™ is covered by the federal VICP. Information on the federal VICP and rotavirus vaccines may be found at: http://www.hrsa.gov/vaccinecompensation/.

Enclosures: Order Form (11/08)

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