

# Virtually All Pediatricians Follow Tdap Guidelines

BY ROBERT FINN  
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HONOLULU — One year after the Centers for Disease Control and Prevention issued new recommendations on vaccinating adolescents against pertussis, 96% of pediatricians but only 75% of family physicians were recommending the vaccine routinely, according to a mail-based survey.

In a multivariate analysis, the only two variables independently associated with

recommending Tdap were medical specialty (pediatrics vs. family practice) and whether the physician stocked the combined tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) in their offices, wrote Dr. Amanda F. Dempsey of the University of Michigan, Ann Arbor, and her colleagues.

In March 2006, the CDC's Advisory Committee on Immunization Practices (ACIP) issued recommendations on replacing the adolescent tetanus and diph-

theria toxoids (Td) with Tdap. The committee suggested age 11-12 years as the preferred age for Tdap vaccination, and recommended the catch-up vaccination of adolescents aged 13-18 years.

The study involved a mail-based survey of a national sample of 725 pediatricians and 725 family physicians drawn randomly from the American Medical Association's Physician Masterfile. The survey was conducted between January and March 2007. The response rates were 68%

for pediatricians and 53% for family physicians, Dr. Dempsey reported in a poster presentation at the joint meeting of the Pediatric Academic Societies.

Survey results showed that 68% of pediatricians were significantly more likely than were family physicians to have adolescent patient volumes above 25%, although most respondents reported that at least 10% of their patients were adolescents.

On the question of Tdap recommendation patterns for 11- to 12-year-old patients, 96% of pediatricians said that they routinely issued such recommendations, 3% said that they sometimes did, and 1% said that they rarely or never did. In contrast, 75% of family physicians said that they routinely recommended the vaccine for their 11- to 12-year-old patients, 12% said they sometimes did, and 13% said that they rarely or never did. These differences were statistically significant.

The results were similar regarding recommendations for Tdap boosters for 13- to 18-year-old patients without a previous Td booster. Among pediatricians, 96% routinely recommended this booster, 3% sometimes did, and 1% rarely or never did. Among family physicians, 80% routinely recommended the booster, 10% sometimes did, and 10% rarely or never did. Once again, the differences were statistically significant.

A lack of adolescent visits was the most frequently cited barrier to administering the Tdap vaccine, with about 33% of physicians citing this as a major barrier and 38% citing it as a minor barrier.

The majority of physicians surveyed said that they found no barriers with regard to Tdap supply, reimbursement, record keeping, or the problem of other priorities during visits.

"Specialty-based differences in immunization practices suggest an ongoing need for provider education, particularly among [family physicians]," they wrote.

The study was funded by the CDC, and Dr. Dempsey reported that she had no conflicts of interest related to her presentation.

## DIFFERIN® (adapalene) Cream, 0.1%

### Rx Only

### BRIEF SUMMARY

**For topical use only. Not for ophthalmic, oral, or intravaginal use.**  
**INDICATIONS AND USAGE:** DIFFERIN® Cream is indicated for the topical treatment of acne vulgaris.

**CONTRAINDICATIONS:** DIFFERIN® Cream should not be administered to individuals who are hypersensitive to adapalene or any of the components in the cream vehicle.

**PRECAUTIONS: General:** If a reaction suggesting sensitivity or chemical irritation occurs, use of the medication should be discontinued. Exposure to sunlight, including sunlamps, should be minimized during use of adapalene. Patients who normally experience high levels of sun exposure, and those with inherent sensitivity to sun, should be warned to exercise caution. Use of sunscreen products and protective clothing over treated areas is recommended when exposure cannot be avoided. Weather extremes, such as wind or cold, also may be irritating to patients under treatment with adapalene.

Avoid contact with the eyes, lips, angles of the nose, and mucous membranes. The product should not be applied to cuts, abrasions, eczematous or sunburned skin. As with other retinoids, use of "waxing" as a depilatory method should be avoided on skin treated with adapalene.

**Information for Patients:** Patients using DIFFERIN® Cream should receive the following information and instructions:

1. This medication is to be used only as directed by the physician.
2. It is for external use only.
3. Avoid contact with the eyes, lips, angles of the nose, and mucous membranes.
4. Cleanse area with a mild or soapless cleanser before applying this medication.
5. Moisturizers may be used if necessary; however, products containing alpha hydroxy or glycolic acids should be avoided.
6. Exposure of the eye to this medication may result in reactions such as swelling, conjunctivitis, and eye irritation.
7. This medication should not be applied to cuts, abrasions, eczematous or sunburned skin.
8. Wax epilation should not be performed on treated skin due to the potential for skin erosions.
9. During the early weeks of therapy, an apparent exacerbation of acne may occur. This is due to the action of this medication on previously unseen lesions and should not be considered a reason to discontinue therapy. Overall clinical benefit may be noticed after two weeks of therapy, but at least eight weeks are required to obtain consistent beneficial effects.

**Drug Interactions:** As DIFFERIN® Cream has the potential to produce local irritation in some patients, concomitant use of other potentially irritating topical products (medicated or abrasive soaps and cleansers, soaps and cosmetics that have a strong drying effect, and products with high concentrations of alcohol, astringents, spices or lime rind) should be approached with caution. Particular caution should be exercised in using preparations containing sulfur, resorcinol, or salicylic acid in combination with DIFFERIN® Cream. If these preparations have been used, it is advisable not to start therapy with DIFFERIN® Cream until the effects of such preparations in the skin have subsided.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Carcinogenicity studies with adapalene have been conducted in mice at topical doses of 0.4, 1.3, and 4.0 mg/kg/day, and in rats at oral doses of 0.15, 0.5, and 1.5 mg/kg/day. These doses are up to 8 times (mice) and 6 times (rats) in terms of mg/m<sup>2</sup>/day the maximum potential exposure at the recommended topical human dose (MRHD), assumed to be 2.5 grams DIFFERIN® Cream, which is approximately 1.5 mg/m<sup>2</sup> adapalene. In the oral study, increased incidence of benign and malignant pheochromocytomas in the adrenal medullas of male rats was observed.

No phototoxicity studies were conducted. Animal studies have shown an increased risk of skin neoplasms with the use of pharmacologically similar drugs (e.g., retinoids) when exposed to UV irradiation in the laboratory or to sunlight. Although the significance of these studies to human use is not clear, patients should be advised to avoid or minimize exposure to either sunlight or artificial UV irradiation sources.

Adapalene did not exhibit mutagenic or genotoxic effects *in vivo* (mouse micronucleus test) and *in vitro* (Ames test, Chinese hamster ovary cell assay, mouse lymphoma TK assay) studies.

Reproductive function and fertility studies were conducted in rats administered oral doses of adapalene in amounts up to 20 mg/kg/day (up to 80 times the MRHD based on mg/m<sup>2</sup> comparisons). No effects of adapalene were found on the reproductive performance or fertility of the F<sub>2</sub> males or females. There were also no detectable effects on the growth, development and subsequent reproductive function of the F<sub>2</sub> generation.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when DIFFERIN® Cream is administered to a nursing woman.

**Pediatric Use:** Safety and effectiveness in pediatric patients below the age of 12 have not been established.

**ADVERSE REACTIONS:** In controlled clinical trials, local cutaneous irritation was monitored in 285 acne patients who used DIFFERIN® Cream once daily for 12 weeks. The frequency and severity of erythema, scaling, dryness, pruritus and burning were assessed during these studies. The incidence of local cutaneous irritation with DIFFERIN® Cream from the controlled clinical studies is provided in the following table:

	Incidence of Local Cutaneous Irritation with DIFFERIN® Cream from Controlled Clinical Studies (N=285)			
	None	Mild	Moderate	Severe
Erythema	52% (148)	38% (108)	10% (28)	<1% (1)
Scaling	58% (166)	35% (100)	6% (18)	<1% (1)
Dryness	48% (136)	42% (121)	9% (26)	<1% (2)
Pruritus (persistent)	74% (211)	21% (61)	4% (12)	<1% (1)
Burning/Stinging (persistent)	71% (202)	24% (69)	4% (12)	<1% (2)

Other reported local cutaneous adverse events in patients who used DIFFERIN® Cream once daily included: sunburn (2%), skin discomfort-burning and stinging (1%) and skin irritation (1%). Events occurring in less than 1% of patients treated with DIFFERIN® Cream included: acne flare, dermatitis and contact dermatitis, eyelid edema, conjunctivitis, erythema, pruritus, skin discoloration, rash, and eczema.

**OVERDOSAGE:** DIFFERIN® Cream is intended for cutaneous use only. If the medication is applied excessively, no more rapid or better results will be obtained and marked redness, scaling, or skin discomfort may occur. The acute oral toxicity of DIFFERIN® Cream in mice and rats is greater than 10 mL/kg. Chronic ingestion of the drug may lead to the same side effects as those associated with excessive oral intake of Vitamin A.

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325069-0805  
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## DIFFERIN® (adapalene gel) Gel, 0.1%

### Rx Only

### BRIEF SUMMARY

**INDICATIONS AND USAGE:** DIFFERIN® Gel is indicated for the topical treatment of acne vulgaris.

**CONTRAINDICATIONS:** DIFFERIN® Gel should not be administered to individuals who are hypersensitive to adapalene or any of the components in the vehicle gel.

**WARNINGS:** Use of DIFFERIN® Gel should be discontinued if hypersensitivity to any of the ingredients is noted. Patients with sunburn should be advised not to use the product until fully recovered.

**PRECAUTIONS: General:** If a reaction suggesting sensitivity or chemical irritation occurs, use of the medication should be discontinued. Exposure to sunlight, including sunlamps, should be minimized during the use of adapalene. Patients who normally experience high levels of sun exposure, and those with inherent sensitivity to sun, should be warned to exercise caution. Use of sunscreen products and protective clothing over treated areas is recommended when exposure cannot be avoided. Weather extremes, such as wind or cold, also may be irritating to patients under treatment with adapalene.

Avoid contact with the eyes, lips, angles of the nose, and mucous membranes. The product should not be applied to cuts, abrasions, eczematous skin, or sunburned skin.

Certain cutaneous signs and symptoms such as erythema, dryness, scaling, burning, or pruritus may be experienced during treatment. These are most likely to occur during the first two to four weeks and will usually lessen with continued use of the medication. Depending upon the severity of adverse events, patients should be instructed to reduce the frequency of application or discontinue use.

**Drug Interactions:** As DIFFERIN® Gel has the potential to produce local irritation in some patients, concomitant use of other potentially irritating topical products (medicated or abrasive soaps and cleansers, soaps and cosmetics that have a strong drying effect, and products with high concentrations of alcohol, astringents, spices, or lime) should be approached with caution. Particular caution should be exercised in using preparations containing sulfur, resorcinol, or salicylic acid in combination with DIFFERIN® Gel. If these preparations have been used, it is advisable not to start therapy with DIFFERIN® Gel until the effects of such preparations in the skin have subsided.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** Carcinogenicity studies with adapalene have been conducted in mice at topical doses of 0.3, 0.9, and 2.6 mg/kg/day and in rats at oral doses of 0.15, 0.5, and 1.5 mg/kg/day, approximately 4-75 times the maximal daily human topical dose. In the oral study, positive linear trends were observed in the incidence of follicular cell adenomas and carcinomas in the thyroid glands of female rats, and in the incidence of benign and malignant pheochromocytomas in the adrenal medullas of male rats.

No phototoxicity studies were conducted. Animal studies have shown an increased tumorigenic risk with the use of pharmacologically similar drugs (e.g., retinoids) when exposed to UV irradiation in the laboratory or to sunlight. Although the significance of these studies to human use is not clear, patients should be advised to avoid or minimize exposure to either sunlight or artificial UV irradiation sources.

In a series of *in vivo* and *in vitro* studies, adapalene did not exhibit mutagenic or genotoxic activities.

**Pregnancy:** Teratogenic effects. Pregnancy Category C. No teratogenic effects were seen in rats at oral doses of adapalene 0.15 to 5.0 mg/kg/day, up to 120 times the maximal daily human topical dose. Cutaneous route teratology studies conducted in rats and rabbits at doses

of 0.6, 2.0, and 6.0 mg/kg/day, up to 150 times the maximal daily human topical dose exhibited no fetotoxicity and only minimal increases in pre-natal mortality in rats. There are no adequate and well-controlled studies in pregnant women. Adapalene should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when DIFFERIN® Gel is administered to a nursing woman.

**Pediatric Use:** Safety and effectiveness in pediatric patients below the age of 12 have not been established.

**ADVERSE REACTIONS:** Some adverse effects such as erythema, scaling, dryness, pruritus, and burning will occur in 10-40% of patients. Pruritus or burning immediately after application also occurs in approximately 20% of patients. The following additional adverse experiences were reported in approximately 1% or less of patients: skin irritation, burning/stinging, erythema, sunburn, and acne flares. These are most commonly seen during the first month of therapy and decrease in frequency and severity thereafter. All adverse effects with use of DIFFERIN® Gel during clinical trials were reversible upon discontinuation of therapy.

**OVERDOSAGE:** DIFFERIN® Gel is intended for cutaneous use only. If the medication is applied excessively, no more rapid or better results will be obtained and marked redness, peeling, or discomfort may occur. The acute oral toxicity of DIFFERIN® Gel in mice and rats is greater than 10 mL/kg. Chronic ingestion of the drug may lead to the same side effects as those associated with excessive oral intake of Vitamin A.

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