




Dermatology: *Making Sense of a Topical Approach*

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At the end of this presentation,
the participant will be able to

- ❑ Discuss the prescribing considerations for selected topical therapies:
 - ❑ topical steroids,
 - ❑ antifungals,
 - ❑ antibiotics, and
 - ❑ keratolytics.
- ❑ Identify cost-effective therapies for common dermatological conditions.



Dermatology: *Topical Steroids*

Prescribing Considerations
Cost Comparison

Topical Steroids

- ❑ Successful treatment depends on an accurate diagnosis and consideration of the steroid's delivery vehicle, potency, frequency of application, duration of treatment, and side effects
- ❑ Topical steroids differ in potency and formulation

Prescribing Considerations: Potency

- ❑ Potency is based on skin vasoconstricting ability
- ❑ Ranked from I (very high potency) – VII (low potency)
- ❑ Choice of product will be dependent on severity of the condition, location, and amount of surface area to be covered
- ❑ “Fingertip unit” can be used to estimate the amount needed for coverage
- ❑ Steroids vary in potency based on product and the vehicle in which they are formulated

Prescribing Considerations: Ointments

- ❑ Provide more lubrication and occlusion than other preparations
- ❑ Most useful for treating dry or thick, hyperkeratotic lesions; their occlusive nature improves steroid absorption
- ❑ Not to be used on hairy areas
- ❑ May cause maceration and folliculitis if used on intertriginous areas
- ❑ Greasy nature may result in poor patient satisfaction and compliance

Prescribing Considerations: Creams

- ❑ Mixes of water suspended in oil
- ❑ Good lubricating qualities; vanish into the skin
- ❑ Generally less potent than ointments of the same medication
- ❑ May contain preservatives, which can cause irritation, stinging, and allergic reaction
- ❑ Acute exudative inflammation responds well to creams
- ❑ Creams are also useful in intertriginous areas
- ❑ Do not provide the occlusive effects

Prescribing Considerations: Lotions and Gels

- ❑ Least greasy and occlusive of all topical steroid vehicles
- ❑ Lotions contain alcohol; have a drying effect on oozing lesions
- ❑ Lotions are useful for hairy areas because they penetrate easily and leave little residue
- ❑ Gels have a jelly-like consistency and are beneficial for exudative inflammation, such as poison ivy
- ❑ Gels dry quickly and can be applied on the scalp or other hairy areas and do not cause matting



Prescribing Considerations: Foams

- ❑ Foams, mousses, solutions, and shampoos are effective for scalp application
- ❑ Easily applied and spread readily in hairy areas
- ❑ Foams are usually more expensive than creams or ointments



Cost Comparison

- ❑ Refer to chart provided in your packet for Average Wholesale Pricing
- ❑ Cash cost at the pharmacy may be higher or lower than AWP
- ❑ Formulary coverage may mandate which product you prescribe



Cost-Effective Prescribing: Case Example

- ❑ You are caring for a patient with eczema, who has a large dry, scaly patch on the occipital region of the scalp that has been driving him “nuts...it’s just itching like crazy.” You intend to prescribe a medium or high-potency topical steroid.



Dermatology: *Antifungals*

Prescribing Considerations
Cost Comparison

Prescribing Considerations: Indications and Limitations

❑ Indications:

- ❑ Topical therapy is often effective for tinea corporis, cruris, and pedis; oral antifungals are reserved for patients who do not respond to topical therapy
 - ❑ Topical therapy should be considered first-line for those with tinea versicolor
 - ❑ Diaper and intertriginous dermatitis from *Candida albicans*
- ## ❑ Limitations: Topical therapy is not indicated for tinea capitis; systemic therapy may be warranted for diabetics and immunocompromised patients

Prescribing Considerations: OTC Therapies

- ❑ Efficacy of OTC products
 - ❑ Terbinafine or butenafine vs. clotrimazole or miconazole
- ❑ Recommend brand name OTC products:
 - ❑ **Lamisil AT or Lotrimin Ultra**

Prescribing Considerations: Selecting a Formulation

- ❑ Creams or solutions
- ❑ Application directions
 - ❑ 1-2" beyond the rash
 - ❑ Terbinafine or butenafine x 1-2 weeks
 - ❑ Clotrimazole or miconazole x 2-4 weeks
 - ❑ Continue 1-2 weeks after skin looks healed to prevent recurrence
- ❑ Combination with topical steroids is **not** recommended

Cost Comparison: Antifungals

Agent/Generic Available Bold font = 1-2 weeks typically needed Regular font = 2-4 weeks typically needed	How Supplied/ Cost (Generic if Available)
terbinafine 1% (Lamisil AT) cream OTC <i>Prescription Formulation No Longer Available</i>	12gm \$9-11 20gm \$30
butenafine 1% (Lotrimin Ultra) cream OTC butenafine 1% (Mentax) cream/No Generic	12gm \$10-12 15gm \$189
clotrimazole 1% (Lotrimin AF) cream OTC	12gm \$4-10
clotrimazole 1% + betamethasone dipropionate (Lotrisone®)	45gm \$73
tolnaftate 1% (Tinactin) cream OTC	15/30gm \$4-12
nystatin cream 100,000 USP/gm	15/30gm \$4*-\$22
oxiconazole nitrate 1% (Oxistat®) lotion	60ml \$140
nystatin + Triamcinolone Acetonide (Mycolog II®)	30gm \$56-80
Terbinafine (Lamisil) 250mg tablets	#30 \$4*-\$68



Cost-Effective Prescribing: Case Example

- You are caring for a patient with Type II DM who presents with a matted, deep red, macerated, moist rash involving the inframammary intertriginous region. You suspect candida albicans. She has tried OTC powders, but has gotten no relief.



Dermatology: *Antibiotics/ Antimicrobials and Keratolytics*

Cost Comparison

Cost Comparison: Impetigo

Antibiotic	Dosing and Duration	How Supplied/ Cost
Mupirocin 2% oint (Bactroban®)	TID application x 8-12 days	22gm \$20-44
Mupirocin 2% cream (Bactroban®)	TID application x 7-10 days	15gm \$97 30gm \$149
Retapamulin 1% ointment (Altabax)	BID application x 5 days	15gm \$124 30gm \$230
Cephalexin (Keflex®)	Adults: 500mg TID-QID x 10 days Children: 90mg/kg/day, divided in BID-QID dosing x 10 days	#30 \$4-21
Erythromycin	Adults: 250-500mg QID x 10 days Children: 90 mg/kg/day, divided into BID-QID dosing x 10 days	#40 \$22

Cost Comparison: Rosacea

Antimicrobial/Generic Available?	Dosing/ Application	How Supplied/ Cost
Metronidazole gel 1% Metrogel®/No	BID	60gm \$327
Metronidazole gel 0.75%/Yes	BID	45gm \$94
Metronidazole cream 0.75% (MetroCream)/Yes	Daily	45gm \$115
Azeliac Acid gel 15% (Finacea)/ No	BID	50gm \$243
Sodium Sulfacetamide 10% and Sulfur 5% gel (Avar®)/No		45gm \$220
Doxycycline monohydrate 50mg tablets/Y	Daily	#30 \$100
Doxycycline hyclate 50mg tablets/Yes	Daily	#30 \$4*
Doxycycline 30mg immediate release + 10mg delayed (Oracea)/No	Daily	#30 \$503

Cost Comparison: Acne Antimicrobials

Product/Generic Available?	Dosing/ Application	How Supplied/ Cost
benzoyl peroxide 5-10% cream, gel, bar, lotion, cleansing liquid	Daily to BID	28gm gel \$5
clindamycin 1% gel, solution, & lotion/Yes	BID	60gm gel \$53
erythromycin 2% gel/Yes	BID	60gm \$37
azelaic acid cream 20% (Azelex)/No	BID	30/50gm \$312-455
clindamycin 1% & benzoyl peroxide 5% gel (Benzacilin) 25&50gm jar; 35&50gm pump/Y	BID	50gm jar \$380/\$257
clindamycin 1.2% & benzoyl peroxide 2.5% 50gm pump (Acanya®)/No	Daily	50gm pump \$355
clindamycin 1.2% & benzoyl peroxide 5% gel (Duac) 25&50gm jar; 35&50gm pump/Y	Daily	45gm tube \$256/130
doxycycline monohydrate 50mg tablets/Yes	Daily	#30 \$100
doxycycline hyclate 50mg tablets/Yes	Daily	#30 \$4*
minocycline HCl extended release tablets (Solodyn®) 45-135mg/No	1mg/kg/day X 12 weeks	115mg #30 \$923

Cost Comparison: Keratolytics

Product/Generic Available?	Dosing/ Application	How Supplied/ Cost
Salicylic acid 2% (OTC: Clearasil Ultra Rapid Action Treatment Gel)	Daily-TID	28gm gel \$10
Adapelene (Differin) 0.3% gel/No	Q PM	45gm \$319
Adapelene (Differin) 0.1% gel/Yes	Q PM	45gm \$483/192
Adapalene 0.1%/Benzoyl peroxide 0.25% (Epiduo)/No	Daily	45gm \$312.99
Tretinoin (Retin-A) 0.01%-0.1% cream and gel/Yes	QPM	15-45gm \$34.29-93.99
Tretinoin (Retin-A Micro) 0.04 or 0.1% gel/No	QPM	15gm \$247 45gm \$443
Tretinoin (Atralin) 0.05% gel/No	Q PM	45gm \$383
<i>Tazarotene (Tazorac)</i> 0.1% cream and gel; 0.05% cream/No	Q PM	30/60gm \$296-654
Isotretinoin (Accutane) 0.5-1.0mg/kg/day divided BID with food x 15-20 weeks/Yes	BID	40mg #60 \$500

Summary: Key Points

- ❑ Low potency steroids should be used for children, milder conditions, and areas of thinner skin
- ❑ Start with a low or MEDIUM potency steroid for most patients and switch to a higher potency if needed
- ❑ Save high potency steroids for severe inflammation and thicker skin, switching to a lower potency after obtaining a response (not more than 2 weeks)
- ❑ Estimate the quantity you need to prescribe using the “fingertip unit”
- ❑ Formulation influences potency: in general, ointments are more potent than creams; creams are more potent than lotions
- ❑ Use ointments for thick or dry skin; lotions, gels, foams for hairy areas or areas of thinner skin

Summary: Key Points

- ❑ OTC antifungals are usually adequate for treating tinea; Recommend terbinafine (Lamisil AT) or butenafine (Lotrimin Ultra)
- ❑ In general, creams and solutions are more effective because they can be rubbed into the area of infection; patients should apply the antifungal 1 to 2 inches beyond the rash and may continue application 1-2 weeks after cleared
- ❑ Topical antifungal-steroid combinations should be avoided
- ❑ Topical therapy is ineffective for tinea capitis; oral therapy may be required for up to 12 weeks
- ❑ Tinea versicolor, which has a high rate of recurrence, may require one dose of oral antifungal

Summary: Key Points

- ❑ Topical antibiotics are preferred first-line therapy for impetigo; can be more effective than systemic antibiotics
- ❑ Mupirocin 2% ointment (22gm = \$20-44) is a reasonable option for impetigo, despite TID dosing for 8-12 days
- ❑ Topical metronidazole is the "gold standard" for papulopustular rosacea; some patients need additional oral tetracycline-based antibiotics for initial therapy
- ❑ Monotherapy with topical antibiotics can lead to drug resistance; combination therapies are commonly prescribed for rosacea and acne
- ❑ Topical retinoids are the backbone of acne treatment; topical tazarotene and oral isotretinoin are category X
- ❑ Combination products for acne and rosacea are often cost prohibitive; the agents may be prescribed separately

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