



Review

Art of prevention: Practical tips for improving adherence to treatments for older patients in dermatology^{☆☆☆☆}



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ABSTRACT

Given demographic changes and increases in longevity, physicians will see increasing numbers of patients over the age of 65 years. As the population ages, adapting and optimizing patient care to better serve the needs of older patients should be a priority. The goal of this review is to shed light on potential barriers affecting treatment adherence and to improve clinical care for older adults with dermatologic conditions. We provide practical strategies to help overcome these barriers and provide suggestions to address the impact of functional limitations on topical medication adherence. Some less apparent risks of treatment, such as fall risks with topical treatments, are also discussed, along with issues such as cost of treatments and prescribing considerations for patients who reside in facilities.

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Contents

Introduction	478
Patient factors, comorbidities, and living situations affecting adherence	479
Factors affecting treatment adherence in individuals with chronic skin diseases	479
Addressing physical obstacles to application of topical treatments	480
Reducing fall risk with topical medications	480
Cost barriers to treatment adherence and over-the-counter alternatives	480
Conclusion	480
References	480

Introduction

The U.S. Census projects that by 2030, one in five Americans will be age ≥ 65 years (Vespa et al., 2020). As the population of older adults grows, developing and implementing strategies that overcome barriers to dermatologic care in this vul-

nerable population is important. Our goal is to provide a helpful framework for dermatologists, geriatricians, and primary care providers to manage the unique challenges of older patients with cutaneous conditions.

Older adults are more susceptible to a number of dermatologic conditions, including xerosis, eczematous dermatoses, neoplasm, and infections (Jafferany et al., 2012). However, the clinical management of older patients in dermatology is more nuanced than just diagnosis and treatment. There are unique considerations in maximizing clinical management, improving adherence, and reducing treatment risks, such as falls, in this population, as summarized in Table 1 and discussed in detail in this review.

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Table 1
Patient-specific barriers to dermatologic treatment adherence in older adults and potential solutions

Scenario	Barrier	Potential solutions
Patients with physical limitations	Expelling medication from tubes	Recommend cutting off the end of the tube
	Apply topical medications to hard-to-reach areas	Prescribe tubs instead of tubes Recommend patients use a plastic or silicone spoon or spatula to reach less accessible areas Encourage patients to ask for assistance from caregivers or family Suggest commercial lotion applicators to assist with application Refer to occupational therapy for patients experiencing other difficulties in activities of daily living
Patients with cost barriers	Conservative use of topical emollients to reduce costs	Encourage patients to select budget-friendly emollients that are fragrance free, oil-based, and lower in pH (e.g., petroleum jelly) In certain cases, recommend the use of common and affordable household products, such as virgin coconut oil, baby oil, petroleum jelly, or Crisco. Encourage patients to purchase emollients in bulk
	Conservative use of barrier creams to reduce costs	Recommend lanolin, which can be purchased inexpensively and in bulk from a veterinary supply store
	Limited supply or ability to afford medication	Prescribe in bulk or encourage patients to purchase in bulk Inquire about difficulties in affording medications using normalizing language
Patients with vision impairment	Difficulty reading care instructions	Print instructions in a larger font Send voice messages with care instructions
Patients with cognitive impairment	Difficulty remembering prescriptions	Request that available staff assist patients in setting alarms or reminders Encourage patients to receive assistance from caregivers or family members Encourage patients to apply topical medications along with morning or evening medications
		Provide a written copy of instructions
Patients with hearing impairment	Difficulty hearing treatment plans	Speak slowly, clearly, and with an appropriate tone when providing care instructions
Patients receiving care at facilities	Receiving topical medications at inconsistent intervals or only "as needed"	Prescribe medications at designated and scheduled times of the day
Difficulty attending doctor's appointments or limited access to pharmacy	Limited access to prescription refills	Prescribe more refills for conditions that require less consistent follow-up Prescribe a larger quantity when appropriate and safe
Poor topical treatment adherence	Aversion to greasy topical medications	Establish patient-preferred topical vehicle (e.g., lotion, cream, ointment)

Patient factors, comorbidities, and living situations affecting adherence

When attempting to uncover factors affecting adherence, individual patient factors, such as dementia, hearing loss, vision loss, and physical impairments, should be considered first. Acknowledging how common geriatric comorbidities affect care can assist the clinician in developing an individualized treatment plan to accommodate needs, establish rapport, and improve adherence. Strategies include providing instructions in larger fonts, sending voice messages with care instructions, and considering different application methods for patients who are physically disabled. The increased incidence of cognitive problems among older adults can cause memory difficulties that contribute to treatment nonadherence. Setting alarms in intervals congruent to prescribed dosing can help improve consistency and medication response. Office staff may be able to assist patients in setting up alarms before leaving the office after clinic visits. Applying topical medications along with other scheduled medications can help patients develop a routine that is easier to remember. For older patients, establishing the level of assistance provided by caregivers or family to unveil other challenges to treatment adherence is also important. For example, patients who receive care at facilities may miss applying topical medications depending on how the medication is prescribed. Topical medication listed as "as needed" may be less frequently used than medication that is prescribed in scheduled intervals. Thus,

understanding the patient's living situation and method of receiving prescriptions can help guide patient care.

Factors affecting treatment adherence in individuals with chronic skin diseases

Eicher et al. (2019) conducted a systematic review to identify factors that influence treatment adherence for patients with chronic inflammatory skin diseases. The results indicated that patients with higher compliance were more likely to be female, married, employed, educated, nonsmoking, and nondrinking. Patients with social support from family, friends, and support groups had higher treatment adherence. While being respectful of patients' autonomy and independence, providers can recommend the engagement of family or social support.

Another important factor affecting treatment adherence is the type of prescription medication. Eicher et al. (2019) revealed that patients were most compliant with biologics or small-molecule inhibitors, followed by oral medications and topical therapies. Biologics and small molecule inhibitors often have higher treatment adherence because they are frequently administered by injection or infusion in established intervals. Topical medications are useful for those with comorbidities because they typically have fewer side effects and polypharmacy interactions. Assessing challenges to topical medication application use for patients recalcitrant to treatment is recommended and can avoid unnecessary treatment esca-

lation. When multiple options have similar clinical benefit, asking which formulation (cream, gel, ointment) is preferred may be useful. Topical medications can have challenges to adherence. Patients have the most difficulty with topical medications because they can be time consuming, less esthetically pleasing, and require consistency to achieve clinical benefit (Eicher et al., 2019). Topical treatments can also be difficult to apply.

Addressing physical obstacles to application of topical treatments

As patients age, they may experience challenges in applying topical medications, particularly to hard-to-reach areas (e.g., back and shoulders) due to arthritis and other factors. There are commercial tools designed to reach these areas that patients can purchase from online pharmacies or websites such as Amazon.com by searching for “lotion applicator.” Alternatively, patients can consider using objects, such as large plastic or silicone spoons or spatulas, that are smooth, nonporous, and allow for easy application. Patients who experience difficulties with medication application should be encouraged to ask for assistance from a caregiver. Patients may benefit from referral to occupational therapy when experiencing general difficulties with activities of daily living.

Some older patients may experience difficulty squeezing medications out of tubes. To mitigate the challenge of expelling the medication, cutting off the end of the tube may allow for easy access to the remaining medication. Patients should be advised that this method may increase the risk of contamination, so the product should be stored in a sealed bag. Cutting off the end of the tube may also invalidate the expiration date (Oakley, 2016); therefore, this method may be best suited for when the tube is almost empty. Prescribing tubs of medication instead of tubes can also allow for easier access. In the United States, hydrocortisone and triamcinolone are often prescribed as tubs (454 g). Most other topical steroids are not available at larger volumes but may be available from compounding pharmacies.

Reducing fall risk with topical medications

Patients who use topical oils, creams, and ointments should be cognizant of the potential fall risk (Berger et al., 2013). Patients are often advised to apply moisturizing agents after showering or bathing but should be reminded to be especially careful when water and/or oil spills onto the floor because this can pose a serious fall risk. Oils and moisturizers should be applied while the patient is in a comfortable and stable position while on surfaces such as carpet or while standing on a bathmat. Applying oils and moisturizers inside of the shower or bathtub or adding oil to bath water should also be avoided. Patients may be advised to wear nonslip socks if applying topical medications to feet.

Cost barriers to treatment adherence and over-the-counter alternatives

Treatment and emollient costs can also pose a significant barrier to treatment adherence for many patients, especially seniors on fixed incomes. The high cost may result in sparing use to conserve the product. When selecting budget-friendly moisturizing products, patients should be reminded to avoid fragrant lotions and creams which, in addition to cost, may result in allergic reactions. Patients should also be reminded that thicker oil-based moisturizers that frequently are packaged in tubs are often more beneficial for dry skin compared with water-based moisturizers in bottles with pumps. Additionally, increased skin pH has been reported in older adults (Man et al., 2009; Schreml et al., 2012; Zlotogorski, 1987). Therefore, moisturizers of lower pH are also

recommended to preserve the skin's acid mantle (pH 4–6) and maintain skin barrier function (Ali and Yosipovitch, 2013).

Many commonly used household items can be considered for certain skin conditions. For conditions such as xerosis or atopic dermatitis, some studies have reported benefits in moisturization for patients using virgin coconut oil, petroleum jelly, and baby oil (Hlela et al., 2015; Karagounis et al., 2019), which are relatively inexpensive. Of these options, petroleum is the most hydrating, but it can stain clothing or furniture. Although no formal studies have been performed, some patients have also reported a benefit at a low cost by using all-vegetable shortening, such as Crisco (soybean and palm oil), which is easy to spread and has no allergens or perfumes.

Similar money-saving strategies can also be applied for skin sealant, barrier, and moisturizing creams for urinary incontinence. Many products used for urinary incontinence include a lanolin, petrolatum, or zinc oxide base. Lanolin is a wax derived from wool-bearing animals that helps to block moisture from reaching the skin and causing breakdown (avoid prescribing in wool allergy). Additionally, lanolin does not require frequent reapplication and can be purchased inexpensively and in bulk as udder cream from veterinary supply stores or online as Bag Balm, Lantiseptic, or 100% generic lanolin.

In addition to recommending household items for cost barriers, several other strategies can help patients access medications. When appropriate, patients should be encouraged to purchase medications and supplies in bulk to save money and improve adherence, particularly patients with limited access to pharmacies and stores. When covered by insurance, providers can consider prescribing medications in larger quantities or with additional refills to reduce overall costs, avoid medication scrimping, and improve accessibility. Providers should also avoid assumptions about cost because many patients will not divulge that they are skipping or reducing their medication use. Providers can use open and normalizing language, such as, “Sometimes medications can be expensive and some of my patients do not use as much as prescribed or are not able to afford to fill their prescription. Has that ever been an issue for you?” Stating the question in this way helps normalize barriers that patients may face while allowing for an opportunity to express concern.

Conclusion

Providers must recognize that correct diagnosis and prescription are only the initial steps of the treatment plan for an older patient with a dermatologic concern. Successful and safe treatment requires addressing common barriers to care that a clinician may not often consider, such as cognition, living situation, physical ability to apply medication, and potential fall risk of topical treatments. Addressing these issues allows clinicians to more holistically care for patients and increase chances for successful treatment.

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