

June 16, 2009

**MANAGEMENT OF PEDAL KERATOSES, ONYCHOMYCOSIS
AND OTHER NAIL DISORDERS**

1. PURPOSE: This Veterans Health Administration (VHA) Directive provides policy for medically necessary basic foot care needs of Veteran patients.

2. BACKGROUND

a. Growing numbers of patients are presenting to VHA for basic foot care and management of painful conditions of their feet. These common ailments include mechanically induced keratoses (corns and calluses) and a variety of toenail disorders. Medicare guidelines define medical necessity using a set of restrictive clinical criteria (class findings) that determine eligibility for treatment. Typically, only those patients considered to be at high risk for developing serious foot complications (ulcers or amputation) are covered for preventive services. These criteria are restricted to patients with circulatory disease or areas of diminished sensation in the legs or feet.

b. VHA has taken an expanded view of medical necessity, to include those patients who are visually, cognitively or physically impaired as well as those Veterans who may have severe arthritis, chronic low back pain, or those on chronic anticoagulation therapy. It is well established that aging adds a degree of peripheral vascular compromise and a reduction in immune response. Wounds may take longer to heal in elderly patients. This cohort of “at risk” Veterans should not be using sharp instruments on their own feet as the potential for self inflicted injury is high. However, the resources of the Department of Veterans Affairs (VA) are limited and eligibility criteria must be developed to differentiate routine basic hygiene from limb preservation.

c. The implications of an aging Veteran population as well as an influx of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) Veterans suggests an increased need for basic foot care as well as care for more complex medical and surgical conditions of the foot.

d. Definitions

(1) **Pedal Keratoses.** Pedal keratoses is a localized horny overgrowth of the upper layer of skin such as corns, calluses or warts. Corns and calluses are most often the result of abnormal pressure and friction from ambulation and shoe gear. Bony deformities (hammer toes and prominent metatarsal heads) increase the likelihood of blister formation, in the presence of acute pressure and friction, and callus formation in the presence of chronic repetitive stress. The pain associated with these keratoses is due to sub-lesional bursitis, capsulitis or peripheral nerve irritation. Ultimately when untreated, these conditions can lead to ulceration of the skin, abscess formation, soft tissue infection, and osteomyelitis, especially in high risk patients. Preventive care is necessary in order to minimize this risk.

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(2) **Onychomycosis.** Onychomycosis is a fungal or mycotic infection of the nail bed and nail.

(3) **Other Nail Disorders.** Although the majority of dystrophic nail disorders are fungal in nature, nail thickening is not exclusive to onychomycosis. It can also be caused by psoriasis, chronic micro trauma from shoes or it can be the result of acute injury with or without traumatic nail avulsion. These types of nail dystrophies are usually not “crumbly” however they do represent an increased risk in vulnerable patients for both injury and falls. Risk of subungual ulceration, abscess formation, soft tissue infection and osteomyelitis is increased secondary to the thickening and hypertrophic nature of nail growth. Preventive care is necessary in order to minimize this risk. In addition, in patients with normal nails, the issue of improperly trimming nail margins is a common cause of self induced onychocryptosis (ingrown toe nail) which can lead to pain, falls, and infection.

3. POLICY: It is VHA policy that every VHA Network and Facility (including medical centers, CBOC’s, and outpatient clinics, etc.) use the risk categories and provision of care procedures below to determine care levels to direct eligibility for basic foot care. ***NOTE:** This policy does not apply to other more complex medical and surgical condition of the foot and ankle. It is meant for ongoing basic corn, callus, and nail care.*

4. ACTION: The facility Director is responsible for ensuring that:

a. Veterans in risk groups are identified. To define eligibility criteria for basic foot care a classification system to identify high, moderate and lower risk patients needs to be established. ***NOTE:** See Attachment A for Risk Group Chart.*

(1) High Risk. Patients with a documented history of peripheral arterial disease and sensory neuropathy are in the high-risk category.

(2) Moderate Risk. Those with systemic conditions that place them at increased risk for injury are at moderate risk.

(3) Lower Risk. Patients who are otherwise healthy but who cannot physically maintain their foot hygiene are at lower risk. In this group, the decision to provide ongoing care needs to be made at the provider level as circumstances may or may not warrant regularly scheduled care.

b. The diagnosis of diabetes in and of itself does not confer a level of risk and subsequent inclusion in a particular risk group; however, individuals with diabetes require annual foot screening examinations to identify progression of their lower extremity disease. Determination of risk category for patients with diabetes depends on vascular and neurologic status, presence of foot deformity and prior history of ulceration.

c. All patients, regardless of risk level, are eligible for treatment of documented onychomycosis as well as other systemic or traumatic dystrophic nail conditions. Only high risk and some moderate risk patients (depending on the judgment of the podiatrist or foot care specialist) are eligible for ongoing or regularly scheduled basic nail care. ***NOTE:** Care can be provided in either primary care or podiatry for medical care of onychomycosis.*

d. Staffing resources are adequate. For example, the addition of the foot hygienist or health technician as part of the podiatric clinical team helps address the increased need for basic foot care under the direction of the chief of podiatry allowing the podiatric physician to treat more complex foot and ankle conditions. **NOTE:** *A training program for mid-level providers of basic foot care is available and recommended. Additional information and a brochure can be found at <http://vaww.sites.lrn.va.gov/vacatalog/cudetail.asp?id=25087> or the Podiatry Web Site at <http://vaww1.va.gov/podiatry/page.cfm?pg=50>*

e. Therapy treatments are followed.

(1) **Pedal Keratoses.** Abnormal pressure and friction applied to the foot from walking and poorly fitting shoes can be aggravated by underlying structural deformities (hammer toes, prominent metatarsal heads and bunions). These conditions can be addressed by accommodation modification of shoe gear in addition to debridement of hyperkeratotic skin lesions, or by surgical correction of the underlying bony abnormality. In the face of significant peripheral vascular disease, where healing is in question, more frequent debridement and more aggressive shoe accommodation should be the course of care. In some circumstances, surgical intervention is necessary and bone resection (including amputation) is mandatory, such as in a non-healing ulceration, significant skin infection, osteomyelitis and gangrene.

(2) **Hypertrophic Nail Disorders.** Each clinician must determine the appropriateness of using either oral agents or topical agents in an attempt to “cure” or “control” a fungal nail condition. Modestly effective pharmacologic antifungal agents are in current use. However, recurrence of infection is relatively high. What is clear is that some attempt to control onychomycosis on an ongoing basis is necessary to reduce the incidence of repeated tinea pedis infections. The debridement of mycotic nails while diminishing the pain association with thickened nails has not been shown to be an effective treatment of the fungal infection. However, it is desirable to reduce the trauma which may facilitate infection of other nails or of the skin.

5. REFERENCES

a. The Medicare Benefit Policy Manual, Publication 100-2, Chapter 15 can be found at <http://www.cms.hhs.gov/manuals/Downloads/bp102c15.pdf> on the CMS Website.

b. MLN Matters Number: SE0707.
<http://www.cms.hhs.gov/MLNMattersArticles/downloads/SE0707.pdf>.

c. A Practical Manual of Diabetic Foot Care, second edition, 2008 Blackwell Publishing, Michael Edmonds, Alethea Foster and Lee J. Sanders.

d. Weaver T, Ton MV, and Pham TV: Ingrowing toenails: Management practices and research outcomes. *The International Journal of Lower Extremity Wounds*, Vol 3, No. 1, 22-34 (2004).

e. Fungal Nail Infection. Pocket Picture Guides, Mosby-Wolfe Medical Communications, D.T. Roberts, EGV Evans and BR Allen.

6. FOLLOW-UP RESPONSIBILITY: The Office of Patient Care Services (11) is responsible for the contents of this Directive. Questions may be referred to the National Program Director of Podiatry at (202) 461-7122.

7. RESCISSIONS: None.

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ATTACHMENT A

FOOT CARE RISK CATEGORIES

Risk Group	Description	Care Level by Podiatry Service once referred by Primary Care.
High Risk	<ul style="list-style-type: none"> • Documented Peripheral Arterial Disease • Documented Sensory Neuropathy • Prior history of foot ulcer or amputation 	On going regularly scheduled care at prevention intervals determined by podiatrist
Moderate Risk	<ul style="list-style-type: none"> • Visually impaired • Physically impaired • Neuromuscular diseases, i.e. Parkinson's disease • Severe arthritis and spinal disc disease • Cognitive dysfunction • Chronic anticoagulation therapy 	On-going care as needed determined by podiatrist
Lower Risk	<ul style="list-style-type: none"> • >70 years old without other risk factors • Diabetes without foot complications • Obesity 	Initial care and discharge or care as necessary and as determined by a Podiatrist.