Body System: Integumentary		
Session Topic: Nail Procedures		
Educational Format		**Faculty Expertise Required**
Clinical Procedural Workshop (CPW)		Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience teaching hands-on procedural workshops. The majority of the education must emphasize hands-on learning, with feedback from faculty.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. Please describe your interest and plan for teaching a PBL on your proposal form.

Professional Practice Gap	**Learning Objective(s) that will close the gap and meet the need**	**Outcome Being Measured**
Data from a recent AAFP Common Medical Procedures Needs Assessment indicate that family physicians have a need for training regarding nail disorders, and performing nail surgery. Data from a recent AAFP CME Needs Assessment survey indicates that family physicians have a statistically significant and meaningful gap in the knowledge and skill to perform aesthetic procedures/techniques, manage nail disorders, and provide optimal postoperative care for surgical procedures.	1. Demonstrate common methods used for nailbed surgery and repair. 2. Illustrate the steps used to treat ingrown nails and nail abnormalities. 3. Prepare assessment and treatment plans for different patient populations who may require various nail procedures. 4. Assemble appropriate tools for nail procedures.	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement newly acquired nail procedure skills.

ACGME Core Competencies Addressed (select all that apply)			
X	Medical Knowledge		Patient Care
	Interpersonal and Communication Skills		Practice-Based Learning and Improvement
	Professionalism		Systems-Based Practice

Faculty Instructional Goals

Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will

facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
    - Visit http://www.aafp.org/journals for additional resources
    - Visit http://familydoctor.org for patient education and resources
- Provide demonstrations of common methods used for nailbed surgery and repair.
- Provide demonstrations of effective techniques for digital blocks.
- Provide training illustrating the steps used to treat ingrown nails and nail abnormalities.
- Provide recommendations to help physician learners prepare assessment and treatment plans for different patient populations who may require various nail procedures.
- Provide recommendations to help physician learners assemble appropriate tools for nail procedures.
- Provide recommendations for appropriate coding/billing of common nail procedures.

Needs Assessment

As family physicians treat patients of all ages – from young children to the elderly – it is important to equip them with the tools to identify, diagnose and develop treatment plans for the diverse populations they see in practice. Skin problems and diseases have become a growing reason for which patients seek treatment (35 million patient visits to family physicians were for skin-related problems in 2009[1]) and as such, family physicians should be well equipped to handle some of the most common conditions, which may include everything from acne and eczema to skin cancer and aging. Membership data from recent surveys conducted by the American Academy of Family Physicians (AAFP) indicates that over 73% of family physicians provide skin procedures (e.g. biopsies), and an additional 8.6% perform cosmetic procedures in their clinical practice.[2] When asked what procedures members would most like to provide, botulinum injections was the most frequently mentioned; however, lack of training was a strong factor for not offering the procedure.[3]

The 2012 AAFP CME Needs Assessment Survey indicates that family physicians in general have statistically significant and meaningful gaps in medical knowledge and skill to perform aesthetic procedures/techniques, manage nail disorders, and provide optimal postoperative care for surgical procedures.[4] Additionally, CME outcomes data for the clinical procedural workshops (CPD) for integumentary procedures from the 2012-2016 AAFP FMX (formerly Assembly) show that over 50% of learners engaging in those sessions indicated a need to pursue additional education, with several learners commenting that they had an interest in adding aesthetic skin procedures to their practice.[5-9] This suggests that family physicians require continuing medical

education, in order to provide optimal care and management of integumentary procedures for their patients.

Data from recent AAFP CME Needs Assessment of Common Medical Procedures, indicate that family physicians have knowledge and performance gaps regarding nail disorders, and performing nail surgery.[4,10] More specifically CME outcomes data from 2014 AAFP Assembly and 2015 AAFP FMX *Nail Procedures* sessions, indicate that physicians have knowledge and practice gaps regarding selecting appropriate nail procedure instruments; efficacy performing nail procedure techniques; performing digital block effectively; determining when silver nitrate sticks or a nail bed raiser are appropriate for nail ablation; performing ingrown nail procedures; appropriate use of antibiotics; and performing partial nail removal.[6,7]

Over the course of the past decade, the demand for aesthetic skin procedures has increased nearly five-fold, and family physicians have greater opportunities to perform minimally invasive procedures as requested by patients. In fact, minimally invasive procedures have become the principal modality for addressing age-related facial changes in patients. They are, according to one source, associated with high patient satisfaction due to the minimal recovery time, few side effects and relatively good outcomes.[11] This will continue to have significant implications on family physicians' practices as the population continues to age dramatically; in 20 years, the proportion of the U.S. population over the age of 65 is expected to double to more than 71 million older adults, or one in every five Americans, leading to a 25% increase in health care spending.[12] While family physicians may not provide extensive in-office procedures for aesthetic purposes, they should still be prepared to address patient questions and concerns, resources on appropriate options and requests for referrals when necessary.

Nail procedures, which may be done to treat ingrown toenails, nail abnormalities or even address increased brittleness, transverse grooves, onycholysis and subungual keratosis associated with pregnancy.[13,14] One of the more challenging aspects of nail procedures is effective execution of office anesthesia for nail procedures.[15]

Physicians should consider the following evidence-based recommendations for practice:[13,15-17]

- Oral terbinafine (Lamisil) has been shown to be an effective long-term therapy for onychomycosis caused by fungal infections. Oral itraconazole (Sporanox) may be more effective for yeast or nondermatophytic mold infections.
- Treatment of squamous cell carcinoma of the nail includes Mohs surgery or amputation.
- If no abscess is present, oral antibiotics should be used to treat severe acute paronychia, with consideration for methicillin-resistant Staphylococcus aureus coverage in high-prevalence areas and anaerobic bacteria coverage if exposure to oral flora is suspected.
- Surgical treatment modalities for pincer nail include nail bed cutting with or without splinting.
- Lidocaine (Xylocaine) buffered with sodium bicarbonate decreases the pain associated with injection; this effect is enhanced when the solution is warmed to room temperature.
- The intraoral approach to infraorbital or mental nerve blocks reduces patient discomfort.
- Don't prescribe oral antifungal therapy for suspected nail fungus without confirmation of fungal infection.

- When preparing a nail specimen to test for onychomycosis, the nail should be cleaned with 70% isopropyl alcohol, then samples of the subungual debris and eight to 10 nail clippings should be obtained. The specimen should be placed on a microscope slide with a drop of potassium hydroxide 10% to 20% solution, then allowed to sit for at least five minutes before viewing under a microscope.
- Periodic acid–Schiff staining should be ordered to confirm infection in patients with suspected onychomycosis.
- Systemic antifungal agents are the most effective treatment for onychomycosis, but cure rates are much less than 100%. Terbinafine (Lamisil) is the most effective systemic agent available.
- When prescribing the topical agent ciclopirox, patients should be informed that it has some benefit in the treatment of onychomycosis, but also has a high failure rate.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

References

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