

Treatment of Warts

Clinical Guideline

This guideline supports initial treatment of patients with Warts and includes information for referral to the Children's Wisconsin Dermatology Clinic.



To support collaborative care, we have developed guidelines for our community providers to use when referring to, and managing patients with, the pediatric specialists at Children's Wisconsin. These guidelines provide information and recommendations for jointly managing patient care between community providers and our pediatric specialists.

Diagnosis/symptom	Referring provider's initial evaluation and management:	When to initiate referral/ consider refer to Dermatology Clinic:	What can referring provider send to Dermatology Clinic?	Specialist's workup will likely include:
<p><u>Signs and Symptoms</u></p> <p>Verrucae vulgaris (common warts) and verrucae plantaris (plantar warts): rough, skin-colored papules</p>	<p><u>Diagnosis and Treatment</u></p> <p>Evaluate type, number and location of warts. Determine patient/family desire for treatment and patient cooperation. Observation is always an option, as response to treatment is variable and eventual resolution is expected with or without treatment.</p> <p><u>Salicylic Acid</u></p> <ul style="list-style-type: none"> • Soak and file wart nightly, then apply 40% salicylic acid under occlusion. • WartStick is 40% salicylic acid available OTC. • Mediplast is a plaster that can be cut to size and applied to lesions. This might have to be covered with duct tape or medical tape to keep in place. • Do not use on the face or genitals. • Irritation is the desired endpoint. If irritation is severe or ulcers 	<p>Patients and families should be motivated to pursue treatments that can be painful and generally require repeated visits.</p> <ul style="list-style-type: none"> • Failed treatment after at least 3 months with topical therapy • Complications or lack of response from in-office treatment • Lack of patient cooperation • Lesions in difficult sites such as face, genitals, extensive nailfold involvement. 	<p>How to refer:</p> <ol style="list-style-type: none"> 1. In Children's Epic: place an Ambulatory referral to Dermatology. 2. External providers: <ul style="list-style-type: none"> • In your instance of Epic – Place an external referral order to CHW DERMATOLOGY CLINICS or • Fax (414-607-5288) or • Online ambulatory referral 	<ul style="list-style-type: none"> • History and physical exam • Dermatoscopic exam • After referral to Dermatology Clinic, multiple follow-up appointments may be needed. Families may want to determine their deductible status and whether Children's Wisconsin is in-network or out-of-network.

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	<p>develop, stop for a few days, allow the skin to heal, and then re-start at a decreased frequency.</p> <p><u>5-fluorouracil</u></p> <ul style="list-style-type: none"> • Soak and file wart nightly, then apply 5-FU under occlusion. • 5-fluorouracil 5% cream is covered by most insurances • Compounded 5-fluorouracil with 17% salicylic acid is available at Skywalk Pharmacy (not covered by Medicaid). • Do not use on the face or genitals. • Irritation is the desired endpoint. If irritation is severe or ulcers develop, stop for a few days, allow the skin to heal, and then re-start at a decreased frequency. • Medication should be applied sparingly so that it does not come in contact with the surrounding normal skin. <p><u>Liquid nitrogen</u></p> <ul style="list-style-type: none"> • Liquid nitrogen applied with two 10-15 second freeze thaw cycles on thin skin areas. 20-25 second freeze thaw cycles for palms/soles. • Repeat treatment every 4 weeks. 			

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	<ul style="list-style-type: none"> Pare any hyperkeratotic skin prior to freezing. Pain, erythema, and blistering are adverse effects. <p><u>General skin care for hand warts:</u></p> <ul style="list-style-type: none"> Avoid biting/picking the skin around fingernails. If the hands are dry use a fragrance-free hand soap and fragrance-free moisturizing cream after each hand washing. Prescribe a low-mid potency steroid if dermatitis is present. 			
Verruca plana (flat warts)	<p><u>Diagnosis and Treatment</u></p> <p>Evaluate type, number and location of warts. Determine patient/family desire for treatment and patient cooperation. Observation is always an option, as response to treatment is variable and resolution is expected with or without treatment.</p> <p><u>Tretinoin</u></p> <ul style="list-style-type: none"> Tretinoin 0.025 or 0.5% cream. Can start 3 times a week and increase to nightly after 2 weeks if tolerated. 	<p>Patients and families should be motivated to pursue treatments that can be painful and generally require repeated visits.</p> <ul style="list-style-type: none"> Failed treatment after at least 3 months with topical therapy Complications or lack of response from in-office treatment Lack of patient cooperation Lesions in difficult sites such as face, genitals, extensive nailfold involvement. 	See above	<ul style="list-style-type: none"> History and physical exam Dermatoscopic exam After referral to Dermatology Clinic, multiple follow-up appointments may be needed. Families may want to determine their deductible status and whether Children's Wisconsin is in-network or out-of-network.

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	<ul style="list-style-type: none"> Slight erythema is desirable. If irritation is severe, stop for a few days, allow the skin to heal, and then re-start at a decreased frequency. <p><u>Imiquimod</u></p> <ul style="list-style-type: none"> Imiquimod 5% cream. Can start 3 times a week and increase to nightly after 2 weeks if tolerated. Slight erythema is desirable. If irritation is severe, stop for a few days, allow the skin to heal, and then re-start at a decreased frequency. Side effects can include robust inflammatory response, psoriasiform rash, or oral ulcers Do not use on the face. <p><u>Liquid Nitrogen</u></p> <ul style="list-style-type: none"> Use liquid nitrogen in a cup with cotton tipped applicators. Apply for two 5-10 second freeze thaw cycles. 			
Condyloma (genital warts)	<u>Diagnosis and Treatment</u>	Patients and families should be motivated to pursue treatments that	See above	<ul style="list-style-type: none"> History and physical exam Dermatoscopic exam

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	<p>Determine need to report to Child Protective Services.</p> <p>Treat with imiquimod cream applied three times per week. Use caution to apply to the warts only and not the normal skin. Can apply Vaseline petroleum jelly to the normal skin to act as a barrier.</p>	<p>can be painful and generally require repeated visits.</p> <ul style="list-style-type: none"> Failed treatment after at least 3 months with topical therapy Complications from in-office treatment Lack of patient cooperation 		<ul style="list-style-type: none"> After referral to Dermatology Clinic, multiple follow-up appointments may be needed. Families may want to determine their deductible status and whether Children's Wisconsin is in-network or out-of-network.
<div> <div> Send referrals to Children's Wisconsin </div>  <div> <p>Internal referral via Children's Epic Send an ambulatory referral to Dermatology</p> <p>External referral via Epic Send to CHW DERMATOLOGY CLINICS</p> </div> <div> <p>Via fax: 414-607-5288</p> </div> <div>  </div> </div>				

Approved by Specialty Medical Leader, CSG Clinical Integration, CMG Clinical Guidelines Core Team

Medical Disclaimer

This Clinical Guideline (CG) is designed to provide a framework for evaluation and treatment. It is not intended to establish a protocol for all patients with this condition, nor is it intended to replace a clinician's judgement. Adherence to this CPG is voluntary. Decisions to adopt recommendations from this CG must be made by the clinician in light of available resources and the individual circumstances of the patient. Medicine is a dynamic science; as research and clinical experience enhance and inform the practice of medicine, changes in treatment protocols and drug therapies are required. The authors have checked with sources believed to be reliable in their effort to provide information that is complete and generally in accord with standards accepted at the time of publication. However, because of the possibility of human error and changes in medical science, neither the authors nor Children's Hospital and Health System, Inc., nor any other party involved in the preparation of this work warrant that the information contained in this work is in every respect accurate or complete, and they are not responsible for any errors in, omissions from, or results obtained from the use of this information.