BCCDC Certified Practice Decision Support Tool:
Genital Warts

The BCCDC decision support tools (DST) aim to provide more equitable, inclusive, and affirming care for all people, particularly for sexually diverse, transgender, Two-Spirit and non-binary people. While anatomy and site-specific testing language are used throughout this document, nurses should always strive to foster safer conversations and gender-affirming care by using an individual's chosen terminology when providing STI assessment and management.

Scope

Registered Nurses with **Reproductive Health – Sexually Transmitted Infection** Certified Practice designation (RN[C]) are authorized to manage, diagnose, and treat individuals with genital warts.[1]

Etiology

Genitals warts refer to skin or mucosal infections caused by the human papillomavirus (HPV) of which over 100 genotypes have been identified.[2] HPV types 6 and 11, associated with low risk of oncogenesis, account for approximately 90% of genital warts.[3,4]

Epidemiology

Genital warts are common, with an estimated annual incidence in the developed world population being approximately 0.15% of the adult population per year.[2] In recent years, the occurrence of genital warts has decreased markedly in countries with HPV vaccination programs. [2,4]

Transmission[2,3]

- primarily via anogenital contact during vaginal and anal sex
- possible during oral sex and genital-to-genital contact without penetration
- rarely passed from a pregnant person to an infant during delivery
- transfer of infection from hand warts may occur
- no strong evidence for transmission via fomites

Risk Factors[2, 3, 5-8]

- sexual contact where there is skin-to -skin transmission with an individual who has HPV infection
- immunosuppression (e.g., HIV infection, organ transplant and immunosuppressive drug therapy)
- smoking is associated with increased prevalence, incidence and reduced clearance of infection

Clinical Presentation

Genital warts occur commonly at certain anatomic sites, including around the vaginal introitus, under the foreskin of the uncircumcised penis, and on the shaft of the circumcised penis.

Warts can also occur at multiple sites in the anogenital epithelium or within the anogenital tract (e.g., cervix, vagina, urethra, perineum, perianal skin, anus or scrotum).

Though presentation can vary, individuals may report, or warts may typically appear as: [2-9]

- flat, papular, or pedunculated growths either as single bumps or in clusters
- often non-pigmented (flesh colour), though different pigment patterns may occur
- often painless, but depending on size and anatomic location, they may be painful or pruritic
- distorted urinary stream or bleeding with urethral lesions
- rectal bleeding (after passage of stools with anal lesions)
- perianal itch

Note: Most anogenital HPV infections are asymptomatic and/or subclinical

Physical Assessment [2-5]

Visual inspection with a good light source is usually sufficient to diagnose warts, although magnification using a dermatoscope may be helpful for smaller lesions.

A physical assessment includes:

- careful inspection and examination of the entire anogenital area (including the urethral meatus, vaginal introitus).
- offering speculum vaginal examination to those with warts at the introitus where the upper limit cannot be visualized, or in those with external warts and other vulvovaginal symptoms such as irritation, bleeding or discharge, or if individual reports being aware of possible internal lesions.

- Consideration for consultation or referral for proctoscopy and/or digital rectal examination if anal canal warts are suspected (e.g. external lesions extending into the anal canal; anal bleeding or discharge). Treatment of external warts does not need to be delayed if internal warts are present.

Diagnostic and Screening Tests

No diagnostic or screening tests available. Diagnosis is based on clinical presentation and physical assessment.

Some non-HPV anogenital lesions can resemble genital warts (e.g. condylomata lata – a manifestation of secondary syphilis). Offer full STI screening.[2-9]

Management

Diagnosis and Clinical Evaluation

Diagnosis is based on clinical presentation and physical assessment.

Consultation and Referral [2-10]

Consult with or refer to a physician or nurse practitioner (NP) all individuals who:

- have warts that are atypical in appearance, are larger than 1-2cm, or have suspicious or variable pigmentation.
- have internal genital warts (anal, vaginal, or urethral). Treatment of external warts does not need to be delayed if internal warts are present.
- are postmenopausal and present with a 1st episode of wart-like lesions. Such lesions may require biopsy before any initiation of therapy to rule out underlying vulvar intraepithelial neoplasia or vulvar cancer
- have reached maximum treatment duration, administered as recommended per treatment modality, without resolution of symptoms (see treatment guidance below)
- have an unexpected, or severe reaction to genital wart treatment (see treatment guidance below)
- are unable to tolerate cryotherapy or other provider-applied treatment and require a prescription for self-applied treatment (see treatment guidance below)
- have diabetes and opting for or require topical podophyllin treatment (see treatment guidance below)
- Pregnant or breast/chest feeding individuals

Treatment [2-5, 8-9]

Treatment of anogenital warts should be guided by:

- wart size, number, and anatomic site
- individual preference
- cost and availability of treatment
- convenience
- adverse effects
- provider experience

No definitive evidence indicates that any recommended treatment is superior to another, and no single treatment is ideal for all people or all warts. Shared clinical decision-making between an individual and a provider regarding benefits and risks of these regimens should be provided as all modalities of treatment have advantages and limitations.

The aims of treatment include the clearance of visible warts, the restoration of the normal appearance of the anogenital skin and/or mucosa and the prevention of wart recurrence. There is no evidence that treatment of warts reduces the risk of onward transmission to sexual partners.

Consult with or refer to a physician, NP or RN (c) (prescriber) for a prescription where appropriate.

Treatment	Notes
No Treatment	
Many genital warts will resolve spontaneously. Deferral of treatment and monitoring may be appropriate if: • this is the individual's preferred option • the lesions are very small and diagnosis remains unclear (given all treatments may result in localised skin reactions and/or scarring)[2]	
Treatment	
Self Applied • Imiquimod 5% or 3.75% cream • Sinecatechins 10% ointment	These options can be expensive; consult with or refer to a physician, NP or RN(C) (prescriber) for a prescription where appropriate.

Treatment	Notes
Provider Applied First Choice: • Cryotherapy with liquid nitrogen (preferred) or alternate cryotherapy regimens approved for the treatment of genital warts (e.g., dimethyl ether propane (Histofreezer®, see package insert for treatment details) **Alternate Treatment:** • Podophyllin 10% tincture or 25% resin* • Trichloracetic acid (TCA) 90%	**First Choice: Cryotherapy with liquid nitrogen** *Note:* Over the counter cryotherapy remedies for wart treatment are not recommended for the treatment of genital warts. Clinical diagnosis is required prior to treatment recommendation. Method of Use: 1. Apply using spray canister. Adjust lighting and use magnification as needed. 2. Stretch the area to be sprayed. Hold the spray nozzle approximately 1cm away from the skin. Distance may vary slightly dependent on amount of freezing required. 3. Spray intermittently to create and maintain a whitish frozen area involving the wart, with a halo of 1- 2mm around the wart. Freezing should be maintained for 5-10 seconds post-application. 4. Allow for the skin to thaw. This occurs when the frozen whitish area returns to normal colour (may be slightly reddened). 5. Repeat steps 2 to 4 for 2-3 treatment cycles total for each wart. 6. Treatment is repeated every 7 to 14 days for 6 to 8 treatment visits. Ensure previously treated areas are completely healed prior to subsequent treatment. 7. If no substantial improvement is observed after a complete course of treatment or in the event of severe side effects, consult/refer with a physician or NP to determine next steps. **Alternate Treatments**: Podophyllin 10% or 25%: For use only in the absence of other treatment options given concerns about local and systemic safety, and low efficacy. DO NOT USE podophyllin: • For pregnant individuals • For the treatment of any internal warts – cervical, meatal, vaginal, or anal. Podophyllin may be used around, but not in the meatus, around the introitus, but not in the vagina or on the cervix, and around, but not in the anus • On open sores or excoriated skin • On individuals who have diabetes

Treatment	Notes
	Method of Use: 1. Measure out 0.5ml podophyllin using syringe/needle. 2. Dab podophyllin on warts with cotton swab: limit the area of application to < 5cm^2. The dose per visit should not exceed 1.0ml. 3. Allow the area to fully dry prior to the individual dressing after treatment. 4. Remind the individual to wash off the first application (first-time treatment) in 1 hour; and if there is no adverse reaction then wash off subsequent applications in 4-6 hours. 5. Podophyllin application may be repeated at seven-day (weekly) intervals for up to 6 treatment sessions. 6. If warts have not resolved after 6 treatment sessions, consult/refer with a physician or NP to determine next steps. Notes: i. Side effects of treatment may include mild to moderate local skin reactions which may include discomfort, tenderness, stinging or pain at the site. Blistering, erythema, and itching may also occur. Reactions are managed by decreasing the intensity of future treatments. ii. If there is no improvement in the warts after 3 provider-applied treatment sessions, consider adding additional treatment options (e.g., cryotherapy first, then apply podophyllin). *Podophyllotoxin/podofilox solution in not currently licensed or available in Canada[4]. It is currently supported for provider applied application in the absence of other treatment options but will need to be procured outside of Canada Trichloroacetic acid (TCA) DO NOT USE TCA: • For the treatment of any internal warts: cervical, meatal, vaginal, or anal • On open sores or excoriated skin Method of Use 1. Measure out a small amount using syringe/needle. 2. Apply petroleum jelly or 2% xylocaine ointment to the surrounding area to protect healthy skin. 3. Use a cotton swab to dab the acid preparation on. Apply sparingly.

Treatment	Notes
	4. Allow area to dry until a “white frosting” appearance is noted. Do not need to wash off. 5. Can be used weekly for up to 6-8 weeks. Notes: i. TCA is a highly caustic solution that can cause blistering and ulcerations if used in excess. The viscosity is lower than water and can spread very quickly. ii. If painful, soap or sodium bicarbonate can be used to neutralize the area. Powder the area with talc or sodium bicarbonate or apply soap to any un-reacted acid.

A new treatment modality should be selected when no substantial improvement is observed after a complete course of treatment or in the event of severe side effects; treatment response and therapy-associated side effects should be evaluated throughout the course of therapy.

Monitoring and Follow-up

- **Repeat testing:** No
- **Test-of-cure (TOC):** No
- **Follow-up:** None unless new warts appear after completion of initial recommended treatment course

Partner Notification

- **Reportable**: No
- **Trace-back period**: N/A
- **Recommended partner follow-up:** Sexual partners may wish to consult health care providers for HPV vaccination, STBBI screening, cancer screening per guidelines, and assessment and care if they find wart-like lesions on self-examination.

Potential Complications

- pre-cancerous or cancerous lesions from co-infection with specific HPV subtypes
- overgrowth of external warts in immunocompromised individuals
- perinatal transmission (rare)

Additional Education [2-9, 11-12]

- Genital warts are common.
- Most people infected with HPV will have no symptoms. It is possible for sexual partners to both be infected with HPV but yet have different clinical manifestations/presentations (e.g. one person may present with visible genital warts, the other may not have any visible genital warts).
- Most external genital warts are caused by HPV types that are low risk and only rarely associated with cancer. These are not the same strains of HPV that are detected by HPV cervical cancer screening.
- Transmission can occur during oral, vaginal and anal sex and other intimate skin-to-skin contact.
- It is possible to be infected by more than 1 type of HPV at a time.
- Condoms used consistently and correctly can lower the chances of acquiring and transmitting HPV and developing HPV-related diseases.
- Intra-anal warts can occur even among people who have not had a history of anal sexual contact.
- Smoking is a risk factor for HPV. Provide information on smoking cessation programs where available.
- Treatment of warts does not reduce the risk of onward transmission to sexual partners.
- If warts are in the pubic region, avoid shaving or waxing as this may facilitate local spread by autoinoculation of HPV into areas of microtrauma.
- Routine cervical cancer screening is recommended.
- Offer HPV vaccination (as per eligibility criteria) which can protect and prevent against some strains of HPV. (Human papillomavirus vaccines). Diagnosis of external genital warts, or of HPV detected by cervical cancer screening, does not limit the eligibility for HPV vaccination.
- External visible warts are generally not associated with cancers of the cervix, anus, or genitals, as they are considered low-risk and are usually benign.
- Warts often resolve on their own even without treatment.
- Treatment is mainly aesthetic to remove visible warts.
- Review treatment considerations
- Standard Education for Sexually Transmitted & Blood-Borne Infection (STBBI)

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