BCCDC Certified Practice Decision Support Tool:
Bacterial Vaginosis (BV)

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 Bacterial Vaginosis.[1]

Note: For individuals who are taking gender-affirming testosterone therapy or who have had gender-affirming vaginoplasty, and who have signs/symptoms of Bacterial Vaginosis, consult with and/or refer to a nurse practitioner (NP) or physician as additional tests and alternate treatment may be indicated.[2-4] For more information please refer to the following:

- Trans Care BC's Gender-affirming Care for Trans, Two-Spirit and Gender Diverse Patients in BC: A Primary Care Toolkit.
- BCCDC Certified Practice - Assessment and Diagnostic Guideline: Sexually Transmitted Infections

Etiology

Bacterial Vaginosis (BV) is a common imbalance of the vaginal flora caused by a depletion of lactobacilli and the presence and overgrowth of BV-associated bacteria[5] (especially anaerobic, gram-negative bacilli) which may include:

- *Gardnerella vaginalis*
- *Prevotella* spp.
- *Mobiluncus* spp.
- *Ureaplasma urealyticum*
- *Mycoplasma hominis*

Epidemiology

BV is the most common cause of changes to normal vaginal discharge, affecting 23%–30% of reproductive-aged people[6].

Risk Factors[5, 7-11]

- Sexual contact with at least one partner
- New/multiple sexual partners
- Other STI (e.g., herpes simplex virus, chlamydia, gonorrhea)
- Intrauterine device (IUD)
- Cigarette smoking
- Douching

Clinical Presentation[7-12]

- Often asymptomatic
- Change in normal vaginal discharge
- Odour (fishy)
- Irritation

Physical Assessment[12]

- Individuals reporting signs and symptoms of BV should be offered a pelvic exam. Refer to the *BCCDC Certified Practice – Assessment and Diagnostic Guideline: Sexually Transmitted Infections.*
- Observation of reported changes in vaginal discharge which may include:
    - Moderate to profuse amount
    - Homogenous (i.e., not clumpy)
    - Greyish or white colour
    - Thin
    - Obvious BV (fishy) odour

Diagnostic and Screening Tests

Full STI screening is recommended. See *BCCDC Certified Practice – Assessment and Diagnostic Guideline: Sexually Transmitted Infections.*

Collect the following specimens from the vaginal wall (*may be obtained through clinician- or self-collected blind swab or by the clinician during a pelvic exam*):

- Swab for microscopy: smear on slide for gram stain
- Swab for pH
- Swab for KOH whiff test

Notes:

- Prepare glass slide for microscopy prior to using the sample for pH or KOH whiff test.
- pH strips are ineffective in the presence of blood.
- The KOH whiff test involves adding 10% KOH solution (not exceeding 0.5 ml) to collected vaginal secretions and briefly sniffing (1-2 seconds) the vapour to assess for an amine odour. Detection of an amine odour constitutes a positive whiff test. For more information on KOH whiff testing refer to the Safe Use of 10% Potassium Hydroxide (KOH) in screening for STI.

Management

Diagnosis and Clinical Evaluation

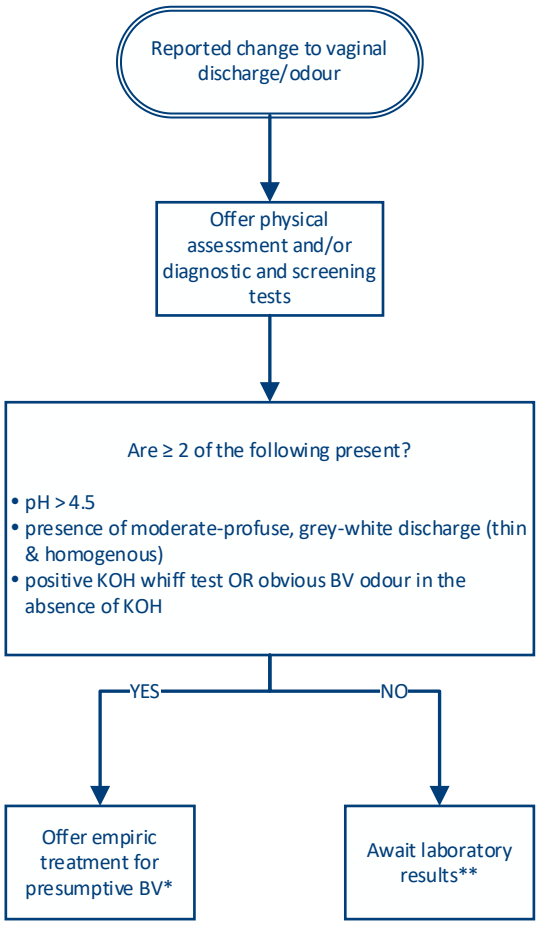
If signs or symptoms of BV are present, the following methods are available for BV diagnosis:

- Modified Amsel's Criteria
- Nugent scoring

Modified Amsel's Criteria: Clinical Management of Bacterial Vaginosis Symptoms in the Absence of Immediate Diagnostic Support

This method is useful for clinical management of BV when microscopic evaluation is not immediately available. Positive diagnosis is supported when the individual reports abnormal changes in vaginal discharge and at least two of the following are present:

- pH greater than (>) 4.5
- Presence of homogenous, moderate-profuse grey-white discharge
- Positive KOH whiff test OR obvious BV odour in the absence of the KOH whiff test



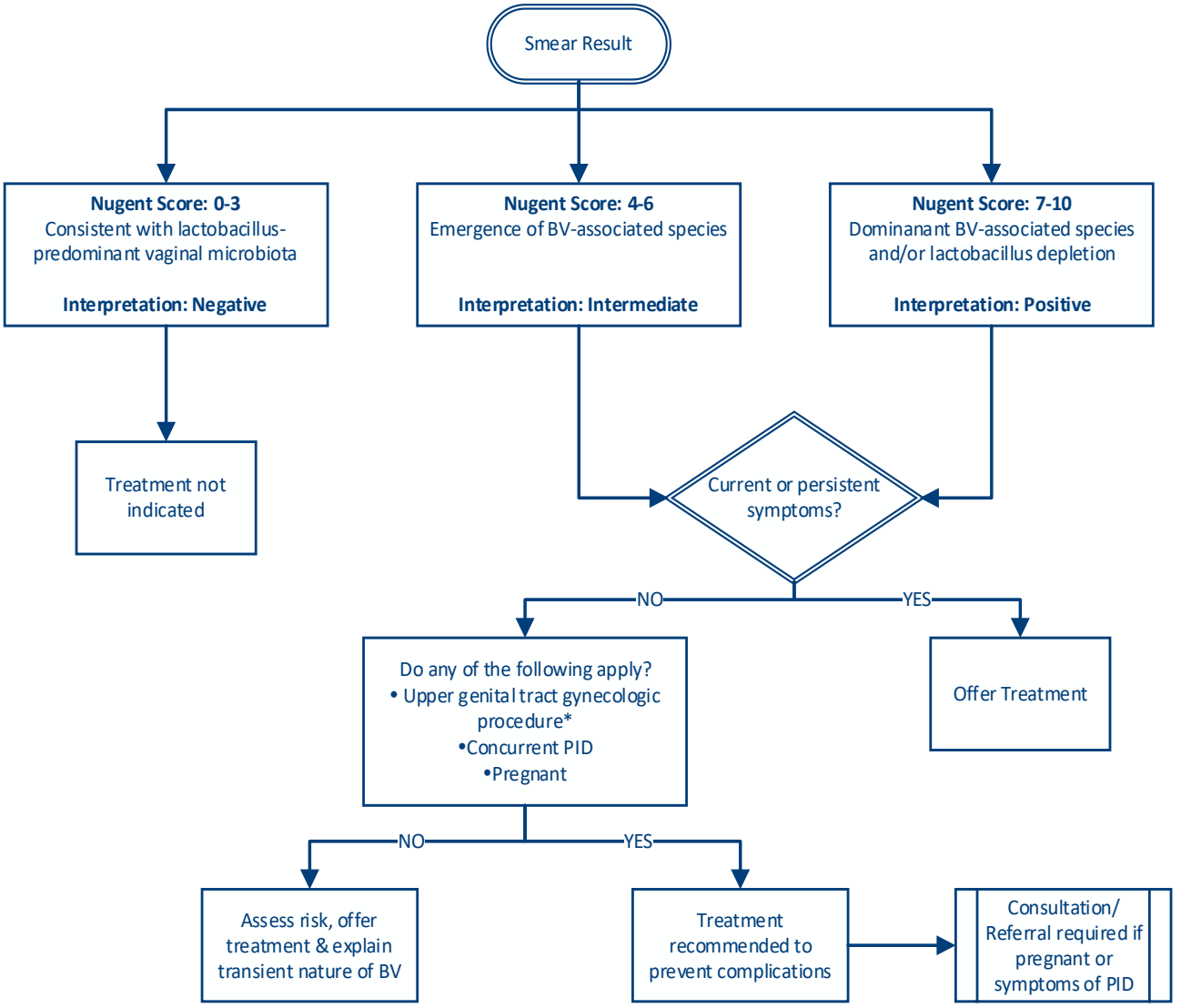
**Refer to Special Considerations & Consultation and Referral sections*

***Refer to the Nugent Score: Laboratory-performed Gram Stain Microscopy algorithm*

Nugent Score: Laboratory-performed Gram Stain Microscopy

Determined by lab with three possible scoring outcomes and interpretations[7]:

- Negative (0-3)
- Intermediate (4-6)
- Positive (7-10)



**Refer to Special Considerations*

Special considerations[10, 12-15]

- Regardless of individual-reported symptoms, if clinical findings and/or lab-confirmed microscopy indicate positive or intermediate BV, treatment is recommended for those who are undergoing or have undergone upper genital tract instrumentation within the last 6 weeks. Examples include surgical abortion, dilation and curettage, or transvaginal hysterectomy.

- Evidence suggests that IUD insertion is low risk for PID even in the presence of BV. Routine screening at time of IUD insertion is not recommended, and BV treatment at the time of or following IUD insertion is only indicated in the presence of symptoms.

Consultation and Referral

Consult with or refer to a physician or NP in the following situations:

- First choice and alternate treatment is contraindicated (see treatment guidance below)
- Pregnancy
- Breast/Chest feeding
- PID symptoms present
- Recurrent BV - persistent symptoms after treatment of:
    - 2 or more episodes of BV within a 4-week time frame
    - 4 or more episodes of BV within a 1-year period

Treatment

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

Treatment	Notes
First Choice Metronidazole 500 mg orally twice a day for 7 days OR Metronidazole gel 0.75%, one applicator (5g) once a day intravaginally for 5 days OR Clindamycin cream 2%, one applicator (5g) intravaginally once a day for 7 days	**General:** 1. Though single dose metronidazole has a lower efficacy in treating BV (primarily due to recurrence), it may be recommended when treatment completion is a concern. 2. Clindamycin cream may weaken latex condoms and diaphragms for up to 5 days after use. 3. The efficacy of probiotics and boric acid preparations as primary treatments for BV has not been conclusively demonstrated, though studies do show promising results when probiotics and/or boric acid are used as adjunct therapy to primary treatment with antibiotics.[16-20] Until there is more published data it is premature to make a judgement as to their recommended use. **Allergy and Administration:** Ingestion of alcohol is not contraindicated during metronidazole therapy. Individuals may, however, wish to avoid alcohol and alcohol-containing medications (e.g., Nyquil®) for 12 hours prior to initiating treatment, during treatment, and for 24-48 hours after treatment completion as a means to limit the risk of possible adverse side effects.[7, 21]
Alternate Metronidazole 2 g orally in a single dose OR Clindamycin 300 mg orally twice a day for 7 days OR Clindamycin ovules 100 mg intravaginally once at bedtime for 3 days	

Monitoring and Follow-up

- **Repeat testing:** No
- **Test-of-cure (TOC):** No
- **Follow-up:** if symptoms resolve, follow-up is not required. If symptoms persist following initial treatment, ensure treatment compliance and re-evaluate to re-confirm diagnosis.

Partner Notification

- **Reportable**: No
- **Trace-back period**: N/A
- **Recommended partner follow-up**: Assessment and testing for BV should be offered to sexual partners with vaginal/vulvar anatomy (inclusive of vaginoplasty).[22] For circumstances where treatment of partners with penile anatomy is being considered (e.g. monogamous couples where partner is agreeable to treatment to prevent BV recurrence) consult with NP or MD.[23]

Potential Complications

- Presence of BV during an invasive procedure (e.g. surgical abortion, dilation & curettage), has been associated with post-procedure pelvic inflammatory disease (PID).[13, 15]
- BV may be associated with premature rupture of membranes, preterm birth, intra-amniotic infection and post-partum endometritis.[7, 24]

Additional Education

- Refraining from sexual activity or use condoms consistently during treatment.
- Vaginal flora and pH balance. Advise that certain practices such as intra-vaginal cleansing (douching) can alter vaginal flora and pH balance.
- Promising results in the investigation of available probiotic (lactobacillus or lactic acid formulations), antiseptics, and boric acid preparations for use in the treatment of BV; however, their exact efficacy as treatments for BV is unknown.
- IUD use associated with BV.
- The presence of BV can increase the likelihood of HIV transmission.
- The presence of BV can increase the likelihood of STI acquisition (e.g., HIV, GC, CT, HSV).
- If symptoms do not resolve with treatment, they will require referral to a physician or NP.
- BV may occur without having had sexual contact.
- Sexually Transmitted & Blood-Borne Infections: Standard Education

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