REPRODUCTIVE HEALTH • INFECTIOUS DISEASE • PUBLIC HEALTH

NGN NCLEX 2026 · REFERENCE SERIES

Sexually Transmitted *Infections*

The seven high-yield STIs every NCLEX candidate must master — pathogens, presentations, priority interventions, pharmacology, and patient teaching in one clinical reference.

CHLAMYDIA | GONORRHEA | SYPHILIS | TRICHOMONIASIS | HERPES (HSV) | HPV | CANDIDIASIS

1 What Are STIs & Why They Matter

DEFINITION · OVERVIEW

DEFINITION

Infections transmitted primarily through **sexual contact** (vaginal, anal, oral) — caused by bacteria, viruses, parasites, or fungi. Many are **asymptomatic**, especially in women.

REPORTABLE TO CDC

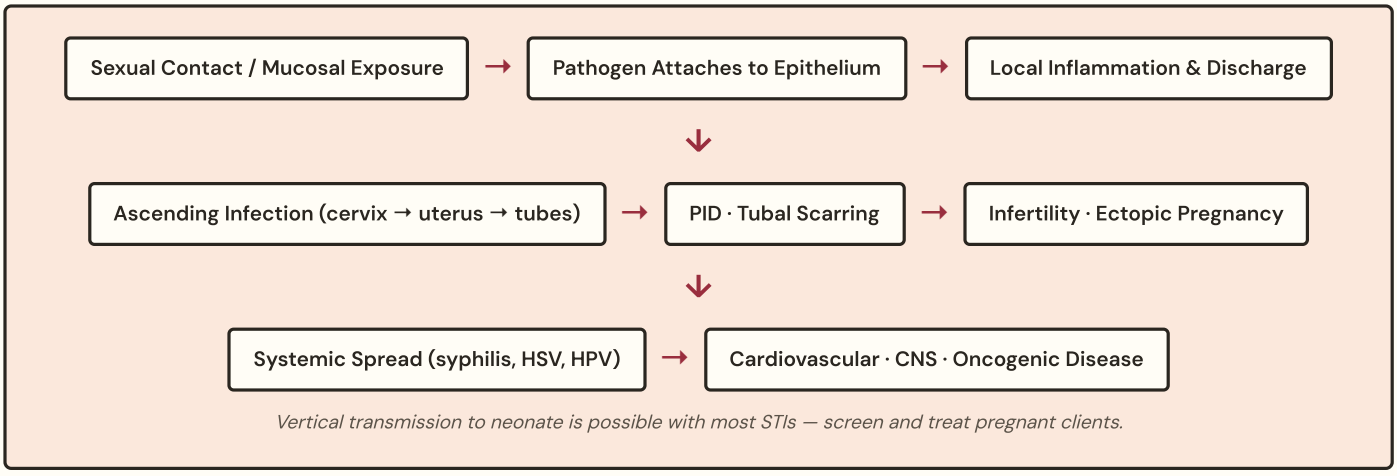
Chlamydia, Gonorrhea, Syphilis (plus HIV, chancroid). Partner notification is required; treat all partners from the last **60 days**.

WHY IT MATTERS

Untreated → **PID, infertility, ectopic pregnancy, neonatal infection, cancer** (HPV), **cardiovascular & CNS disease** (syphilis).

2 How STIs Cause Damage

PATHOPHYSIOLOGY · SIMPLIFIED



Vertical transmission to neonate is possible with most STIs — screen and treat pregnant clients.

MASTER COMPARISON

3 The Seven STIs at a Glance

INFECTION	PATHOGEN TYPE	CLASSIC FINDINGS	FIRST-LINE TREATMENT	KEY COMPLICATION	REPORTABLE?
CHLAMYDIA	Intracellular bacterium	Often **asymptomatic**; mucopurulent cervical discharge; post-coital bleeding; dysuria	Doxycycline 100 mg PO BID × 7 d *or* Azithromycin 1 g PO × 1	PID, infertility, ectopic pregnancy, neonatal conjunctivitis/pneumonia	**YES**
GONORRHEA	Gram-negative diplococcus	Thick **purulent yellow-green** discharge; dysuria; pharyngeal/rectal involvement	Ceftriaxone 500 mg IM × 1 **+** Doxycycline (co-treat chlamydia)	PID, disseminated gonococcal infection (arthritis-dermatitis), ophthalmia neonatorum	**YES**
SYPHILIS	Spirochete	**Painless chancre** (1°); rash on **palms & soles** (2°); gummas / aortitis / neurosyphilis (3°)	Benzathine Penicillin G IM (dose depends on stage)	Congenital syphilis, aortic aneurysm, neurosyphilis, blindness	**YES**
TRICHOMONIASIS	Protozoan (flagellate)	**Frothy yellow-green** discharge; foul/fishy odor; **strawberry cervix** (petechiae); vulvar itching	Metronidazole 2 g PO × 1 *or* 500 mg BID × 7 d. **NO ALCOHOL.**	Preterm labor; PROM; increased HIV susceptibility	No (most states)
HERPES (HSV)	DNA virus (lifelong)	**Painful vesicles** on erythematous base → ulcers; prodrome (tingling, burning); flu-like symptoms (1°)	Acyclovir / Valacyclovir / Famciclovir — episodic *or* suppressive (no cure)	Neonatal HSV (fatal); meningitis; recurrent outbreaks	No
HPV	DNA virus	**Cauliflower-like genital warts** (condyloma acuminata); often asymptomatic; abnormal Pap	Warts: cryotherapy, podofilox, imiquimod, TCA. **Prevent: Gardasil 9 vaccine.**	**Cervical, anal, oropharyngeal cancer** (types 16, 18)	No
CANDIDIASIS	Fungus (yeast)	**Thick, white, "cottage cheese"** discharge; **NO odor**; intense itch; burning; dyspareunia	Fluconazole 150 mg PO × 1 *or* intravaginal azoles (miconazole, clotrimazole)	Recurrence with diabetes, antibiotics, pregnancy, immunosuppression	No

SIGNS & SYMPTOMS

4 Discharge, Lesions & Systemic Cues

🟡 Vaginal Discharge — Pattern Match

- **Chlamydia:** mucopurulent, scant (or none)
- **Gonorrhea:** thick, purulent, yellow-green
- **Trichomoniasis:** frothy yellow-green + fishy odor
- **Candidiasis:** thick white cottage cheese, *no odor*
- **Bacterial vaginosis** (not STI, common confounder): thin gray + fishy odor, *positive whiff test*

🚩 RED FLAG

Strawberry cervix = trichomoniasis. **No odor + intense itch** = candida. **Yellow-green pus** = gonorrhea.

🔴 Lesions — Painful vs Painless

- **Syphilis (1°):** single, *painless* chancre with firm raised edges
- **Herpes:** multiple, *painful* vesicles → shallow ulcers
- **HPV:** cauliflower-shaped genital warts (painless)
- **Chancroid** (less common): painful soft ulcer (H. ducreyi)

🚩 MEMORY PEARL

"Painful = HSV. Painless = syphilis." The chancre is the only painless genital ulcer you must recognize on NCLEX.

🔥 Systemic / Late Findings

- **Syphilis 2°:** rash on *palms & soles*, condyloma lata, flu-like, lymphadenopathy
- **Syphilis 3°:** gummas, aortic aneurysm, neurosyphilis (tabes dorsalis, Argyll-Robertson pupil)
- **HSV (1°):** fever, malaise, painful inguinal nodes
- **Gonorrhea (DGI):** arthritis-dermatitis syndrome, fever

🚩 TEST CUE

Rash on **palms and soles** is a near-pathognomonic NCLEX cue for **secondary syphilis**.

👶 Neonatal & Pregnancy Concerns

- **Chlamydia:** neonatal conjunctivitis (5–14 d), pneumonia
- **Gonorrhea:** ophthalmia neonatorum (within 48 h) → blindness
- **Syphilis:** stillbirth, hepatosplenomegaly, snuffles, "saber shins"
- **HSV:** disseminated neonatal HSV (high mortality) → **C-section if active lesions**
- **HPV:** rare juvenile laryngeal papillomatosis

🚩 UNIVERSAL NEWBORN CARE

Erythromycin ophthalmic ointment to both eyes within 1 hour of birth prevents gonococcal ophthalmia.

PRIORITY NURSING INTERVENTIONS

5 ABCs · Safety · NCLEX Prioritization

🫁 A — Assess

1. **Obtain** sexual history (5 P's: Partners, Practices, Protection, Past STIs, Pregnancy plans)
2. **Inspect** lesions — describe location, number, pain, drainage
3. **Collect** specimens: NAAT (urine/swab), VDRL/RPR, HSV culture/PCR, wet mount, KOH prep
4. **Screen** for co-infection (HIV, hepatitis B/C) — STIs travel together
5. **Assess** pregnancy status before prescribing doxycycline, metronidazole, fluconazole

💊 B — Treat & Protect

1. **Administer** antibiotics/antivirals per protocol — verify allergies first
2. **Treat partners** from last 60 days (Expedited Partner Therapy where legal)
3. **Co-treat** chlamydia whenever treating gonorrhea
4. **Report** chlamydia, gonorrhea, syphilis to public health
5. **Educate**: abstain from sex until both partners complete therapy + **7 days** (or all lesions healed for HSV)
6. **Monitor** for Jarisch-Herxheimer reaction after first PCN dose for syphilis (fever, chills, myalgia × 24 h)

🛡️ C — Counsel & Confidentiality

1. **Provide** private, non-judgmental, culturally sensitive care
2. **Adolescents**: most states allow STI care without parental consent — verify state law
3. **Offer** HIV testing + risk-reduction counseling (condoms, PrEP)
4. **Promote** Gardasil 9 vaccination (ages 9–26; up to 45)
5. **Recommend** test of cure for pregnant chlamydia/gonorrhea clients in 3–4 weeks
6. **Document** with HIPAA-protected language; partner notification done by health dept, not the nurse

PHARMACOLOGY

6 High-Yield STI Drugs

DRUG / CLASS	TREATS	MECHANISM (SIMPLE)	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Doxycycline (tetracycline)	Chlamydia	Inhibits bacterial protein synthesis (30S ribosome)	Photosensitivity, GI upset, tooth staining (children), esophagitis	**Contraindicated in pregnancy & children < 8 y.** Take with full glass of water, upright × 30 min. Avoid dairy, antacids, iron.
Azithromycin (macrolide)	Chlamydia (alt.), pregnancy	Inhibits bacterial protein synthesis (50S ribosome)	GI upset, QT prolongation, hepatotoxicity	Safe in pregnancy. Single 1 g PO dose for chlamydia. Monitor for cardiac history.
Ceftriaxone (3rd-gen cephalosporin)	Gonorrhea	Inhibits cell wall synthesis (bactericidal)	Injection-site pain, rash, diarrhea, rare anaphylaxis	500 mg IM × 1. Ask about PCN allergy (cross-reactivity ~1–3%). Always co-treat chlamydia.
Benzathine Penicillin G	Syphilis (all stages)	Cell wall inhibitor, bactericidal against spirochetes	Injection pain, anaphylaxis, **Jarisch-Herxheimer reaction**	**Drug of choice — including pregnancy.** If PCN-allergic + pregnant → desensitize. IM into ventrogluteal/dorsogluteal.
Metronidazole (Flagyl)	Trichomoniasis, BV	Damages DNA of anaerobes/protozoa	Metallic taste, GI upset, dark urine, peripheral neuropathy	**NO alcohol** during + 72 h after (disulfiram-like reaction: severe N/V, flushing, tachycardia). Treat partners.
Acyclovir / Valacyclovir / Famciclovir	HSV-1, HSV-2	Inhibits viral DNA polymerase (no cure — controls outbreaks)	Nausea, headache, nephrotoxicity (esp. IV acyclovir)	Encourage **hydration** with IV acyclovir. Start at *first prodrome*. Use daily for suppressive therapy. Continue in pregnancy at term.
Fluconazole (azole antifungal)	Candidiasis	Inhibits ergosterol synthesis → fungal membrane damage	Hepatotoxicity, QT prolongation, GI upset	150 mg PO × 1. Avoid in 1st trimester pregnancy → use topical miconazole/clotrimazole instead.
Gardasil 9 (HPV vaccine)	HPV prevention	Recombinant vaccine → antibodies against 9 HPV types	Injection-site soreness, syncope, mild fever	Routine at **ages 11–12**; catch-up through 26 (up to 45 in some adults). **Have client sit/lie 15 min post-dose** — syncope risk.
Imiquimod / Podofilox / TCA	HPV genital warts	Immune-mediated wart destruction (imiquimod); cytotoxic (podofilox, TCA)	Local erythema, burning, erosion	Patient-applied (imiquimod, podofilox) vs provider-applied (TCA, cryotherapy). Avoid in pregnancy except TCA/cryo.

NCLEX TEST TRAPS

7 ⚠️ Wrong vs Right — What Trips Students Up

❌ WRONG THINKING
"My partner has no symptoms, so I don't need to mention them."

✅ RIGHT ACTION
Treat **ALL PARTNERS** from the past 60 days regardless of symptoms — most STIs are asymptomatic in carriers.

❌ WRONG THINKING
"Treat gonorrhea with ceftriaxone alone."

✅ RIGHT ACTION
Always **CO-TREAT CHLAMYDIA** when treating gonorrhea (≈ 40–50% co-infection rate). Add doxycycline or azithromycin.

❌ WRONG THINKING
"Doxycycline is fine for a pregnant client with chlamydia."

✅ RIGHT ACTION
Doxycycline is **CONTRAINDICATED IN PREGNANCY** (tooth/bone effects). Use **AZITHROMYCIN** 1 g PO × 1.

❌ WRONG THINKING
"After PCN for syphilis, fever and chills mean an allergic reaction — stop the drug."

✅ RIGHT ACTION
That's the **JARISCH-HERXHEIMER REACTION** — an expected response from dying spirochetes. **CONTINUE THERAPY**; treat fever with antipyretics and reassurance.

❌ WRONG THINKING
"The client is taking metronidazole — one glass of wine is fine."

✅ RIGHT ACTION
Zero alcohol — **DURING THERAPY AND FOR 72 HOURS AFTER**. Disulfiram-like reaction can be severe.

❌ WRONG THINKING
"Active herpes lesions at delivery? Induce vaginal birth."

✅ RIGHT ACTION
CESAREAN SECTION when active genital HSV lesions or prodromal symptoms are present at onset of labor.

❌ WRONG THINKING
"HPV vaccine is only for sexually active adults."

✅ RIGHT ACTION
Vaccinate **BEFORE** sexual debut — routinely at **AGES 11–12** (can start at 9). Most effective when given before HPV exposure.

❌ WRONG THINKING
"Cottage-cheese discharge + fishy odor = bacterial vaginosis."

✅ RIGHT ACTION
Cottage cheese with **NO ODOR** = candidiasis. Fishy odor + thin gray = bacterial vaginosis. Frothy + fishy + green = trichomoniasis.

PATIENT & FAMILY EDUCATION

8 What to Teach Before Discharge

🚫 Abstinence & Barrier Protection

- ✓ Abstain from sex until **both partners complete therapy + 7 days**
- ✓ For HSV: avoid sex during prodrome, active lesions, and until *fully healed*
- ✓ Use **latex or polyurethane condoms** consistently and correctly — every act
- ✓ Condoms **do not fully prevent** HSV or HPV (skin-to-skin transmission outside the barrier)

💊 Medication Adherence

- ✓ Finish the **entire** antibiotic course even if symptoms resolve
- ✓ Avoid alcohol with metronidazole + 72 h after
- ✓ Doxycycline: take with full water, stay upright 30 min, avoid sun
- ✓ HSV antivirals: start at first tingle/prodrome for shortest outbreak

👫 Partner Notification & Re-Testing

- ✓ All sexual partners from past **60 days** must be tested and treated
- ✓ Public health dept assists with anonymous contact tracing
- ✓ Re-test chlamydia & gonorrhea in **3 months** (high reinfection rate)
- ✓ Test of cure for pregnant clients in 3–4 weeks

🛡️ Prevention & Routine Screening

- ✓ Annual chlamydia/gonorrhea screening for **all sexually active women < 25**
- ✓ Syphilis & HIV screening every pregnancy (1st visit + 3rd trimester if high risk)
- ✓ Pap smear: every 3 years ages 21–29; every 5 years 30–65 with HPV co-test
- ✓ HPV vaccine series (Gardasil 9): 2 doses if < 15; 3 doses if 15+

🧠 Living with HSV / HPV

- ✓ HSV is **lifelong but manageable** — most people live full lives
- ✓ Identify triggers: stress, illness, sun exposure, menstruation
- ✓ Daily suppressive therapy reduces transmission to partners
- ✓ HPV often clears on its own; high-risk types need monitoring with Pap/colposcopy

🍞 Candidiasis Self-Care

- ✓ Wear cotton underwear; avoid tight synthetic clothing
- ✓ **Avoid douching** — it disrupts normal flora
- ✓ Control blood glucose if diabetic (high sugar fuels yeast)
- ✓ Eat probiotic-rich foods (yogurt) during antibiotic use
- ✓ OTC azole creams work for uncomplicated cases; see provider if recurrent (≥ 4/year)

MEMORY BOOSTERS

9

Mnemonics, Patterns & Quick Recall

CGS

Reportable STIs · *C*hlamydia · *G*onorrhea · *S*yphilis. (Plus HIV.) "**CGS calls the CDC.**"

PAIN ≠ POX

HSV is painful. Syphilis chancre is painless. The two genital ulcers separate by pain alone.

PALM & SOLE

Rash on **palms and soles** → think **secondary syphilis**. (Also Rocky Mountain spotted fever — context is key.)

5 P's

Sexual history: Partners · Practices · Protection · Past STIs · Pregnancy plans.

"FROTHY-GREEN, STRAWBERRY SCENE"

Trichomoniasis = **frothy yellow-green discharge + strawberry cervix.**

"COTTAGE, NO ODOR"

Candidiasis = **thick white cottage-cheese discharge, no odor**, intense itch.

METRO + ETOH = NO

Metronidazole + alcohol = disulfiram-like reaction. Avoid alcohol during therapy and for 72 hours after.

J-H = OK

Jarisch-Herxheimer after PCN for syphilis is expected (fever, chills × 24 h). **Continue treatment** — it is *not* an allergy.

"HERPES → C-SECTION"

Active genital HSV lesions or prodrome at labor onset → **cesarean delivery** to prevent neonatal HSV.

NEXT-GEN NCLEX · NCJMM CLINICAL JUDGMENT

10 Six-Step Scenario — STI / PID

The Scenario: *A 22-year-old female presents to the women's health clinic reporting lower abdominal pain for 3 days, painful urination, and "yellow-green" vaginal discharge. She is sexually active with 2 partners in the past 3 months and reports inconsistent condom use. Vital signs: T 38.5 °C (101.3 °F), HR 104, BP 112/68, RR 18, O_2 98 %. The provider suspects pelvic inflammatory disease secondary to gonorrhea and/or chlamydia. Last menstrual period was 5 weeks ago. The client says, "I think I might be pregnant — I haven't taken a test yet."*

STEP 1

Recognize Cues

Fever (101.3 °F), tachycardia (HR 104), pelvic pain, purulent yellow-green discharge, dysuria, multiple recent partners, inconsistent barrier use, possible pregnancy, late menses by 1 week.

STEP 2

Analyze Cues

Classic presentation of **PID** from gonorrhea ± chlamydia. Fever + tachycardia = systemic inflammation. Possible pregnancy alters drug selection (no doxycycline; no fluconazole 1st trimester). Risk for tubo-ovarian abscess, ectopic pregnancy, infertility.

STEP 3

Prioritize Hypotheses

Top priority: acute PID needing immediate antibiotics. **Second:** rule out pregnancy (β-hCG) before treatment. **Third:** screen for co-existing HIV, syphilis, hepatitis. **Fourth:** partner notification and behavioral counseling.

STEP 4

Generate Solutions

Obtain urine β-hCG, NAAT for GC/chlamydia, wet mount, RPR, HIV. Initiate empiric IM ceftriaxone 500 mg + oral doxycycline (or azithromycin if pregnant) + metronidazole. Antipyretic. Pelvic rest. Treat partners from past 60 days.

STEP 5

Take Action

Administer ceftriaxone 500 mg IM × 1. Verify pregnancy result before doxycycline. Educate on abstinence × 7 days post-treatment, partner therapy, full med adherence, and re-test in 3 months. Report gonorrhea/chlamydia to public health.

STEP 6

Evaluate Outcomes

Expected: fever and pain resolve in 48–72 h, discharge clears, NAAT negative at 3 months. **Worsening:** persistent fever, worsening pain, vomiting → suspect tubo-ovarian abscess → hospitalize for IV antibiotics ± surgery.