SECTION 3: SYNDROMIC PRESENTATIONS

Introduction ........................................................................................................... 7
- Genital skin conditions ................................................................................. 7
- Mouth .............................................................................................................. 7
- Throat ............................................................................................................. 7
- Male symptoms .............................................................................................. 8
- Female symptoms .......................................................................................... 9

Anorectal ............................................................................................................. 12
- History ........................................................................................................... 12
- Signs / symptoms ......................................................................................... 13
- Examination .................................................................................................. 15
- Investigations ............................................................................................... 15
- Management / treatment .............................................................................. 16
  - Care and management of other anorectal conditions ................................ 16

Client education ............................................................................................... 18
- Anal health care ............................................................................................. 18
- Perianal cleansing .......................................................................................... 18
- Lubrication ..................................................................................................... 18
- Condoms and other barriers ......................................................................... 18
- Douching ........................................................................................................ 19

Hepatitis ............................................................................................................ 20
- History ........................................................................................................... 20
- Signs / symptoms .......................................................................................... 20
- Signs of viral hepatitis: .................................................................................. 20
- Signs of cirrhosis: ........................................................................................... 20
- Investigations ................................................................................................ 21
- Contact tracing .............................................................................................. 21
- Immunisation ................................................................................................. 22

Hepatitis A (HAV) ............................................................................................. 23
- Symptoms ...................................................................................................... 23
- Risk factors for infection / groups at higher risk ........................................... 23
- Acute illness .................................................................................................. 23
- Incubation period ........................................................................................... 23
- Risk of progression to chronicity .................................................................... 23
- Investigations ................................................................................................. 24
## Investigatings ................................................................. 48
Management / treatment .................................................. 49
Lesions (oral) ..................................................................... 50
History .............................................................................. 50
Signs / symptoms .............................................................. 50

Diagnosis ........................................................................ 50
Examination .................................................................... 51
Investigations .................................................................. 51
Management / treatment .................................................. 52
Ulcers (genital) .................................................................. 53
History .............................................................................. 53
Signs / symptoms .............................................................. 53
Diagnosis ........................................................................ 53
   Non-sexual causes ......................................................... 53
   Physical .......................................................................... 53
   Allergic .......................................................................... 53
   Neoplastic ...................................................................... 54
   Rare causes .................................................................... 54
   Sexually acquired causes ............................................. 54
Examination .................................................................... 54
Investigations .................................................................. 55
   Interpreting test results ................................................. 55
Management / treatment .................................................. 55
Skin conditions (genital) .................................................... 57
History .............................................................................. 57
Signs / symptoms .............................................................. 57
Diagnosis ........................................................................ 58
Examination .................................................................... 58
Investigations .................................................................. 58
Management / treatment .................................................. 59

**Sexual function** ................................................................ 60

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>60</td>
</tr>
<tr>
<td>Medical/Surgical history</td>
<td>60</td>
</tr>
<tr>
<td>Family/psychosocial</td>
<td>60</td>
</tr>
<tr>
<td>Sexual</td>
<td>61</td>
</tr>
<tr>
<td>Investigations</td>
<td>61</td>
</tr>
</tbody>
</table>
Management / treatment................................................................. 62

**Males**....................................................................................... 63

Scrotal pain and swelling.............................................................. 63
History......................................................................................... 63
Signs / symptoms ...................................................................... 63
Diagnosis ..................................................................................... 64
  *Acute* ...................................................................................... 64
  *Non-acute* .............................................................................. 64
Examination ................................................................................ 64
  *Testicular self awareness* ....................................................... 65
Investigations ............................................................................. 65
Management / treatment ............................................................. 66

**Females**................................................................................... 67

History......................................................................................... 67
Signs / symptoms ..................................................................... 67
  *Discharge* .............................................................................. 68
  *Candida* ................................................................................ 68
  *Bacterial Vaginosis* .............................................................. 68
  *Trichomonas* ........................................................................ 68
  *Mucopurulent cervicitis* ....................................................... 68
  *Purulent or blood stained discharge* .................................... 68
  *Malignancy of the cervix* .................................................... 68
  *Odour* .................................................................................. 68
  *Itch and burn* ...................................................................... 68
  *Pain* .................................................................................... 69
Diagnosis ..................................................................................... 69
  *Most common* ..................................................................... 69
  *Common* ............................................................................ 69
  *Uncommon* ....................................................................... 70
  *Rare* .................................................................................. 70
  *Not to be missed* ................................................................. 70
Examination ................................................................................. 70
Investigations ............................................................................. 71
  *Interpreting results* .............................................................. 71
Cervicitis .................................................................................... 73
History......................................................................................... 73
Signs / symptoms...................................................................... 73
Diagnosis ..................................................................................... 73
  *Possible causes:* ................................................................. 73
Examination ................................................................................. 74
Investigations ........................................................................................................................... 74
Vaginal ......................................................................................................................................... 74
Endocervical .................................................................................................................................. 74
Discuss additional STI screening as indicated. ........................................................................... 74
Management / treatment ............................................................................................................. 74
Consideration ................................................................................................................................ 75
Pelvic pain (females) ..................................................................................................................... 76
History .......................................................................................................................................... 76
Signs / symptoms .......................................................................................................................... 76
Diagnosis ....................................................................................................................................... 77
Acute ............................................................................................................................................. 77
Non-acute ..................................................................................................................................... 77
Examination .................................................................................................................................... 77
Investigations ................................................................................................................................. 78
Management / treatment ............................................................................................................... 79
Vaginal bleeding ............................................................................................................................ 80
History .......................................................................................................................................... 80
Signs / symptoms .......................................................................................................................... 81
Diagnosis ....................................................................................................................................... 81
Examination .................................................................................................................................... 82
Investigations ................................................................................................................................. 82
Management / treatment ............................................................................................................... 83
Vaginal discharge ......................................................................................................................... 84
History .......................................................................................................................................... 84
Signs / symptoms .......................................................................................................................... 84
Comparison of indicators ............................................................................................................. 85
Diagnosis ....................................................................................................................................... 85
Examination .................................................................................................................................... 86
Investigations ................................................................................................................................. 86
Management / treatment ............................................................................................................... 87
References ....................................................................................................................................... 88
INTRODUCTION

Sexually transmitted infections (STIs) can often be identified through the presence of signs or symptoms. Some STIs such as HIV and syphilis may result in more general signs or symptoms. It is important to examine the skin, in order to detect associated systemic symptoms such as rash and patchy hair loss in syphilis, seborrheic dermatitis and Kaposi’s sarcoma in HIV.

GENITAL SKIN CONDITIONS

• Allergic (fixed drug reactions)
• Genital herpes - types 1 or 2
• Human papilloma virus (HPV) / genital warts
• Molluscum contagiosum
• Syphilis
• Neoplastic (premalignant/malignant)
• Dermatological conditions
• Secondary bacterial infections
• Trauma (mechanical/chemical)
• Shingles - herpes varicella zoster virus (VZV).

MOUTH

• Herpes – Types 1 or 2
• HPV
• Oral candidiasis
• Oral hairy leukoplakia (OHL) and gum disease (consider HIV)
• Syphilis (snail track ulcers, mucous patches, any oral ulcers)
• Aphthous ulcers
• Buccal lichen planus.

THROAT

• Gonorrhoea
• Chlamydia

Note: STIs in the throat are usually asymptomatic.
MALE SYMPTOMS

Genital skin conditions
- Allergic (fixed drug reaction)
- Genital herpes - HSV1 or 2
- HPV/genital warts
- Molluscum contagiosum
- Neoplastic (premalignant/malignant)
- Candidal balanitis
- Pubic lice/scabies
- Secondary bacterial infection
- Trauma (mechanical/chemical)
- Herpes varicella zoster virus.

Genital ulceration
- Syphilis (primary chancre or secondary lesions)
- Genital herpes - HSV1 or 2
- Donovonosis
- Trauma.

Urethral discharge
- Chlamydia
- Genital herpes (rare)
- Gonorrhoea
- Non specific urethritis (NSU)
- Trichomonas (rare)

Scrotal pain/swelling
- Chlamydial epididymo-orchitis
- Gonococcal epididymo-orchitis
- Testicular torsion
- Trauma
- Hydrocele (rarely painful)
- Testicular cancer (rarely painful)
- Varicocele (rarely painful).
Dysuria
- Chlamydia
- Gonorrhoea
- Genital herpes
- Urinary tract infection (UTI)
- Non specific urethritis (NSU).

Proctitis
- Gonorrhoea
- Chlamydia (including LGV serovars)
- Lymphogranuloma Venereum
- Genital herpes
- Enteric pathogens (e.g. shigella, salmonella, campylobacter, entamoeba).

FEMALE SYMPTOMS

Genital skin conditions
- Allergic (fixed drug reaction)
- Genital herpes
- HPV/genital warts
- Molluscum contagiosum
- Neoplastic (premalignant/malignant)
- Candidiasis
- Pubic lice/scabies
- Dermatological conditions e.g. lichen sclerosis, lichen planus
- Secondary bacterial infections
- Trauma (mechanical/chemical)
- Fungal infections.

Genital ulceration
- Syphilis (primary chancre, mucous patches, snail track ulcers or condylomata lata)
- Genital herpes
- Herpes varicella zoster virus
- Donovanosis
- Cystic lesions, folliculitis, boils etc.
Vaginal discharge
- Bacterial vaginosis
- Candidiasis
- Pelvic inflammatory disease
- Trichomonas
- Normal physiological discharge.

Cervical discharge and cervicitis
- Chlamydia
- Gonorrhoea
- Pelvic inflammatory disease
- HSV1 or 2 (genital herpes)
- Non-specific cervicitis.

Abnormal vaginal bleeding
- Chlamydia
- Gonorrhoea
- Pelvic inflammatory disease
- Pregnancy related bleeding (threatened or incomplete miscarriage, ectopic pregnancy)
- Trauma
- Cervical polyps, cervical cancer, endometrial lesions and gynaecological problems
- Break-through bleeding (BTB) with contraceptives.

Pelvic pain
- Pelvic inflammatory disease (PID) e.g. caused by chlamydia or gonorrhoea
- Ectopic pregnancy
- Ovarian cyst complications (torsion, rupture)
- Endometriosis
- Pelvic adhesions
- Urinary and bowel pathology.

Dysuria
- Chlamydia
- Gonorrhoea
- Genital herpes
- Urinary tract infection (UTI)
- Candidiasis.
Proctitis

- Gonorrhoea
- Chlamydia (including LGV serovars)
- Lymphogranuloma venereum
- Genital herpes
- Enteric pathogens (e.g. shigella, salmonella, campylobacter, entamoeba).
Anal problems are common and can manifest as lumps, ulcers, rashes, discharge, bleeding, itching or altered defaecation. Often clients are unable to visualise their own anorectal region or accurately describe symptoms i.e. an ulcer may feel like a lump, diarrhoea may be discharge and constipation may be tenesmus. STIs affecting the anus or rectum often have no symptoms or symptoms that mimic other conditions. Common conditions of the anorectum and perianal skin are haemorrhoids and anal fissures, or conditions that cause itching, such as dermatitis, fungal and parasitic infections, skin disorders, allergic reactions and poor anal hygiene.

Men who have sex with men (MSM) are particularly at risk of anorectal STIs, with gonorrhoea, syphilis, chlamydia, anogenital herpes, anogenital warts, HIV and enteric pathogens e.g. giardiasis and shigellosis, common among MSM. Lymphogranuloma venereum (LGV) has also recently emerged among some HIV positive MSM, mostly presenting as proctitis.

Women who perform receptive anal sex practices are also at risk of similar problems. STIs may be spread through anal sex when blood, semen or body fluid is shared, even if there is no anal penetration. Oral-anal contact, kissing or oral contact with fingers that have been touching the anus or genitals can transmit infection, as can sharing sex toys.

**HISTORY**

When taking history, be sure to ask about:

- blood, pus and/or mucus in stools or on underwear
- discomfort/pain or bleeding on defecation
- discomfort/pain or bleeding during or after anal intercourse or penetration
- other associated symptoms e.g. Tenesmus, pruritus, pain and fever
- history of STIs and treatment history
- recent change of sexual partner or symptomatic partner
- recent increase in anal intercourse
- recent overseas travel or sexual contact with a person from a high prevalence country
- use of foreign objects/sex toys for anal penetration
- change in bowel motions/habits
- self-applied treatments e.g. haemorrhoid cream.
# SIGNS / SYMPTOMS

<table>
<thead>
<tr>
<th>Sign / symptom</th>
<th>Differential diagnosis</th>
</tr>
</thead>
</table>
| **Anal discharge**   | • Proctitis  
                          • Gonorrhoea  
                          • Chlamydia  
                          • Genital herpes  
                          • Lymphogranuloma venereum (LGV). |
| **Bleeding per rectum** | • Anal fissure (usually after defecation)  
                                 • Neoplasm  
                                 • Anorectal polyps  
                                 • Proctitis  
                                 • Gonorrhoea  
                                 • Chlamydia  
                                 • Genital herpes  
                                 • Lymphogranuloma venereum (LGV). |
| **Diarrhoea**        | • Proctitis  
                                 • Gonorrhoea  
                                 • Chlamydia  
                                 • Genital herpes  
                                 • Lymphogranuloma venerum (LGV)  
                                 • Enteric pathogens / parasites |
| **Itching and rashes** | See *Itches, rashes, joints* (section three).                                           |
| **Lump**             | • Haemorrhoids  
                                 • Anogenital warts  
                                 • Genital herpes  
                                 • Anorectal abscess  
                                 • Syphilis – Condylomata lata  
                                 • Neoplasm. |
| +/- nausea, bloating, fever | • Enterocolitis  
                                 • Amoeba  
                                 • Giardia  
                                 • Shigella  
                                 • Campylobacter. |
<table>
<thead>
<tr>
<th>Sign / symptom</th>
<th>Differential diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proctitis</td>
<td>- Chlamydia</td>
</tr>
<tr>
<td></td>
<td>- Gonorrhoea</td>
</tr>
<tr>
<td></td>
<td>- Trichomoniasis</td>
</tr>
<tr>
<td></td>
<td>- Genital herpes</td>
</tr>
<tr>
<td></td>
<td>- Genital warts</td>
</tr>
<tr>
<td></td>
<td>- Syphilis</td>
</tr>
<tr>
<td></td>
<td>- Lymphogranuloma venereum (LGV)</td>
</tr>
<tr>
<td></td>
<td>- Enteric pathogens/parasites - <em>Giardia lamblia, Entamoeba histolytica, Campylobacter, Shigella</em></td>
</tr>
<tr>
<td></td>
<td>- Inflammatory/irritable bowel syndrome</td>
</tr>
<tr>
<td></td>
<td>- Rectal and/or bowel abnormalities such as malignancy, benign growths or polyps</td>
</tr>
<tr>
<td></td>
<td>- Diverticular disease</td>
</tr>
<tr>
<td></td>
<td>- Anal fissure, tear, sinus or fistula</td>
</tr>
<tr>
<td></td>
<td>- Foreign bodies</td>
</tr>
<tr>
<td></td>
<td>- Trauma.</td>
</tr>
<tr>
<td>Tenesmus, pain</td>
<td>- Proctitis</td>
</tr>
<tr>
<td></td>
<td>- Gonorrhoea</td>
</tr>
<tr>
<td></td>
<td>- Chlamydia</td>
</tr>
<tr>
<td></td>
<td>- Genital herpes</td>
</tr>
<tr>
<td></td>
<td>- Lymphogranuloma venereum.</td>
</tr>
<tr>
<td>Ulcer</td>
<td>- Syphilis</td>
</tr>
<tr>
<td></td>
<td>- Donovonosis</td>
</tr>
<tr>
<td></td>
<td>- Genital Herpes</td>
</tr>
<tr>
<td></td>
<td>- Anal fissure</td>
</tr>
<tr>
<td></td>
<td>- Anorectal fistula</td>
</tr>
<tr>
<td></td>
<td>- Pilonidal sinus</td>
</tr>
<tr>
<td></td>
<td>- Neoplasm</td>
</tr>
</tbody>
</table>
EXAMINATION

Palpate inguinal lymph nodes for enlargement and/or tenderness and examine the perianal region for colour, discharge, erythema, lesions, ulcers, rashes, excoriation, trauma or abnormalities.

Following a genital examination, the client should lie exposed from the knees to umbilicus. Ask the client to lie in the left lateral position with their knees together and bent and to retract their upper buttock with their right hand. This will enable you to inspect the perineum and perianal area using an examination light. Look for rashes, ulcers, discharge or lumps. As insertion of a proctoscope can be uncomfortable, explain procedure to client and use of relaxation strategies such as deep breathing.

Lubricate proctoscope and rest it on anus until external anal sphincter relaxes and then insert proctoscope gently, directing it toward the umbilicus. Remove trocar and inspect rectal mucosa for colour changes, appearance, lesions, ulceration, fissures, discharge, inflammation, masses or abnormalities. Remove slowly, observing anal wall for haemorrhoids and fistulae. Continue to apply inward pressure while withdrawing the proctoscope to prevent painful clamping by the internal anal sphincter around the end of the proctoscope.

INVESTIGATIONS

Specific STI tests such as anal swabs should be undertaken whenever there are symptoms or history of receptive anal sexual practices.

Client or clinician collected saline moistened anal swabs can be used for asymptomatic testing of the anus. Inspection and proctoscopy are essential if there are symptoms.

• rectal mucosa swabs for:
  – gonorrhoea PCR or culture and sensitivity (C/S)
  – chlamydia PCR
  ➔ if positive also perform LGV serotype (PCR).

• lesion
  – swab for HSV (PCR)
  – swab for treponemal PCR for syphilis
  – press slide and GUMP for donovanosis
  – consider punch biopsy for lesions that are atypical or unresponsive to treatment (particularly in clients with HIV).

• serology - syphilis and HIV
• stool sample for microscopy, culture and sensitivity (M/C/S) (if diarrhoea is present)
• discuss additional STI screening as indicated by history.
MANAGEMENT / TREATMENT

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- all cases of proctitis
- rectal bleeding
- persistent symptoms after treatment
- uncertain diagnosis
- contraindication to treatment
- Immunosuppression i.e. HIV positive client
- abnormal findings of clinical significance
- findings outside NOs scope of practice.

For all other cases:

- If anoscopy reveals proctitis (pus, friable mucosa, contact bleeding), initiate presumptive treatment for chlamydia and gonorrhoea.
- Proctitis associated with painful ulceration also suggests genital herpes, so give presumptive anti-viral treatment.
- Refer to section four, for treatment and management of specific pathogens and conditions.

Care and management of other anorectal conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Symptoms / diagnosis</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anal fissure</td>
<td>Pain and/or bleeding during or shortly after defecation and receptive anal sex. Pain subsides in minutes/hours. Itchy when healing. Anal inspection may reveal skin split / tear or a single, painful triangular ulcer. Consider possibility of chancr.</td>
<td>• Stool softener</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lubricant suppositories</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Warm salt bath after bowel movement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nitroglycerin ointment.</td>
</tr>
<tr>
<td>Haemorrhoids</td>
<td>Small amount of bleeding on toilet paper or in stool after bowel movement. Swollen anal lump felt in anal canal (internal haemorrhoids) or protruding from anus (external haemorrhoid). May be tender if blood clot has formed or if surface has been rubbed raw.</td>
<td>• No treatment for small haemorrhoids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stool softeners for constipation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Salt water bath</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Injection sclerotherapy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rubber band ligation, surgery</td>
</tr>
<tr>
<td>Condition</td>
<td>Description</td>
<td>Treatment</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Anorectal abscesses</td>
<td>Swollen, red, tender, painful lump under the skin around or in anus. May have a point discharging pus.</td>
<td>• Inject local anaesthetic, incise abscess and drain pus. Send sample for culture and sensitivity. Gonococcal anorectal abscesses can occur and require antibiotic treatment. • Use antibiotics if fever, diabetes or infection in rectum or elsewhere in the body • May become an anorectal fistula.</td>
</tr>
<tr>
<td>Anorectal fistula</td>
<td>May be painful or discharge pus from one or more openings. Insert probe into opening to determine depth and direction. Inserting an anoscope into rectum may help locate an internal opening.</td>
<td>• Surgery (fistulotomy) • Anal sphincter damage can cause difficulty controlling bowel movements.</td>
</tr>
<tr>
<td>Anal itching</td>
<td>Skin disorders, allergic reactions, certain foods, micro-organisms (e.g. fungal, bacteria), parasite infestations (e.g. pinworms), antibiotics, diabetes, liver disease, skin tags, poor hygiene and excessive sweating.</td>
<td>• After bowel movements, gently clean anal area with water • Treat pinworms (if suspected) • Corticosteroid (if skin disease) or anti-fungal (if fungus) cream or suppository • Avoid irritating foods (if food irritant) • Loose clothing and light bed linen.</td>
</tr>
<tr>
<td>Pilonidal disease</td>
<td>Tiny holes (pits) at top of the cleft between the buttocks. May be an abscess or sinus which can be painful and swollen.</td>
<td>• Pilonidal abscess, cut and drain • Surgery may be needed.</td>
</tr>
</tbody>
</table>
### Foreign objects

Swallowed or inserted objects lodged in the rectum or junction of the anus and rectum. Sudden, excruciating pain suggests the object is penetrating the anal or rectal wall. Locate object by probing gently with a gloved finger. Sigmoidoscopy and x-rays may be required.

- If the object is small, inject local anaesthetic into the anal skin or wall. This enables retraction of the anus and removal of the object. If the object is large, refer for exploratory surgery.

### Anal neoplasm

May have no symptoms until there is bleeding, change of bowel motions or weight loss. An indurated ulcer may be felt PR (per rectum) and a bleeding raised anal ulcer may be seen on inspection or anoscope examination.

- Refer for biopsy
- If confirmed as cancer, perform surgery.

---

### CLIENT EDUCATION

#### Anal health care

Preventive care of the anus and perianal skin can prevent many common anorectal problems. The perianal skin is generally quite tough but can be traumatised by faecal soiling, persistent moisture, abrasion from toilet paper, excessive washing, unlubricated (or forced) anal penetration and application of treatments. Over-the-counter steroid, antibiotic or haemorrhoid preparations may alleviate symptoms of anal conditions but may mask or alter clinical signs.

#### Perianal cleansing

Washing the anal region before and after anal sex may reduce the amount of bacteria that may be spread. Using water without soap or detergent can reduce the loss of perianal skin oils and anal mucus which protect against infections.

#### Lubrication

The anus does not produce its own lubrication so lubricant needs to be applied during any anal penetrative sex to prevent mucosal tearing. Lubricant use, cleanliness and condoms reduce the chance of tearing and minimise risk of transmitting disease during anal sex. Lubricant should be water-based, as oil-based lubricants increase the risk of latex condom breakage. Lubricants and condoms containing nonoxynol-9 spermicide should be avoided as they increase the risk of HIV transmission by damaging rectal lining.

#### Condoms and other barriers

Condoms help prevent transmission of STIs when worn prior to and during anal contact. Oral-anal contact is safest when using a dental dam (a flat sheet of latex acting as a barrier between the mouth/fingers and the anus). Female condoms may suit some MSM and transgender people. Latex gloves or condoms can be used for barrier protection during
fingering or anal play. Remember that the greatest risk is unprotected insertive or receptive anal sex and that some men have “safer sex fatigue”, so consider these factors when providing safer sex education.

**Douching**

Overuse of enemas can destroy the healthy balance of bacteria in the lower intestine. Routine use of enemas is not recommended. Some men douche with warm water before receptive anal sex to clean the rectum and anus.
Sexual transmission is important for hepatitis A (HAV) and hepatitis B (HBV) but much less common in hepatitis C (HCV). People coinfected with HIV and HBV or HCV are at increased risk of having chronic viral hepatitis B or C (or both), with the rate of progression to severe liver disease is higher.

**History**

It is usually not possible to distinguish between acute viral hepatitis infections on clinical features alone. Sub-clinical infection or non-specific clinical features are common, therefore it is important to elicit relevant epidemiological clues and have a low threshold for testing. Symptoms and signs of chronic viral hepatitis do not reliably reflect disease activity so their absence does not preclude significant pathology.

**Signs / symptoms**

Symptoms of viral hepatitis:
- Malaise
- Lethargy
- Anorexia
- Nausea and vomiting
- Fever
- Jaundice
- Headache and myalgia
- Abdominal pain particularly in the right upper quadrant
- Pruritus and intolerance of alcohol or fatty foods.

Signs of viral hepatitis:
- Tender hepatomegaly
- Fever and icterus

Signs of cirrhosis:
- Spider naevi
- Palmar erythema
- Gynaecomastia
  - Features of portal hypertension such as ascites, splenomegaly, haematemesis and melaena.
Liver failure (acute or chronic) symptoms and signs:

- Intractable nausea
- Excessive bruising and bleeding
- Hepatic encephalopathy
- Reversal of the diurnal sleep pattern
- Increasing lethargy
- Behavioural changes
- Bruising and bleeding
- Peripheral oedema
- Jaundice
- Hepatic flap
- Foetor hepaticus
- Alterations in conscious state.

The extrahepatic manifestations of viral hepatitis are variable. Common clinical features include vasculitic rashes and other skin conditions, dry eyes and mouth, arthritis, abdominal pain and peripheral neuropathy. People living with chronic HCV also have high prevalence of depression.

Investigations

While blood tests and serology diagnose viral hepatitis, newer molecular investigation such as PCR testing is increasingly used. See tables in following pages for interpretation of results.

Management of acute viral hepatitis is supportive and usually does not require hospitalisation. It is important to monitor clients for features of fulminant hepatitis (occurring in <1% of clients) such as intractable vomiting, altered conscious state, coagulopathy or persistently rising on very high bilirubin. Clients displaying these symptoms must be hospitalised and may require liver transplantation. Clients should avoid alcohol, aspirin, narcotics, sedatives and minimise paracetamol use. No specific therapies are routinely used to treat acute viral hepatitis. There is mounting evidence that anti-viral treatment of acute HCV is associated with high rates of viral clearance, though this is still under evaluation and currently available only through clinical trials.

Contact tracing

Any newly diagnosed HAV or HBV should be notified by the treating doctor and the testing laboratory to enable an appropriate public health response.

Discuss contact tracing and screening with the client. In cases of HAV and HBV, contacts should include sexual, blood-to-blood (e.g. IDU) and household contacts. While occupational contact tracing may be relevant in other cases e.g. food preparation for HAV, health care workers involved in exposure prone procedures for HBV and HCV. Follow Commonwealth and state guidelines and seek help from state/territory public health authorities.
Serological follow-up for people exposed to HBV or HCV should extend to six months following exposure and is typically performed at one, three and six months.

**Immunisation**

Vaccination against HAV or HBV (or both in a combined formulation) should be offered to all people with risk factors for infection. Sexual and household contacts of a person infected with either HAV or HBV should also be immunised.

People with chronic viral hepatitis should be protected against further liver injury. A client with chronic HBV needs vaccination against HAV, while a person with chronic HCV needs vaccination against HAV and HBV.

<table>
<thead>
<tr>
<th>Type of exposure</th>
<th>Vaccination³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual</td>
<td>Hepatitis B Immunoglobulin (HBIG) and vaccination within 14 days.</td>
</tr>
<tr>
<td>Percutaneous</td>
<td>HBIG within 72 hours, commence vaccination within seven days.</td>
</tr>
<tr>
<td>Perinatal</td>
<td>HBIG within 12 hours give HBIG and commence vaccination within 24 hours. Repeat vaccine doses at two, four and six months. This regime reduces risk of infection by 90%. The child should be screened for HBV infection with HBsAg and anti-HBs three months after completing the vaccines.</td>
</tr>
</tbody>
</table>

Note: Nurses practicing under DTP-SRH program endorsement should not vaccinate based on the following table. Instead they should refer to relevant information in section eight for HMP supply guidelines and information on HAV and HBV vaccination schedules.

Refer to NHMRC (current version) The Australian Immunisation Handbook³ for information.

<table>
<thead>
<tr>
<th>Vaccination schedule³</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product (all give IMI)</strong></td>
</tr>
<tr>
<td>Hepatitis A vaccine</td>
</tr>
<tr>
<td>Hepatitis B vaccine</td>
</tr>
<tr>
<td>Combined hepatitis A/B</td>
</tr>
</tbody>
</table>

**Immunoglobulins**

<table>
<thead>
<tr>
<th>NHIG (hepatitis A)</th>
<th>&lt;25kg – 0.5mL</th>
<th>25 – 50kg – 1.0mL</th>
<th>&gt;50kg – 2.0mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBIG (hepatitis B)</td>
<td>Sexual: 400 IU</td>
<td>Percutaneous: 400 IU</td>
<td>Perinatal: 100 IU</td>
</tr>
</tbody>
</table>

Both immunoglobulin preparations are given as a single dose IMI. Both can be given simultaneously with the relevant vaccine, but must be administered in a different site.
Exposure with lesser risk (e.g. susceptible household contacts of people with chronic HBV or susceptible long-term partners of clients with latent HBV infection) usually does not warrant HBIG but hepatitis B vaccination is strongly recommended.

Clients who present following unprotected sex or needle sharing with a person of unknown HBsAg status should be offered vaccination against HAV and HBV, as well as those presenting for STI screening or treatment.

HEPATITIS A (HAV)³
HAV can be transmitted via the faecal-oral route, contaminated food/drink and close personal contact including sexual contact and unprotected anal contact i.e. oral-anal (rimming), digital-rectal (fingering) or anal sex.

Symptoms
Many infections are asymptomatic or mild and without jaundice, especially in children. Symptomatic illness with jaundice is more common with increasing age.

Symptoms include flu-like prodrome with fever, malaise, fatigue, and myalgia, together with nausea and vomiting. This typically lasts 4 -10 days and is followed by an icteric phase, characterised by jaundice, with pale stools, dark urine and tender hepatomegaly.

This lasts 1 - 3 weeks but can persist for 12 or more weeks.

Risk factors for infection / groups at higher risk
- Sexual/household contact with acute case
- Men who have sex with men (msm)
- Travel to endemic areas
- Day care attendance/work
- Sewerage workers
- Injecting drug use
- Other recreational drug use
- Point source outbreaks due to poor hygiene or contaminated food/water are uncommon.

Acute illness
- Common in children and adults, especially the Indigenous and intellectually disabled.

Incubation period⁴
2 - 6 weeks, though typically 4 weeks.

Risk of progression to chronicity²⁸
HAV does not cause chronic infection. Complications of hepatitis A are uncommon. Fulminant hepatitis is rare, though occurs more often with advancing age.
Investigations

Acute hepatitis presentation

- HAV IgM total antibodies
- LFTs.

Identified risk factors

- check for past exposure prior to vaccination
- HAV IgG antibodies.

Results interpretation

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
<th>Typical interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-HAV IgM</td>
<td>positive</td>
<td>acute</td>
</tr>
<tr>
<td>Anti-HAV IgM</td>
<td>negative</td>
<td>past infection or immunisation</td>
</tr>
<tr>
<td>Anti-HAV Total Ab</td>
<td>positive</td>
<td></td>
</tr>
</tbody>
</table>

Note:

- Aminotransferases (AST, ALT) markedly elevate (>10 times normal) in acute hepatitis. Bilirubin elevated typically up to 150 μmol/l. Alkaline phosphatase typically less than twice normal, higher if cholestasis is present. Prothrombin time normal unless developing hepatic decompensation.
- Positive HAV IgM confirms diagnosis in symptomatic clients and should be positive by the time of the icteric phase.
- HAV IgM can persist for 3 - 6 months.
- HAV IgG may remain positive for life.

Management

Rest and oral hydration. If severe, with vomiting, dehydration or signs of hepatic decompensation (drowsiness, confusion), hospital admission is warranted. If breast-feeding, consider administration of normal human immunoglobulin to the baby.

Immunisation

A vaccine is available.

Refer to section four, for information on HAV vaccination.

Sexual and household contacts (during the two weeks prior and for one week following the onset of jaundice in the index case) should receive normal human immunoglobulin (NHIG). Non-immune individuals at ongoing risk of HAV infection can start active vaccination against HAV simultaneously. NHIG should be administered as soon as possible (certainly within two weeks). A published clinical trial suggests hepatitis A vaccine is as effective as NHIG at preventing HAV in healthy contacts following exposure. Australian guidelines do not currently recommend this approach but this may change in future.
Contact tracing

If a client has acute HAV

- trace all close contacts including household and sexual contacts. In the case of a care facility, trace all staff and children
- make contact tracing of sexual partners, domestic contacts, close social contacts and food handlers a high priority.

Follow-up

- review at 1 – 2 week intervals until aminotransferase levels normalise (may take 4 – 12 weeks). Immunity is life-long.
- follow-up partner notification, testing and treatment
- offer full screening for STI and other blood borne viruses (BBV).

Client education

- written and verbal information regarding the infection (including that HAV is excreted in the faeces for up to two weeks before the onset of illness and at least one week afterwards), contact tracing and follow up
- advise client re hygiene, in particular handwashing
- provide personal record card with details of any vaccinations given
- provide written information regarding hepatitis A. A client fact-sheet is available at www.health.qld.gov.au/sexhealth
- provide MIMS consumer medication information which can be accessed at www.ckn.health.qld.gov.au

**HEPATITIS B (HBV)**

HBV is transmitted by parenteral and mucosal (especially sexual) exposure to infected blood or body fluids.

**Symptoms**

Virtually all infants and children and 10-50% of adults have asymptomatic acute infection.

If symptomatic, hepatitis B tends to be more severe and prolonged than acute hepatitis A. Symptoms include a flu-like prodrome with malaise, fatigue, arthralgia (may be severe), together with right upper quadrant pain.

This is followed by an icteric phase which includes jaundice, anorexia, nausea, fatigue, pale stools, dark urine, and tender hepatomegaly. This phase is usually not associated with fever.

With chronic infection there are often no physical symptoms or signs. However there may be signs of chronic liver disease.
Risk factors for infection / groups at higher risk

- Sexual/household contacts of infected person
- Men who have sex with men (MSM)
- People with multiple sex partners
- Perinatal (approx 80% transmission risk)
- People born in high prevalence regions and their sexual partners
- Indigenous Australians
- Non-sterile injecting drug use
- Unsterile percutaneous exposure [including medical and dental procedures, transfusions, tattooing, piercing or traditional cultural practices such as scarification, female genital mutilation (FGM) and circumcision]
- Prisoners
- Haemodialysis patients.

Acute illness

- Rare in children
- More common in adults.

Incubation period

1 - 6 months, though typically 2 - 3 months.

Risk of progression to chronicity

- 90% of neonates
- 20 - 50% of children
- 1 - 10% of adults.

Investigations

Consider HBV serology for any client with risk factors for HBV infection such as unsafe sex, injecting drug use, or these activities with someone with hepatitis B, as this helps avoid unnecessary vaccination and missing chronic HBV infections. HBV serology for screening includes HBsAg, anti-HBc and anti-HBs)

Consider LFTs for acute hepatitis.

The addition of HBV DNA viral load testing to the Medicare Benefits Schedule means this test is now accessible in the primary care setting up to once per year for clients not receiving antiviral therapy and four times per year for clients on antiviral medication.
### Results interpretation

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
<th>Typical interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBsAG</td>
<td>negative</td>
<td>Not immune</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>Vaccinated - if titre $&gt;10$ mIU/mL and has completed course</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>negative</td>
<td>of vaccination, no further immunisation is required</td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>positive</td>
<td>Early acute infection</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>positive</td>
<td>Acute infection*</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>IgM anti-HBc*</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>positive</td>
<td>Chronic HBV infection*</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>IgM anti-HBc*</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>Resolved infection</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>Either distant resolved infection, recovering from acute</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td>infection, false positive or ‘occult’ chronic infection (HBV</td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td>DNA PCR positive).</td>
</tr>
<tr>
<td>HBeAg</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBeAb</td>
<td>positive</td>
<td></td>
</tr>
</tbody>
</table>


* IgM anti-HBc can be positive during a flare of chronic HBV infection.

### Management

For acute infection consider oral hydration. If severe with vomiting, dehydration or signs of hepatic decompensation (drowsiness or confusion) consider admission to hospital.
Effective therapies exist to treat HBV. For clients with chronic HBV, persistently elevated HBV DNA and ALT and biopsy evidence of chronic hepatitis, treatments include nucleoside analogues (lamivudine, entecavir, adefovir, tenofovir) or pegylated interferon. The aim of therapy is to suppress viral replication, induce HBeAg seroconversion, prevent progressive fibrosis and HCC, and to prevent transmission.

If not treated monitoring is recommended 6-12 monthly. LFTs for people under 40 years, and if abnormal refer to specialist. Over 40 years LFTs 6-12 monthly, and if raised transaminases do screening for hepatocellular carcinomas (AFT and ultrasound) and refer to specialist.

Counselling is important in the management of clients with viral hepatitis, their partners and family members. Provide information on natural history, virus transmission, prevention, treatment availability and the need for ongoing monitoring, allowing adequate time to answer all questions. Discuss harm minimisation relating to alcohol intake and ongoing injecting drug use.

**Vaccination**

A vaccine is available.

Refer to section four, for information on HBV vaccination.

Following significant exposure to HBsAG positive source, a non-immune individual should receive Hepatitis B immune globulin (HBIG) as soon as possible and start Hepatitis B vaccination simultaneously. HBIG can only be obtained from the Australian Red Cross Blood Service.

**Post exposure prophylaxis - see table on page 18**

The following is recommended (pending results of serology), where there has been recent sexual exposure with a person known to be a hepatitis B carrier or following sexual assault.

Hepatitis B immunoglobulin HBIG 400 IU (4 ml) IM once; may be given up to 14 days after sexual exposure, then followed by hepatitis B vaccination (if the exposed partner is not immune). The first dose should be given within seven days of exposure. Hepatitis B vaccine and immunoglobulin can be given at the same time, but should be at different sites.

Refer to the NHMRC (Current Version) *The Australian Immunisation Handbook* for additional supporting information about HBV vaccination schedules.

**Contact tracing**

Contact tracing is not applicable unless the client has acute hepatitis B.

If the client has acute hepatitis B:

- refer to MO for management of client and contacts
- Contact being people who inject drugs, sexual partners and domestic contacts.
Follow-up
Post vaccination serological testing (HBsAb) four weeks after the third dose of hepatitis B is recommended for high-risk people, including those:
- at significant occupational risk
- at risk of severe or complicated disease, immunocompromised or persons with pre-existing liver disease not related to hepatitis B
- in whom a poor response to hepatitis B is expected e.g. immunocompromised clients with HIV infection or chronic renal failure
- persistent non-responders should be informed about the need for hepatitis B immunoglobulin within 72 hours of parental exposure to HBV or 14 days of sexual exposure.

Client education
- verbal information, contact tracing and follow up
- provide personal record card with details of any vaccinations given
- provide written information on hepatitis B. A fact-sheet is available at www.health.qld.gov.au/sexhealth
- provide MIMS consumer medication information from www.ckn.health.qld.gov.au

HEPATITIS C (HCV)\(^3,28\)
Hepatitis C virus (HCV) is primarily transmitted by parenteral exposure to infected blood.

Symptoms
The majority of acute infections are subclinical. Acute hepatitis C goes unnoticed in most new infections.

Acute infection
If symptomatic, hepatitis C produces a flu-like prodrome with malaise, fatigue, myalgia, together with right upper quadrant pain. This is followed by an icteric phase which includes jaundice, anorexia, nausea, and fatigue, pale stools, dark urine and tender hepatomegaly. 25-30\% of people do clear the virus.

Chronic infection (70 – 85\% of acutely infected people)
This usually progresses slowly. A proportion of people develop hepatic fibrosis. Most people with hepatitis C remain asymptomatic for 8 -12 years after initial infection. In most cases, natural history extends over 20 - 50 years. High alcohol intake, obesity and other coexistent liver disease exacerbates the course of chronic hepatitis C. Significant liver disease can be present when liver function is normal.
It is recommended to test:

- clients who identify as injecting drug users
- recipients of blood or blood products prior to 1990
- clients with HIV infection
- clients with tattoos or body piercing by non-professionals
- people who have been incarcerated in juvenile detention centres or prison
- people from highly endemic countries.

Risk factors for infection / groups at higher risk of infection

- Perinatal (5% transmission risk)
- Sexual transmission is documented but rare. There is some evidence of transmission risk for MSM who have anal sex
- Unsafe injecting drug use is responsible for >80% of infections
- Unsterile percutaneous exposure [including medical and dental procedures, transfusions, tattooing, piercing or traditional cultural practices such as scarification, female genital mutilation (FGM) and circumcision]
- Incarcerated people.

Acute illness
Uncommon and typically non-specific.

Incubation period
2 weeks - 6 months, typically two months.

Risk of progression to chronicity
Approximately 75%.

Investigations

- Anti-HCV Immunoassay used for initial screening.
- If there is a positive result, confirm with a second EIA using a different manufacturer’s kit. Consult with a laboratory regarding local protocols.
- Hepatitis C RNA PCR test is used to confirm current infection and can be used for follow-up and management. Consult with a laboratory for advice.

Pre and post test discussion
Any client offered hepatitis C antibody testing should receive quality pre and post test information, ensuring there is informed consent and an understanding of the implications of a positive test result. It also provides an opportunity to clarify essential information relating to the transmission of Hepatitis C.
Results interpretation

Anti-HCV represents having been infected with HCV. Up to 25% of anti-HCV positive clients will have cleared the infection but will always be HCV Ab positive. Due to the availability of a Medicare rebate for HCV RNA PCR, the test to establish the replicative status (i.e. whether the infection persists or has been cleared) of an anti-HCV positive client is possible in the primary care setting. Repeatedly negative PCR suggests cleared infection.

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
<th>Typical interpretation</th>
<th>Alternative interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>anti-HCV</td>
<td>negative</td>
<td>no infection</td>
<td>Previous infection with clearance and seroconversion, during incubation period</td>
</tr>
<tr>
<td>HCV RNA PCR</td>
<td>negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>anti-HCV</td>
<td>negative</td>
<td>acute infection</td>
<td></td>
</tr>
<tr>
<td>HCV RNA PCR</td>
<td>positive</td>
<td>past resolved infection</td>
<td>False positive antibody result</td>
</tr>
<tr>
<td>anti-HCV</td>
<td>positive</td>
<td>acute or chronic infection</td>
<td></td>
</tr>
<tr>
<td>HCV RNA PCR</td>
<td>negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>anti-HCV</td>
<td>positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCV RNA PCR</td>
<td>positive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Management

Effective therapies exist to treat chronic HCV. The combined HCV therapy with pegylated interferon and ribavirin elicits a sustained virologic response (SVR defined as remaining HCV RNA PCR negative, six months after cessation of therapy) in 45 – 85% of clients depending on HCV genotype. Achievement of an SVR is associated with improvement in liver histology, reduction in incidence of HCC and reduced mortality and SVR appears durable in >98% of clients. The former requirements for a liver biopsy and raised ALT to access treatment no longer apply to chronic HCV infection.

Information is important in the management of clients with viral hepatitis, their partners and family members. Provide information on natural history, virus transmission, prevention, treatment availability and the need for ongoing monitoring, allowing adequate time to answer all questions. Discuss harm minimisation relating to alcohol intake and ongoing injecting drug use.

Vaccination

Not available.

Contact tracing

- discuss management of clients with hepatitis C who have shared intravenous drug equipment
- in the absence of acute infection, trace back to the likely time of infection e.g. first needle sharing or blood transfusion. It may be impractical to go beyond 2 - 3 years
- document the agreed method for identifying and notifying partners.
Follow-up¹
- refer to a specialist for assessment and management (if indicated)
- follow-up of partner notification, testing and management
- offer a full screen for STIs and other blood borne viruses (BBV)
- offer vaccination for hepatitis A and B if not immune.

Client education¹
- verbal information, contact tracing and follow up
- provide personal record card with details of any vaccinations given
- Reinforce health education regarding safe sex, harm minimisation during drug use and the toxic effects of alcohol on the liver
- clients may benefit from referral to a hepatitis C support group
- provide written information on hepatitis C. A fact-sheet is available at www.health.qld.gov.au/sexhealth
- provide MIMS consumer medication information from www.ckn.health.qld.gov.au
ITCHES, RASHES, JOINTS

Genital itches and rashes are common and can usually be well differentiated by good history and examination. Medication history is important as many clients present after they have attempted to treat a condition themselves.

Itch

Common causes of itch include public lice, scabies, genital warts, candidiasis, allergy/dermatitis, pruritus ani or vulvodynia.

Rash

Common causes include scabies, candida, herpes, allergy/dermatitis, psoriasis. There are three important generalised rashes which should not be overlooked – the rash of primary HIV, disseminated gonococcal infection (DGI) and secondary syphilis. Persistent problems or lack of response may warrant biopsy and/or referral.

Joints

Arthralgia is a common presenting problem of prodromal viral illness including hepatitis B, hepatitis C and HIV. Urethritis associated with arthritis and conjunctivitis ‘Reiters syndrome’ is a rare complication due to chlamydia and gonorrhoea or sometimes gastroenteritis (i.e. can be a non STI). Mucocutaneous manifestations are also possible. The condition is associated with HLA type B27.

HISTORY

Identify whether signs/symptoms are general or genital. When taking history be sure to ask about:

- other skin diseases e.g. dermatitis, psoriasis or intertrigo
- past STI history
- medical conditions such as diabetes
- medication
- client’s perception and concerns about their condition
- location
- duration
- associations
- other symptoms (general or genital)
- recent sexual activity e.g. changes in practices or partners
- intensity, and variation in presenting signs/symptoms e.g. does scratching temporarily relieve the itch or make it worse
• aggravating factors e.g. temperature, perfumed products, sexual intercourse or tampons
• triggers that may affect lesions e.g. occupation, sport, soaps, douches, underwear, alcohol, tobacco, recreational drug use, lubricants or condoms.

**SIGNS / SYMPTOMS**

<table>
<thead>
<tr>
<th>Signs/ symptoms</th>
<th>Differential diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• may occur as a response to soaps, secretions, sweat and topical applications.</td>
<td>Allergy</td>
</tr>
<tr>
<td>• moderate to severe local vulval/vaginal itch which often worsens the week before a menstrual period</td>
<td>Candidiasis</td>
</tr>
<tr>
<td>• whitish, moderate to thick vaginal discharge which is either odourless or smells yeasty</td>
<td></td>
</tr>
<tr>
<td>• red confluent rash usually in the creases (groin or natal cleft) with spots on the edge of the rash known as satellite lesions</td>
<td></td>
</tr>
<tr>
<td>• may be precipitated by medication (the pill or antibiotics), applications (creams or soaps) or a new sexual partner</td>
<td></td>
</tr>
<tr>
<td>• it is rarely necessary to treat a male partner unless he has symptoms, which include a spotty rash under the foreskin/ head of penis and/or persistent itch.</td>
<td></td>
</tr>
<tr>
<td>• often associated with medication/application history.</td>
<td>Contact dermatitis</td>
</tr>
<tr>
<td>• can occur anywhere in the body including the genitals</td>
<td>Dermatitis</td>
</tr>
<tr>
<td>• suspect particularly with a history of self diagnosed candida infections and frequent treatment with creams.</td>
<td></td>
</tr>
<tr>
<td>• multiple pustular, petechial or necrotic macules or papules on the trunk or extremities</td>
<td>Disseminated gonococcal infection (DGI)</td>
</tr>
<tr>
<td>• associated with gonococcal bacteraemia and often accompanied by polyarthralgia and tenosynovitis.</td>
<td></td>
</tr>
<tr>
<td>• it is not uncommon for viral and bacterial infections to present with generalised rashes i.e. HIV, disseminated gonococcal infection (DGI) and syphilis</td>
<td>Syphilis</td>
</tr>
<tr>
<td>• consider viral exanthems including glandular fever, HBV and HCV and perform relevant serology.</td>
<td>Primary HIV infection</td>
</tr>
<tr>
<td>• can present atypically as a rash but history may uncover preceding burning or pain without rash or the rash itself may show characteristic vesicles which can be sampled for PCR erythematos inflammatory response around blisters.</td>
<td>Genital herpes</td>
</tr>
<tr>
<td>• itch (+/- rash in skin creases of groin), spares the genitals but affects all other areas where skin overlaps</td>
<td>Intertrigo</td>
</tr>
<tr>
<td>• itch is mild to moderate but persistent and longstanding.</td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Lichen sclerosis                  | - characterised by long duration
|                                   | - mild to moderate itch with pale vulva.                                    |
| Primary HIV infection (PHI)       | - PHI is a glandular fever-like illness accompanied by a macular erythematous non-itchy rash on the trunk, inner aspects of arms and legs and occasionally the palms/soles of hands/feet
|                                   | - onset is 2 – 6 weeks
|                                   | - may be accompanied by oral and genital aphthous ulcers and generalised lymphadenopathy. |
| Pruritus ani                      | - moderate to severe persistent itch around anus
|                                   | - can be extensively self-treated as an itch or present with rash inflammation from persistent scratching. |
| Psoriasis                         | - usually mildly itchy and associated with a well demarcated erythematous patch
|                                   | - erythematous inflamed skin with clearly defined margins. |
| Pubic lice                        | - severe itch primarily on pubic hair
|                                   | - can spread through body hair (males) and eyelashes
|                                   | - no rash, but may have excoriation marks on skin under pubic hair. |
| Scabies                           | - itch is usually worse at night or when warm
|                                   | - typically infects the whole body (especially finger and toe webs) with a thin red trail (burrow) on skin, sparing only the face and scalp
|                                   | - history of itch and visible rash all over body. |
| Secondary syphilis                | - maculo-papular erythematous non-itchy rash on the trunk, inner aspects of arms and legs, extending to the palms/soles of hands/feet
|                                   | - onset is about six weeks after acquiring syphilis (usually when the primary chancre has disappeared)
|                                   | - rash is usually accompanied by generalised lymphadenopathy and systemic symptoms.
|                                   | - condylomata lata (moist, wart-like lumps in the perineal and perianal skin grooves and creases) can also occur. |
| Vulvodynia                         | - severe, persistent and painful vulval itch which becomes more painful when scratched
|                                   | - is usually present for many years and associated with marked dyspareunia
|                                   | - localised severe pain (usually introital) can be elicited by gently touching area with a cotton bud. |
EXAMINATION

Examine affected body parts to see if general involvement e.g. scabies

- examine non-genital skin and mucosal surfaces e.g. trunk, extensor and flexural surfaces, nails, scalp and mouth
- examine finger and toe webs and other parts for scabies burrows
- check for rashes or skin conditions on palms/soles of hands/feet
- inspect for aphthous ulceration on buccal mucosa
- check antecubital and popliteal fossae for patches of dermatitis
- check for other rashes e.g. psoriasis, intertrigo (frequently occurring under breasts)
- assess for signs of tenosynovitis and/or arthritis
- assess for generalised lymphadenopathy and/or enlarged spleen.

Perform a full genital examination

- palpate inguinal lymph nodes for enlargement/tenderness
- inspect groin and pubic hair for adult lice (crabs) or nits (pubic lice eggs) which are about 1mm, stuck to the base of hair and can be dislodged by combing
- examine anogenital region for lesion, itch rash, discharge, pruritus, skin irritation, redness, inflammation, excoriation, erythema, lesions, ulcers, lesions, discomfort, pain and assess characteristics of presenting signs/symptoms
- check perineum and perianal area for other skin conditions, trauma or abnormalities
- inspect under foreskin/inside introitus and on vaginal wall
- speculum/proctoscope examination may be indicated.

INVESTIGATIONS

Diagnosis of genital rashes is usually based on history and examination, but can be clarified with an investigation.

- vaginal
  - high vaginal swab or blind swab for M/C/S
  - swab for trichomonas PCR (if indicated)
  - gram stain and wet prep (onsite if available)
  - pH and whiff test.

- lesion
  - swab for HSV PCR (if indicated)
  - swab for M/C/S (if indicated)
  - measure lesions
– skin scraping (if indicated)
– press slide and GUMP for donovanosis (if indicated)
– dark ground microscopy (if available)
– swab for treponemal PCR for syphilis (if indicated)
– consider punch biopsy for lesions that are atypical or unresponsive to treatment (particularly in clients with HIV).

• genital rash/itch
  – skin scraping
  – biopsy for clear diagnosis.

• for generalised rash
  – testing for primary HIV infection now routinely combines an antibody and antigen test
  – if DGI is suspected, swab for culture and sensitivity for gonorrhoea from all mucosal sites (pharynx, endocervix, urethra, conjunctiva and rectum) as per history, blood cultures and aspirate of joint effusion
  – if secondary syphilis is suspected, RPR plus a specific treponemal test (EIA, TPPA or FTA ABS).

• serology
  – syphilis
  – HIV.

• offer a full STI screen if indicated by history.

**MANAGEMENT / TREATMENT**

Conditions requiring NO to refer to or at a minimum consult with an MO or NP (if appropriate/available):

• chronic symptoms that are recurrent or persistent
• abnormal findings of clinical significance
• uncertain diagnosis
• contraindication to treatment
• immunosuppression i.e. HIV positive client
• client is pregnant or breastfeeding
• findings outside NOs scope of practice.

Note: Unless a sexual partner has symptoms it is rarely of value to test them.
For all other cases:
Treat according to diagnosis but be aware of need to maintain genital health and avoid the
**Four Ss** (secretions, soaps, steroids and scratching).

- **Secretions** - sweat and non-breathing underwear can worsen thrush so wear loose cotton
clothing.
- **Soaps** - bath oils and vaginal deodorants can cause local irritation
- **Steroids** - can cause decreased resistance (especially to HSV)
- **Scratching** - can cause further skin break down.

Refer to section four, for information on management and treatment of the following conditions:

- Candidiasis
- Pubic lice
- Scabies
- Genital herpes
- Primary HIV infection
- Secondary syphilis.

**CONSIDERATIONS**

**Persistent candidiasis**

Persistent and/or severe thrush can occasionally indicate systemic disease such as onset of
non-insulin dependant diabetes mellitus or HIV.

**Dermatitis and vulval or penile psoriasis**

Steroids can effectively treat these conditions, usually with a rapid effect. If condition doesn’t resolve within one week, consider biopsy to check diagnosis.

**Lichen sclerosus**

This is a serious condition with potential to lead to extensive fibrosis and distortion of the
introitus in females, and phimosis and meatal stenosis in males. The condition requires long
term treatment with high potency steroid cream or ointment. Suspicious lesions should be
biopsied to confirm diagnosis. Review area annually and repeat biopsy of suspicious areas
due to a small yet significant risk of malignancy. If concerned refer for specialist advice.

**Intertrigo**

Intertrigo often occurs in genitocrural surfaces on obese clients. It can be caused by a mixed
infection of *C. Albicans* and *S. Aureus*, therefore mixed antifungal and fungicide creams are
helpful and it is ideally treated by separating involved surfaces. Provide the client advice on
hygiene.
Vulvodynia
Symptoms often respond to a low dose (10-15mg) of Amitriptyline PO (ADEC category C) and treatment should include some counselling/sex therapy.

Disseminated gonococcal infection (DGI)
Gonorrhoea can become a disseminated infection with bacteraemia and skin/joint involvement, though this is rare (only in approx 0.5 - 3% of cases). Dissemination can occur from gonococcal infection on any mucosal site (urethral, rectal, endocervical, pharyngeal or conjunctival). Frequently the mucosal infection is asymptomatic in the presence of disseminated infection. DGI is more common in females than males.

DG presents in two ways
1. As a bacteraemia (mild fevers, malaise, chills and rigors) with arthralgia/dermatitis syndrome (tenosynovitis and/or migratory polyarthritis affecting usually more peripheral joints and/or multiple painless macular, pustular or necrotic skin lesions near affected joints and on trunk).
2. As septic arthritis affecting no more than one or two major joints (knee, elbow, ankle etc.).

Diagnosis is initially difficult and frequently missed due to the non-specific nature and lack of genital symptoms.

Take swabs for microscopy, culture and sensitivity for *N. gonorrhoeae* from all mucosal sites depending on recent sexual history. In the absence of discharge, first void urine and high vaginal swabs for PCR for gonorrhoea are an acceptable alternative. Blood cultures for *N. gonorrhoeae* should be taken, but have poor yield.

Joint aspirates sent for microscopy, culture and sensitivity have good yield when large joints are involved with palpable effusions. If septic joint is suspected, urgent orthopaedic referral is necessary.

Swabs from skin lesions for microscopy, culture and sensitivity have poor yield.

Where DGI is suspected, arrange hospital admission because rarely gonococcal meningitis, endocarditis or osteomyelitis may occur as serious complications.

Clients should be managed as for an STI, with education about safer sex, contact tracing and advice to avoid sex until symptoms abate and partners have been treated. Screening for other STIs (especially syphilis and HIV) is also important.
LUMPS AND BUMPS

A genital lump or bump is a common STI presentation. In sexually active clients, new lumps will mostly be genital warts caused by the human papillomavirus (HPV), but normal skin variants and benign skin conditions should also be considered. Most causes are treatable.

The Gardasil ® HPV vaccine is on the National Immunisation Program and covers infection with HPV types 6, 11, 16 and 18. Types 6 and 11 cause 90% of genital warts, while types 16 and 18 cause 70% - 80% of all cervical cancers. Therefore, there will likely be a decrease in clinical wart presentations in the coming years and hopefully a reduction in cervical cancers, as coverage in the younger Australian population increases. Cervarix ® is another vaccine which immunises against HPV types 16 and 18.

Sometimes bumps will be normal anatomical variations e.g. Tyson’s glands, pearly penile papules or foreskin remnants in circumcised males. Occasionally sebaceous glands or epidermoid cysts, Fordyce’s spots and angiokeratomas cause concern if they have not been noted before. A lump in the groin may be a lymph node. This may be due to STIs commonly causing ulcers or systemic pathology e.g. HIV or distal infection such as cellulitis.

Lumps could be due to molluscum contagiosum, though this is uncommon. In females, consider an abscess or Bartholinitis. In visitors from high prevalence countries, men who have sex with men (MSM), or Indigenous Australians, consider condylomata lata as a sign of infectious secondary syphilis.

Very rarely, a hard, non-tender lump in an elderly client (usually over 60 years of age) is genital cancer.

HISTORY

When taking history, be sure to ask:

• How long have lumps been present? (Warts usually grow to a noticeable size over a period of weeks to months)
• Is this the first time you have checked yourself? (Keep in mind normal variants if self-examination is new to the client)
• Are the lumps growing in size or are more appearing? (If yes, they are most likely to be warts or another infection)
• Are they sore? (abscess, Bartholinitis, lymph nodes and folliculitis can be painful, however warts usually are not).

SIGNS / SYMPTOMS

The client usually feels or sees the lump and occasionally it can be tender or itchy. After they examine themselves for the first time (e.g. after first sex or gynaecological procedures) they may find normal variations and become anxious about the cause. Very rarely do lumps indicate cancer. Ensure you also examine the abdomen and thighs.
Warts

- firm, painless and irregular cauliflower surface
- commonly found under foreskin, at base of penis and vulval fourchette
- can be keratinised on skin
- often multiple
- warts in pregnancy and HIV or the immunocompromised
  - warts can grow quickly in pregnant women or HIV positive people and need prompt aggressive treatment (not chemical in pregnancy) such as cryotherapy or diathermy
  - chemical treatments should be used with care in people with HIV or the immunocompromised.
  - Warts often resolve spontaneously after pregnancy/delivery
- warts in neonates
  - Warts can indicate sexual abuse but neonates can be infected genitally at birth. If a baby develops genital warts, consider vertical transmission. Check for a maternal history of genital warts. Investigation by appropriate child protection services is important to exclude sexual abuse, as diagnosis of vertical transmission is one of exclusion.

Tyson’s glands

- 1 - 2mm regular paired
- either side of the penile frenulum.

Pearly penile papules

- 1 - 2mm regular smooth
- bilateral
- edging the penile corona.

Sebaceous cysts / Fordyce’s spots

- 2 - 5mm pale, smooth and soft
- attached to skin.

Epidermoid cysts

- 2 - 10mm pale, smooth and soft
- attached to skin (often scrotum).
Angiokeratomas
- pink/red
- smooth
- well demarcated
- painless.

Lymph node
- 1 - 3cm
- in groin
- may be tender
- deep to skin
- check for distal infection.

Molluscum contagiosum
- 2 - 4mm smooth, pale
- central dimple
- often multiple
- only on skin
- usually found in the suprapubic region and inner thighs.

Abscess
- tender, red, warm lump
- attached to skin.

Bartholinitis
- tender lump
- lower-third of labia minora.

Condylomata lata
- soft, wet, smooth clustering
- found in skin creases
- condylomata lata are a sign of secondary syphilis and are often found adjacent to the primary chancre\(^2\). It should be considered in at-risk clients such as men who have sex with men (MSM), those having recent unprotected sex in high prevalence countries or Indigenous Australians in areas of prevalence
- an RPR and a specific serological test (e.g. TPPA, EIA) for Syphilis will always be reactive (the RPR at high titre – usually >1:16) in the presence of condylomata lata. Syphilis is
a systemic disease acquired through direct contact with infectious exudate from skin lesions (chancre) and mucous membranes.

- in antenates, prompt treatment and follow-up is vital as syphilis can cause serious pregnancy and neonatal complications. If in doubt, check with sexual health physician and arrange follow up.

**Cancer**

- hard, non-tender irregular
- may bleed easily
- in older clients.

**Vulval varices**

- resemble common varices of lower limbs
- little clinical significance other than in association with pregnancy when they usually present in first trimester
- present as grossly distended veins visible through skin and can be associated with localised pruritus, and pain.\(^{18}\)

**Rectocele**

- Feeling of pressure in vaginal like associated with constipation
- Vaginal introitus may widen or protrude with presence of soft round bulge of vaginal mucosa from posterior that represent prolapse of rectum into vagina.\(^{25}\)

**EXAMINATION**

- examine non-genital skin surfaces e.g. trunk, nails and mouth for signs of other lumps, bumps, rashes, lesions or abnormalities (including palms/soles of hands/feet)
- palpate inguinal lymph nodes for enlargement, erythema and tenderness
- examine perianal region for skin colour, inflammation, discharge, erythema, lumps, bumps, lesions, ulcers, rashes, trauma and abnormalities
- Assess lesion(s) and note:
  - size, shape, colour, distribution, exudate, bleeding, erosion, induration, ulceration or secondary infection
  - characteristics e.g. macules, papules, scale, plaque, fissure, erosions, ulceration and borders of lesion(s)
  - number e.g. solitary or multiple
  - associated pain.
- palpate lesion for tenderness, pain, induration, oedema, size, hardness and mobility
- examine for accompanying systemic symptoms e.g. associated joint pain, fever, malaise or systemic illness.
INVESTIGATIONS

Diagnosis is usually clinical.

- pap smear (if indicated)
- biopsy (if indicated).
- additional STI screening. All clients who have unprotected sex should be offered a basic STI screen including blood for HIV, HBV, syphilis and first void urine or an endocervical swab for chlamydia and gonorrhoea PCR (females only).

If condylomata lata is suspected

- swab of lesion for syphilis PCR and serology taken for syphilis.

If cancer is suspected

- biopsy for histology. Penile/vulval cancer may present as a very firm painless lump, usually in older people, growing slowly over time. If in doubt, biopsy or refer for biopsy as this is important not to miss. Refer to oncologist.

MANAGEMENT / TREATMENT

Conditions requiring NO to refer to or at a minimum consult with an MO or NP (if appropriate/available):

- client is pregnant or breastfeeding
- abnormal findings of clinical significance
- uncertain diagnosis
- contraindication to treatment
- persistent symptoms after treatment
- immunosuppression i.e. HIV positive client
- findings outside NOs scope of practice.

For all other cases:

- refer to section four, for treatment and management of:
  - Genital warts
  - Molluscum contagiosum
  - Syphilis
  - Condylomata lata.
CONSIDERATIONS

Tyson’s glands, pearly penile papules, sebaceous and epidermoid cysts and Fordyce’s spots
- benign, reassure.

Lymph node
- check for cause (early genital herpes, HIV or other systemic infection, drainage of distal infection).

Abscess
- incise, drain and observe depending on size and symptoms.

Cancer
- penile/vulval cancer may present (usually in older people) as a very firm painless lump which grows slowly over time. If in doubt refer for biopsy and/or oncologist.

Bartholinitis
- observe/refer for marsupialisation depending on size, symptoms and recurrence
LESIONS, ULCERS AND SKIN CONDITIONS

Breaches in the skin or mucous membranes can occur anywhere on the body including the anogenital region. Lesions, ulcers and skin conditions associated with sexual activity are common presentations, however, not all genital lesions are due to STI or HIV.

Identification and treatment of skin lesions can be challenging for both clinicians and clients. Lesions, ulcers and skin conditions associated with STI, HIV and sexual activity can present unique challenges.

Some common skin conditions occur more frequently in people living with HIV and may provide the first indication that an individual is HIV positive.

Key considerations when determining a diagnosis:
- identify the primary lesion including characteristics and/or symptoms
- determine whether acute or chronic in presentation
- recognise specific features/patterns
- determine any systemic distribution of the lesions, rash or skin condition and/or symptoms
- establish whether the client is immunosuppressed.
LESIONS (GENITAL)

HISTORY
When taking history, be sure to ask about:
• current or recent use of medication, creams, analgesia or narcotics
• allergies/sensitivities to drugs/environment.
• personal/family history of skin and other medical conditions (i.e. asthma, atopy, eczema and diabetes)
• history of overseas travel and/or sexual partner(s)
• current or previous symptomatic partner(s)
• previous investigations/management
• history of environmental factors e.g. employment, pets, chemical exposure
• lesion(s)
  – history
  – onset, location, duration and any associated pain or pruritus
  – characteristics e.g. size, appearance, distribution and whether aggravated by temperature.
• history of genital trauma/injury
• duration and timing of symptoms relative to last sexual contact
• associated symptoms e.g. headaches, fever, myalgia, arthralgia, dysuria
• previous history of orolabial lesion(s) or partner with orolabial lesion(s)
  – current or recent treatment/medication including complementary, over-the-counter treatments, cosmetics and hair removal techniques.

SIGNS / SYMPTOMS
• Lesions / rash
• Pruritus
• Pain
• Oedema
• Inguinal lymphadenopathy.

DIAGNOSIS
Possible causes include but not exclusive:
• Ulcerative conditions (i.e. genital herpes, herpes zoster virus, syphilis, donovanosis, chancroid, lymphogranuloma venereum)
• Genital warts
• Molluscum contagiosum
• Trauma
• Dermatological conditions (i.e. eczema, psoriasis, scabies, folliculitis, lichen simplex, lichen sclerosis, lichen planus or candidiasis)
• Behcet’s disease
• Crohn’s disease
• Malignancy, neoplasms (e.g. vulval intraepithelial neoplasia (VIN), penile intraepithelial neoplasia (PIN), and Bowen’s disease)²
• Fixed drug eruptions, Stevens-Johnson syndrome
• Epstein-Barr virus.

EXAMINATION
• examine non-genital skin surfaces including trunk, nails and mouth for signs of rash, lesion or abnormality (including palms of hands and soles of feet)
• palpate inguinal lymph nodes for enlargement, erythema or tenderness
• examine perianal region for skin colour, inflammation, discharge, erythema, lesions, ulcers, rashes, trauma or abnormalities
• assess lesion(s)
  – size, shape, distribution, exudate, bleeding or secondary infection
  – characteristics e.g. macules, papules, scale, plaque, fissure, erosions, ulceration and note borders of lesion(s)
  – number e.g. solitary or multiple
  – pain associated
  – prodromal symptoms.
• palpate lesion for tenderness or pain, induration, oedema, size, hardness and mobility
• examine for accompanying systemic symptoms, joint pain, fever, malaise and systemic illness.

INVESTIGATIONS
Base investigations on risk assessment, clinical findings and local clinic policy. Discuss additional STI screening as indicated.
• Lesion
  – swab for HSV PCR
  – swab for M/C/S
- press slide and GUMP for donovanosis
- treponemal PCR for syphilis
- Dark ground microscopy (if available)
- Biopsy – if lesion is chronic (>6wks), referral to a MO is required.

- Serology
  - syphilis
  - HIV.

- Discuss additional STI screening as indicated by history.

**MANAGEMENT / TREATMENT**

Conditions requiring a NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- suspected or laboratory confirmed syphilis, LGV, donovanosis, chancroid, Behcet’s disease, neoplasms or Steven-Johnson syndrome
- client is pregnant and breastfeeding
- abnormal findings of clinical significance
- uncertain diagnosis
- contraindication to treatment
- persistent symptoms after treatment
- immunosuppression, i.e. HIV positive client.
- findings outside NOs scope of practice.

For all other cases:

- refer to section four, for management and treatment of specific pathogens and conditions.
LESIONS (ORAL)

HISTORY

When taking history, be sure to ask about:

- current or recent use of medication or analgesia. Including complimentary, over-the-counter treatments, cosmetic products and hair removal techniques
- ingestion of caustic agents, recreational drugs or other substances such as alcohol
- allergies/sensitivities to drugs/environment
- history of skin and other medical conditions, especially immunosuppression
- past history of similar lesions or genital lesions
- history of overseas travel and/or sexual partner(s)
- current or previous symptomatic partner(s)
- dental care
- lesion
  - onset, location, duration and any associated pain
  - characteristics e.g. size, appearance and aggravating factors
  - duration and timing of symptoms relative to last sexual contact
  - associated symptoms e.g. headaches, fever, myalgia, arthralgia or dysuria
  - previous history of orolabial lesion(s) or partner with orolabial lesion(s).

SIGNS / SYMPTOMS

- Lesions
- White plaques
- Regional lymph enlargement or tenderness.

DIAGNOSIS

Possible causes include but not exclusive:

- Oral candidiasis
- HSV or HZV
- Oral wart
- Reiters’ syndrome
- Oral hairy leukoplakia (HIV)
- Syphilis (snail track ulcers)
- Aphthous ulcer
- Malignancy, neoplasm
- Trauma.

EXAMINATION
- palpate regional lymph nodes for enlargement or tenderness
- examine the oral cavity, buccal mucosa, palate and tonsillar crypts for colour, discharge, erythema, lesions, ulcers, rashes, trauma or abnormalities
- assess lesions:
  - size, shape, exudate, bleeding or secondary infection
  - characteristics e.g. macules, papules, scale, plaque, fissure, erosions, ulceration and note borders of lesions
  - number of lesions e.g. solitary or multiple
  - associated pain
  - prodromal symptoms
  - palpate lesion for tenderness and/or pain, induration, oedema, size, hardness and mobility.
- examine other skin surfaces e.g. genital, trunk and nails for signs of rash, lesion or abnormality (including palms/soles of hands/feet)
- Examine for accompanying systemic symptoms, associated joint pain, fever, malaise and systemic illness.

INVESTIGATIONS
Perform investigations based on risk assessment, clinical findings and local policy.
- lesion
  - swab for HSV PCR
  - swab for M/C/S
  - press slide and GUMP for donovanosis
  - swab for treponemal PCR for syphilis
  - dark ground microscopy (if available).
- serology
  - syphilis
  - HIV.
- discuss additional STI screening as indicated by history.
MANAGEMENT / TREATMENT

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- client is pregnant and breastfeeding
- abnormal findings of clinical significance
- uncertain diagnosis
- contraindication to treatment
- persistent symptoms after treatment
- immunosuppression i.e. HIV positive client
- findings outside NOs scope of practice.

For all other cases:

- refer to section four, for management and treatment of specific pathogens and conditions.
ULCERS (GENITAL)³

Ulcers are breaches in skin or mucous membranes and although they can occur anywhere in the anogenital region, not all are sexually acquired. Anogenital ulceration is a common presentation at clinics, though not as common as urethral or vaginal discharge.

HISTORY

Establish whether the anogenital ulcer is sexually acquired or caused by something else, by probing regarding recent medication, application of topical agents, overuse of soap, possible trauma and exposure to allergens. Ensure to ask the following:

- Has the client had recent sex overseas? (Possibly syphilis, chancroid or LGV)
- Has the client had sex with a partner who recently arrived from overseas? (Possibly syphilis, chancroid or LGV)
- Does the client have a same sex partner? (Genital herpes or syphilis is likely in males, while LGV is a possibility).

The nature of ulceration is also helpful for diagnosis

- Is the ulceration painful? (Possibly herpes or chancroid). If not painful, consider syphilis
- Is the ulceration recurrent? (Possibly herpes)
- Is the ulceration chronic i.e. longer than six weeks? (Possibly neoplasia, donovanosis or herpes in an immunosuppressed client)
- Are there accompanying oral ulcers? (Possibly PHI).

SIGNS / SYMPTOMS

- single or multiple, painless or painful, soft or indurated, chronic or short-lived, and recurrent or once only presentations
- can be associated with systemic symptoms
- atypical presentation may include skin splits, skin irritation or fissures.

DIAGNOSIS

Non-sexual causes

Physical

Trauma (often sexual but not always e.g. zip fasteners).

Allergic

Fixed drug eruption, Stevens-Johnson syndrome or severe reaction to local topical allergen.
Neoplastic
Squamous cell carcinoma and its predecessors, vulval intraepithelial neoplasia (VIN), penile intraepithelial neoplasia (PIN) and Bowen's disease.

Rare causes
Tropical (Cutaneous amoebiasis, cutaneous tuberculosis or leishmaniasis) and other rarities (Aphthosis including Behcet’s disease or Crohn’s disease).

Sexually acquired causes
Sexually acquired genital ulcers can be single or multiple, painless or painful, soft or indurated, chronic or short-lived, and recurrent or once only. They can be mild (so therefore easily overlooked) or severe. If ulcers are severe and painful, associated shame may be a barrier to the client seeking help. Ulcers may be accompanied by enlarged inguinal nodes which may or may not be tender.

Causes of sexually acquired genital ulcers are listed below:
- Genital herpes – herpes simplex virus (type 1 or 2)
- Syphilis – treponema pallidum
- Chancroid – haemophilus ducreyi
- Lymphogranuloma venereum (LGV) – chlamydia trachomatis serovars (L1 - L3)
- Donovanosis (granuloma inguinale) – klebsiella granulomatis
- Primary HIV infection (PHI) – painful aphthous ulcers may occur on genital mucous membrane as part of the PHI, usually accompanied by oral ulceration and systemic symptoms.

Anogenital ulcer(s) due to STIs are mostly likely herpetic, but can also be Syphilitic, and this is an important diagnosis not to overlook. In MSM ulcers can be due to lymphogranuloma venerum (LGV) or chancroid. See section 4 for further information on LGV and chancroid. Donovanosis generally occurs only in Indigenous Australians in central or northern Australia or visitors from endemic countries (especially Papua New Guinea).

EXAMINATION
Always try to examine a client presenting with anogenital ulceration. If the client is embarrassed or unwilling, postpone examination until the next visit, but ask them to self-collect swabs from the lesion for testing. When examining:
- inspect ano-genital area (i.e. skin folds and under foreskin)
- palpate the ulceration with a gloved hand to determine induration and pain (indurated indicates syphilis/neoplasia, painful indicates trauma, herpes or chancroid)
- palpate inguinal lymph nodes (painful lymphadenitis indicates herpes, chancroid or LGV. Painless lymphadenopathy indicates syphilis or neoplasia)
- inspect mouth and throat to identify any accompanying ulceration (PHI, aphthosis).
INVESTIGATIONS

Take a cotton tipped swab from the ulcerated area. If the client prefers, they can take a self-collected swab after you provide them instructions. Your local laboratory can provide appropriate transport tubes and/or media for NAAT tests or culture. Definitive diagnosis depends on appropriate laboratory tests.

- swab for herpes (preferably nucleic acid amplification test – NAAT e.g. polymerase chain reaction PCR or culture if NAAT is not available)
- swab for treponemal NAAT (usually PCR) if available. It is rare to find a laboratory that can reliably perform dark field microscopy
- syphilis serology (RPR and treponemal EIA or RPR and TPPA) – these are mandatory tests whenever there is anogenital ulceration
- HIV serology, if primary HIV infection with aphthous ulceration is suspected
- consult laboratory if you suspect chancroid, LGV or donovanosis. Multiplex PCR tests (single swab for syphilis, herpes, chancroid and sometimes donovanosis) are becoming available. Some laboratories can perform a chlamydia NAAT specific for L1-L3 serovars
- biopsy if lesion is chronic (>6 weeks)
- discuss additional STI screening as indicated by history.

Interpreting test results

Positive test results correlate with a true diagnosis (i.e. false positives are uncommon). Negative results may not eliminate a true diagnosis (especially herpes culture, also serology in very early Syphilis).

- Negative herpes test – advise client that herpes is still a possibility and ask them to return early for further testing if there is recurrence
- Negative syphilis serology and clinical suspicion – repeat in two weeks
- Positive RPR alone – confirm with TPPA or treponemal EIA (laboratory may not automatically do this. It is recommended you ask for a specific test as well as the RPR in the presence of anogenital ulceration and notes symptoms on pathology form)
- Positive treponemal EIA or RPR/TPPA – check if previously treated for syphilis – if RPR titre is low, positive serology may be explained by earlier treated infection
- Negative HIV test in the presence of symptoms consistent with PHI – repeat in 1-2 weeks.

MANAGEMENT / TREATMENT

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- suspected or laboratory confirmed syphilis, LGV, donovanosis, chancroid, Behcet’s disease, neoplasms, Steven-Johnson syndrome
• client is pregnant or breastfeeding
• abnormal findings of clinical significance
• uncertain diagnosis
• contraindication to treatment
• persistent symptoms after treatment
• immunosuppression i.e. HIV positive client
• findings outside NOs scope of practice.

For all other cases:
• Refer to section four, for management and treatment of specific pathogens and conditions.
SKIN CONDITIONS (GENITAL)\(^6\)

HISTORY

When taking history, be sure to ask about:

- recent use of analgesia, antibiotics or narcotics
- allergies/sensitivities to drugs/environment
- occupation/household and exposure to chemicals/substances
- personal and family history of skin and other medical conditions i.e. asthma, atopy, eczema and diabetes
- associated local or systemic symptoms e.g. headaches, fever, myalgia, arthralgia or dysuria
- past history of lesion(s), overseas sexual partner or symptomatic partner/household contacts
- duration and timing of symptoms relative to last sexual contact
- recent travel and/or change to living conditions
- lesions
  - onset, location, duration of lesions and any associated pain or pruritus
  - characteristics of lesion e.g. size, appearance and whether they are aggravated by temperature
  - natural history of lesion, including progression or spread over time, change in appearance and effect of any previous treatment
  - current or recent medication including complimentary, over-the-counter treatments and cosmetic products.
- client’s perception and concerns about their condition
  - aggravating factors e.g. temperature, perfumed products, sexual intercourse or tampons
  - triggers that the client feels affect the lesions e.g. occupation, sport, soaps, douches, underwear, alcohol, tobacco and other recreational drug use, lubricants and condoms.

SIGNS / SYMPTOMS

Includes anogenital region i.e. vulval and perianal lesion, itch or discomfort.

- Rash, skin irritation, redness, inflammation or pain
- Lesions i.e. pustules or vesicles
- Pruritus.
DIAGNOSIS
Possible causes include but not exclusive:
- normal variation
- contact irritation caused by hygiene practices, lubricants or topical application of products
- rashes/lesions caused by STI such as herpes simplex virus, gonorrhoea, Reiter's syndrome, syphilis, trichomoniasis or scabies
- candidal and bacterial infections
- systemic causes such as fixed drug eruption/allergic reaction
- other genital dermatological conditions i.e. impetigo, lichen sclerosis, fixed drug eruption, lichen planus, vitiligo, psoriasis, contact dermatitis, eczema, epidermal cysts, erythrasma, ulcerating conditions, vitiligo or eczema pemphigus
- premalignant conditions – erythroplasia of queyrat, plasma cell balanitis, Bowen's disease, Bowenoid papulosis (penile intraepithelial neoplasia – PIN).

EXAMINATION
- palpate inguinal lymph nodes for enlargement/tenderness
- examine perianal region for inflammation, discharge, erythema, lesions, ulcers, lesions, trauma or abnormalities
- assess lesion(s) i.e. note size, shape, colour erosion, induration, ulceration or secondary infection
- characteristics of lesion(s) i.e. macules, papules, scale, plaque, fissure, erosions, ulcers and note borders of lesions
- palpate lesion(s) for tenderness, induration, changes in skin temperature or oedema
- examine non genital skin and mucosal surfaces i.e. trunk, extensor and flexural surfaces, nails, scalp and mouth.

INVESTIGATIONS
Base investigations on risk assessment, clinical findings and local policy.
- lesion
  - swab for HSV PCR (if indicated)
  - swab for M/C/S (if indicated)
  - measure lesions
  - skin scraping (if indicated)
  - press slide and GUMP for donovanosis (if indicated)
- dark ground microscopy (if available)
- treponemal PCR for syphilis (if indicated).

• serology
  - syphilis
  - HIV.

• Discuss additional STI screening as indicated.

**MANAGEMENT / TREATMENT**

Conditions requiring NO to refer to or at a minimum consult with an MO or NP (if appropriate/available):

• Client is pregnant and breastfeeding
• abnormal findings of clinical significance
• suspicious or abnormal lesions
• uncertain diagnosis
• contraindication to treatment
• persistent symptoms after treatment
• immunosuppression i.e. HIV positive client
• findings outside NOs scope of practice.

For all other cases:

• Refer to section four, for management and treatment of specific pathogens and conditions.
SEXUAL FUNCTION

The three major forms of male sexual dysfunction are erectile dysfunction, ejaculatory dysfunction and decreased libido. Premature ejaculation generally has no underlying physical abnormality. Erectile dysfunction is a common problem in men over the age of 40 due to hormonal abnormalities, medications, psychological problems, neurologic disease, or vascular insufficiency and can be an indicator cardiovascular disease or diabetes. Management of men with erectile dysfunction aims to restore two vital sexual functions: the capacity to acquire and sustain penile erections; and the reactivation of libido. Priority must be given to excluding any underlying medical conditions.

Female sexual dysfunction often involves several different aetiologies contributing to the problem. Management must be tailored to the sexual issue and take into account underlying physical and psychological, including relationship, factors. Conditions that may alter sexual function (eg, depression, sexual issues related to medication or substance abuse) should also be considered.

HISTORY

Elicit the following history as appropriate:

**Medical/surgical history**
- Medications - prescription and others
- Lifestyle: such as alcohol and other recreational drug use, smoking, exercise, sleep patterns
- Chronic medical illness
  - Diabetes
  - Ischaemic heart disease – angina, MI, CVA
  - Hypertension
  - Cholesterol, last time checked and known problem
  - Renal or hepatic dysfunction
  - Neurological disorders.
- Previous surgery, radiotherapy, pelvic/perineal trauma

**Family / psychosocial**
- Mood, depression, anxiety, lifestyle stress and fatigue
- Altered self-esteem or coping skills
- History of sexual abuse
- Libido
- Social or relationship issues/difficulties
• Impact on partner and relationship.
• Social, cultural, religious impacts, conflicts, restrictions

**Sexual**

• Duration nature of problem
• Determine sudden or gradual onset, duration and progression
• Determine whether the problem is situational or global, i.e. are all sexual encounters affected?
• Whether it occurs with all partner(s) in all settings?
• Whether the male gets an erection but loses it during intercourse
• Presence, absence or alteration to strength of spontaneous morning/nocturnal and self stimulatory/masturbatory erection
• Does the problem concern arousal, libido, ejaculation, orgasm, genital pain or painful intercourse (deep or superficial)
• Sexual partners (enquire whether male or female)
• Satisfaction with sex life
• Partner(s) sexual function and satisfaction with sex life.
• Understanding of arousal physiology and anatomy.

**INVESTIGATIONS**

Client symptoms and examination findings should guide laboratory testing. No specific tests are recommended for clients with sexual dysfunction. Offer STI screening as indicated by history and examination.

• Both
  – blood pressure
  – urinalysis
  – serology
    • discuss with MO prior to venipuncture
    • FBC, E/LFTs, TFT
    • fasting lipids profile
    • fasting glucose or glycosylated haemoglobin (HbA₁C).
  – Discuss additional STI screening as indicated.

• Male
  – total testosterone
  – PSA (prior to referral to MO for prostate examination – if indicated)
- LH, FSH levels
- serum prolactin.

- Female
  - baseline testosterone levels (free and total)
  - LH, FSH, prolactin
  - progesterone.

**MANAGEMENT / TREATMENT**

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- client is pregnant or breastfeeding
- organic basis for sexual difficulty suspected
- consider referring to a psychologist/counsellor if there are actual or potential mental health issues
- abnormal findings of clinical significance
- immunosuppression i.e. HIV positive client
- findings outside NOs scope of practice.

For all other cases:
- manage as per history and clinical indicators.
SCROTAL PAIN AND SWELLING

HISTORY

When taking history, be sure to ask about:

- onset, location, radiation and duration of pain (intrascrotal or extrascrotal)
- severity of pain and whether client has received treatment
- characteristics of pain e.g. acute, chronic or intermittent
- associated symptoms e.g. swollen testicles, nausea, vomiting, fever or recent unexplained urethral discharge/bleeding
- previous investigations or management
- previous testicular surgery e.g. vasectomy or inguinal hernia
- recent illness e.g. mumps
- recent use of analgesia, narcotics or antibiotics
- history of recent trauma/injury
- history of testicular mass or lump
- duration and timing of symptoms relative to last sexual contact.

SIGNS / SYMPTOMS

- Asymptomatic
- Testicular discomfort, pain and/or tenderness (usually unilateral with Epididymo-orchitis)
- Urethritis or recent history of dysuria and/or urethral discharge
- Erythema and/or oedema of scrotum (usually unilateral)
- Enlarged tender epididymis on affected testicle
- Pain in inguinal region or abdominal flank on affected side
- +/− fever and/or malaise
- Testicular or scrotal mass
- Risk of STI.
DIAGNOSIS

Acute
Requires immediate referral to a MO or emergency department.
Possible causes:

- Testicular torsion
- Epididymitis
- Acute orchitis
- Testicular mass
- Secondary complication of urethritis
- Severe injury/trauma to testes or scrotum
- Malignancy
- Henoch-Schönlein purpura (vasculitis syndrome).

Non-acute
Requires referral or consultation with a MO when appointment is available.
Possible causes:

- Hydrocele
- Varicocele
- Spermatocele
- Epididymal cysts
- Inguinal hernia (not incarcerated)
- Testicular tuberculosis
- Skin lesions e.g. epidermal cysts.

EXAMINATION

- palpate inguinal lymph nodes for enlargement/tenderness
- examine perianal region for colour, discharge, erythema, lesions, ulcers, rashes, excoriation, trauma or abnormalities
- examine glans penis and penile shaft for dermatoses, lesions, ulcers or abnormalities
- if uncircumcised, retract foreskin and examine glans for inflammation, lesions, ulcers or abnormalities
- examine urethral meatus for discharge, inflammation, erythema, lesions, ulcers or abnormalities
- examine scrotal skin for erythema, oedema, rash, nodules or lesions
- examine scrotal sac for size, asymmetry (lying and standing may be indicated)
- palpate non tender testis first
- palpate testes (including epididymis and spermatic cord) for tenderness, lumps, changes in skin temperature and other abnormalities, noting size, shape, consistency, change in position and presence of associated pain
- instruct client on principles of testicular self awareness and examination (TSE). Advise them to seek medical consultation if a lump, pain or other change is detected in the testis.11-12

Note: With Epididymo-orchitis a normal testis is usually palpable in the early stages with a separate enlarged, indurated and tender epididymis. After a few days, differentiation of the testis and epididymous becomes more difficult, the whole mass feeling enlarged, tender and knobbly. Sometimes there is a reactive hydrocoele surrounding the infective process.14

Testicular self awareness

Monthly self-examination of testes is recommended to check for lumps or swelling. While there is no clear evidence that regular TSE reduces deaths from testicular cancer11 it is prudent to advise young men who are in a high-risk group to regularly check for lumps or swelling on the surface of the testicles. Those in the high-risk group include men with a personal history of undescended testicles, a family history of testicular cancer (father or brother) or with any other risk factors.

INVESTIGATIONS

Base investigations on risk assessment, clinical findings and local policy. Discuss additional STI screening as indicated.
- temperature and pulse
- urethral
  - first catch urine for chlamydia and gonorrhoea PCR
  - gram stain of urethral discharge (If indicated)
  - swab of urethral discharge for gonorrhoea M/C/S (if indicated)
  - swab of urethral discharge for enteric pathogens C/S.
- mid stream urine for M/C/S (if indicated)
- Discuss additional STI screening as indicated.

Other possible investigations
- Doppler ultrasound scan (MO or NP required) to differentiate between torsion and tumour.

Note: When a male aged under 35 years presents with acute onset testicular pain and tenderness, testicular torsion and testicular tumour must be excluded. If torsion is suspected, urgently request a Doppler ultrasound (within six hours of onset) and surgical opinion.
MANAGEMENT / TREATMENT

Conditions requiring NO to **immediately** refer MO or NP:

- acute scrotal pain or rapid onset of scrotal swelling
- suspected testicular torsion
- acute orchitis.

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- refer all suspected cases of epididymo-orchitis to a MO
- chronic scrotal pain or symptoms that are recurrent and/or persistent
- persistent symptoms after treatment
- abnormal findings of clinical significance
- uncertain diagnosis
- contraindication to treatment
- immunosuppression i.e. HIV positive.
- findings outside NOs scope of practice.

If non-Acute and a MO is not available for immediate consultation:

- refer to section four, for treatment of epididymo-orchitis
- make follow-up appointment with a MO.

For all other cases:

- refer to section four, for management and treatment of specific pathogens and conditions.
FEMALES

Vaginal symptoms are common and often distressing. Vulval symptoms often coexist with vaginal symptoms and need specific attention. The clinical scenarios range from mild and localised to associated pelvic inflammatory disease.

The most common causes which include candidiasis, bacterial vaginosis (BV) and urinary tract infections are not necessarily STIs, but STIs can co-exist. Identification of groups at increased risk of STIs guides testing. Emerging evidence suggests that BV is sexually transmitted or at least associated with sexual activity between women and may indicate risk of other STIs. Symptomatic physiological discharge is common and is a diagnosis of exclusion. Pre-ovulatory fertile cervical mucus can be experienced as abnormal discharge.

HISTORY

When taking history, be sure to ask the following:

- Describe vulval or vaginal symptoms, chronicity and associated features.
  - Type
  - Colour
  - Amount
  - Blood stained or abnormal bleeding
  - Odour.

SIGNS / SYMPTOMS

<table>
<thead>
<tr>
<th>Signs/ symptoms</th>
<th>Differential diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• response to soaps, secretions, sweat and topical applications.</td>
<td>allergy</td>
</tr>
<tr>
<td>• moderate to severe local vulval/ vaginal itch which often worsens the week before a menstrual period</td>
<td>candidiasis</td>
</tr>
<tr>
<td>• whitish, moderate to thick vaginal discharge which is odourless or smells yeasty</td>
<td></td>
</tr>
<tr>
<td>• red confluent rash usually in the creases (groin, natal cleft) with spots on the edge of rash ‘satellite lesions’</td>
<td></td>
</tr>
<tr>
<td>• candidiasis can be precipitated by medication (the oral contraceptive pill or antibiotics), applications (creams and soaps) or a new sexual partner</td>
<td></td>
</tr>
<tr>
<td>• it is rarely necessary to treat a male partner unless he has symptoms such as a spotty rash under the foreskin/head of penis and/or persistent itch.</td>
<td></td>
</tr>
</tbody>
</table>
Discharge
Discharge is very common and often there is a combination of itch, discharge, odour and pain. It is usually of vaginal origin (BV, candidiasis and trichomoniasis in some settings), though less commonly it can be cervical (chlamydia, gonorrhoea) or rarely herpetic infection (mucopurulent cervicitis). Exclude foreign body.

Candida
Infection with candida albicans classically has a ‘cottage cheese’ discharge and vulvovaginal erythema and sometimes fissuring. Immunosuppression, diabetes and antibiotics are risk factors for recurrent candidiasis in a minority of cases.

Bacterial Vaginosis
Bacterial vaginosis presents as a homogenous grey-white discharge with a pH >4.5.

Trichomonas
Infection with trichomonas vaginalis is inflammatory with a frothy yellow-green discharge and pH >4.5 (can be tested at time of examination using pH litmus paper – also used in diagnosis of BV). There may be the appearance of a ‘strawberry cervix’ associated with this inflammation.

Mucopurulent cervicitis
Can produce vaginal discharge which is usually caused by chlamydia and gonorrhoea.

Purulent or blood stained discharge
Rarely, purulent or blood stained discharge is due to desquamative inflammatory vaginitis or erosive lichen planus. These are rare conditions often associated with vulval burning and vaginal petechiae. Specialist advice is recommended as treatment is often difficult and protracted.

Malignancy of the cervix
Malignancy of the cervix may produce blood stained discharge or postcoital bleeding. Exclude pregnancy in cases of abnormal vaginal bleeding.

Odour
Mostly occurs due to bacterial vaginosis (BV) but can also be caused by a retained foreign object. BV is an overgrowth of various endogenous bacteria including gardnerella vaginalis and mobiluncus species. Presence of blood or semen can make the odour worse as pH rises. Treatment may predispose the client to candidiasis.

Itch and burn
Vaginal or vulval itch and/or burning can occur with acute candidiasis, trichomoniasis or any dermatitis. Severe candidiasis can be erosive. Vulval lichen sclerosis is associated with anatomical abnormalities and scarring. Early disease is very subtle. There is a 3 – 5% malignancy risk.
BV alone is not inflammatory but excessive discharge may cause vulval irritation (sanitary pads can be a potential irritant). HSV lesions may itch locally. Warts associated with dry skin can also itch, while pubic lice and scabies are intensely itchy. Examine carefully, check partner symptoms and test for STI.

**Pain**

Vulvovaginal pain is not uncommon, and is usually pain on penetration (sexual or use of tampons) with a burning sensation afterwards which can persist from minutes through to days. If pain is associated with an infective cause, exclude PID.

Generalised unprovoked pain or discomfort can occur from a group of causes. Neuropathic pain is a cause.

These are diagnoses of exclusion and you should exclude subtle candidiasis, dermatitis and HSV lesions. The skin and its structures may appear normal. In localised pain, there is no intense pain on cotton tip pressure around the introitus but there is often an altered sensation (prickly, scratchy, itchy or sharp) in generalised pain.

Multidisciplinary specialist advice (including pelvic floor physiotherapists and sexual counsellors) is recommended.

**DIAGNOSIS**

**Most common**

- Candidiasis (75% of women will have at least one episode, while it’s recurrent in about 5%)
- BV (occasionally coexists with candidiasis and may be a risk factor for STI)
- Herpes simplex virus type 1 and 2 vulvovaginal infection (most recurrences are type 2)
- Urinary tract infection
- Warts.

Vulval dermatitis, eczema and irritants are often associated with candidiasis.

Trauma, secondary to scratching (including sexual friction), is associated with infection and dermatitis.

**Common**

Asymptomatic chlamydia is common. Females most at risk are:

- aged under 30
- have history of chlamydia
- had a partner change in the past 1–3 months
- had recent lower abdominal pain and intermenstrual or post coital bleeding.
Uncommon

- Gonorrhoea and trichomoniasis (consider risks and clinical setting). Gonorrhoea is more prevalent in partners of bisexual males. Gonorrhoea and trichomoniasis are more frequent in females who have had unprotected sex overseas and Indigenous females
- *Mycoplasma genitalium* infection of the endocervix or urethra
- Vulval pain syndrome which can be localised introital or generalised
- Vulval lichen sclerosis is often misdiagnosed as candidiasis
- Public lice and scabies
- Retained foreign body (i.e. tampon, sponge or condom).

Rare

- Malignancies of the cervix or vulva
- Aphthous ulceration (exclude HSV)
- Erosive dermatitis that includes the vagina (purulent discharge, can be blood stained).

Not to be missed

- Pregnancy and associated complications
- Pelvic inflammatory disease
- Retained foreign body
- Malignancy.

EXAMINATION

Carefully examine the vulva and introitus using a good light source. Look for rashes, atypical skin lesions, fissures, ulcers, signs of scratching and discharge (note the characteristics and whether there is any odour).

Gently apply a cotton tip at various sites around the introitus to elicit evidence of any localised or generalised pain.

Note any signs of systemic involvement (raised pulse or temperature) and always palpate the lower abdomen to assess for pelvic tenderness.

Speculum examination is recommended. If the client declines, there is other testing that can still be performed. Exclude foreign body, sample lateral vaginal wall and vaginal fluid. Always attempt a bimanual examination for cervical motion tenderness, uterine size and tenderness and adnexal tenderness or mass.

pH testing of vaginal (not cervical) discharge provides valuable information e.g. BV pH > 4.5

Clinical signs alone often have poor diagnostic value so tests are always recommended.
INVESTIGATIONS

Take a dry swab for HSV PCR and a swab for Candida from any lesion(s), whether inflamed, scaly, fissured, split skin or ulcerated. Roll swab onto slide, air-dry then send for microscopy and place in Stuart’s or Amies transport medium for culture.

Specimens for microscopy can be obtained from the vulva, vaginal lateral wall (roll dry swab down lateral wall of vagina starting in the posterior fornix) and endocervical canal. Roll swab onto slide, air-dry and send for microscopy. Place swabs into Stuart's or Amies transport medium for culture for N. gonorrhoea and T. vaginalis. Charcoal transport medium is best for gonorrhoea but is only critical if there are long delays in transport to the laboratory. A dry swab is taken from the endocervix for PCR Chlamydia and gonorrhoea. If speculum examination is refused or too painful, blind vaginal swabs may be collected by clinicians or client may do self-collected low vaginal swabs. If the client declines high vaginal swabs, first void urine for PCR for chlamydia and gonorrhoea gives sensitivity and specificity. Microscopy is reasonably sensitive for candidiasis and BV using blind swabs and these allow pH testing as well.

Wet prep is another useful test in some situations. Use a cotton swab to take a sample from the vaginal lateral wall and place it onto a slide in a drop of normal saline, then cover with a cover slip and transport it to a laboratory quickly. These specimens are useful for screening for candida and trichomonas.

Stuart's, Amie's or charcoal transport media should be kept at room temperature if there is any delay in transport to the laboratory. First void urine specimens that have been held <1hr (no vulval or perineal cleansing) ideally should be kept at <4ºc or frozen. Storing them at room temperature for >24 hours or the presence of blood will reduce sensitivity.

MSU for M/C/S and urine pregnancy test should be taken as indicated. Take a pap smear if due or if there has been recent abnormal bleeding (consider thin prep if there is significant discharge). A pap smear is a screening test only, so abnormal cervical bleeding requires specific tests (i.e. colposcopy) if no other cause is diagnosed.

Interpreting results

Microscopy is sufficient to diagnose candidiasis and BV and identify motile trichomonads in the wet prep if examined promptly. Laboratories perform routine vaginal cultures but delay in transport will limit the sensitivity of T. vaginalis culture. Not all laboratories perform trichomonas vaginalis culture but some do a PCR test.

Candida observed only on culture may represent the commensal state (point prevalence in up to 20% of women). Many colonies are needed for it to be visible on microscopy and the pseudohyphae represent a more active form. Candidiasis is often atypical. Microscopy will show pseudohyphae which are the most common form of the symptomatic candida albicans species. Non-albicans species (C. glabrata and C. krusei) are seen only in the budding form and occasionally cause symptoms. They are typically less responsive to standard treatments. Laboratories should test culture and speciate yeast varieties if budding yeasts are seen and symptoms persist after standard treatments. It is possible to obtain antifungal sensitivity testing for unresponsive cases.
PCR is a nucleic acid amplification test (NAAT) which is used to detect Chlamydia, gonorrhoea and trichomonas (in certain settings). Culture is preferred for gonorrhoea for specificity and antibiotic sensitivity testing. If PCR is used for gonorrhoea testing, laboratories usually perform a supplementary NAAT to confirm gonorrhoea (occasionally non-pathogenic species of Neisseria cause false positives).

When BV is present, microscopy shows clue cells (gram variable endogenous coccobacilli that are densely adherent to epithelial cells) with a varying loss of lactobacilli and a characteristic absence of polymorphs.
CERVICITIS

HISTORY

When taking history, be sure to ask about:

- increase and/or change in vaginal discharge
- pain during penetrative intercourse
- lower abdominal pain
- intermenstrual or postcoital bleeding
- recent use of vaginal preparations
- history of STIs and treatment
- recent change of sexual partner or symptomatic partner.

SIGNS / SYMPTOMS

Symptoms of cervicitis do not always accompany cervical infection. Normal appearance of the cervix on examination does not exclude infection and/or abnormality.1,10

- Mucopurulent cervical discharge
- Abnormal vaginal discharge
- Oedematous, inflamed and friable ectocervix with contact bleeding
- Intermenstrual or postcoital bleeding
- Sustained cervical bleeding following gentle contact/swabbing.10, 13

DIAGNOSIS

Possible causes:

- Chlamydia
- Gonorrhoea
- Mycoplasma genitalium
- Trichomonas vaginalis
- Herpes simplex virus (HSV)
- Bacterial infection
- Retained foreign object e.g. tampon
- Trauma
- Radiation therapy
- Malignancy
- Recent cervical surgery.
EXAMINATION

- palpate inguinal lymph nodes for enlargement/tenderness
- examine vulva and perianal region for erythema, lesions, ulcers, rashes or abnormalities
- perform speculum examination
  - examine vagina for inflammation, discharge, lesions or abnormalities
  - assess cervix for inflammation, oedema, discharge, bleeding or abnormalities.
- may need to perform bimanual examination
  - assess cervix for cervical excitation
  - assess uterus for size, position and tenderness (if pregnancy test negative)
  - assess adnexae for tenderness and masses (if pregnancy test negative).

INVESTIGATIONS

Vaginal

- high vaginal swab for M/C/S
- swab for trichomonas PCR (if indicated)
- gram stain and wet prep (onsite if available)
- pH and whiff test.

Endocervical

- swab for chlamydia PCR
- swab for gonorrhoea M/C/S or PCR
- swab for trichomonas PCR (If indicated and where available for remote communities)
- HSV PCR endo/ecto swab (if indicated)
- pap smear +/- thin prep +/- HPV DNA (if indicated).

Discuss additional STI screening as indicated.

MANAGEMENT / TREATMENT

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- client is pregnant and breastfeeding
- abnormal findings of clinical significance
- uncertain diagnosis
- contraindication to treatment
• persistent symptoms after treatment
• immunosuppression i.e. HIV positive client
• findings outside NOs scope of practice.

For all other cases
Consider syndromic management/empirical treatment for gonorrhoea and chlamydia if:
• high prevalence of chlamydia and gonorrhoea in the community
• signs of cervicitis or PID
• HIV positive client
• concerned client may not return for treatment and follow-up.

Consideration
• syndromic treatment of HIV positive clients with cervicitis is recommended to reduce risk of cervical HIV shedding and HIV transmission13.
PELVIC PAIN (FEMALES)

Pelvic pain in females is a common presentation. It may be acute or chronic and gynaecological or non-gynaecological. Pelvic pain can have many causes, therefore use a systematic approach to diagnose and manage the problem.

HISTORY

When taking history, be sure to ask about:

- last menstrual period (LMP)
- sexual activity including recent change of sexual partner and previous STIs
- contraceptive usage including recent insertion of intrauterine systems (IUCS)
- recent surgical instrumentation e.g. termination of pregnancy (TOP) and/or delivery
- urinary symptoms
- medication
- drug allergies
- onset, location, radiation and duration of pain
- severity of pain and whether any treatment has been received
- characteristics of pain e.g. acute, chronic or intermittent
- associated symptoms e.g. nausea, vomiting, anorexia, diarrhoea, bleeding or haematuria
- previous investigations/management
- recent use of analgesia, narcotics and antibiotics
- time of last bowel movement.

SIGNS / SYMPTOMS

- Fever
- Nausea or vomiting
- Pain (abdominal, pelvic, bowel or bladder)
- Abnormal vaginal bleeding, irregular menstrual cycles
- Abnormal discharge (urethral, vaginal or rectal)
- STI
- Pregnancy
- Urinary symptoms (e.g. dysuria, frequency)
- Evidence of intrauterine or other gynaecological instrumentation e.g. intrauterine contraceptive device (IUCD) insertion.
DIAGNOSIS

Acute
Requires immediate referral or at minimum consultation with a MO.
- Ectopic pregnancy
- Threatened miscarriage
- Peri-anal abscess
- Tubo-ovarian abscess
- Pelvic inflammatory disease (PID)
- Ovarian torsion/cysts and neoplasm
- Acute appendicitis
- Pyelonephritis, bowel obstruction and renal/ureter calculi
- Complications of recent surgical intervention i.e. TOP or delivery.

Non-acute
Requires consultation and review by a MO.
- Mid-cycle abdominal pain (mittelschmerz)
- Endometriosis
- Dysmenorrhoea (primary and secondary)
- Irritable bowel syndrome
- Urinary tract infection/cystitis
- Pelvic and intra-abdominal adhesions
- Constipation
- Gastroenteritis/colitis
- Musculoskeletal referred pain
- Uterine fibroids and adenomyosis (rare)
- Drug withdrawal symptoms.

EXAMINATION
- temperature, pulse and blood pressure (BP) - including supine and standing BP. Look for evidence of narrow pulse pressure
- palpate abdomen for tenderness and location of pain
- palpate inguinal lymph nodes for enlargement/tenderness
- examine vulva and perianal region for erythema, lesions, ulcers, rashes or abnormalities
• speculum examination
  – examine vagina for inflammation, discharge, bleeding, lesions or abnormalities
  – assess cervix for inflammation, oedema, discharge, bleeding or abnormalities.
• perform bimanual examination (if not pregnant)
  – assess cervix for cervical excitation
  – assess uterus for size, position and tenderness
  – assess adnexae for tenderness and masses.

INVESTIGATIONS
• urinalysis
• bHCG urine pregnancy test for all women aged 12 - 50 years
• vaginal
  – high vaginal swab for M/C/S
  – pH and whiff test
  – gram stain, wet prep (onsite if available or self-collected if the client prefers)
  – swab for trichomonas PCR.
• endocervical
  – swab for chlamydia PCR
  – swab for gonorrhoea M/C/S.
• urethral
  – first catch urine for chlamydia and gonorrhoea PCR
  – first catch urine for trichomonas PCR
  – midstream urine (if indicated)
  – urinalysis.
• other (for medical officers or with consultation)²
  – FBE, CRP
  – Pelvic ultrasound
  – If bHCG positive:
    → blood group and antibody screen.
• Discuss additional STI screening as indicated.
MANAGEMENT / TREATMENT

Conditions requiring NO to **immediately** refer to or at minimum consult with a MO or NP (if appropriate/available):

- acute abdominal pain
- ectopic pregnancy
- threatened miscarriage
- peri-anal abscess
- tubo-ovarian abscess
- pelvic inflammatory disease (PID)
- ovarian torsion/cysts and neoplasm
- acute appendicitis
- pyelonephritis, bowel obstruction or renal/ureter calculi
- complications of recent surgical intervention i.e. TOP, delivery.

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

- suspected or confirmed diagnosis of PID
- persistent pain and/or symptoms following treatment
- positive pregnancy test associated with non-acute pain
- inability to tolerate out-patient treatment
- abnormal findings of clinical significance
- immunosuppression e.g. HIV positive client
- recent instrumentation e.g. intrauterine device/system in situ or TOP
- complicated infection e.g. symptoms of Fitz-Hugh-Curtis syndrome
- findings outside NOs usual scope of practice.

If non-acute and a MO is not available for immediate consultation:

- refer the client directly to hospital or make follow-up appointment with a MO (depending on local policy).

For all other cases:

- refer to section four, for management and treatment of specific pathogens and conditions.
VAGINAL BLEEDING\textsuperscript{14-18}

The aetiology of abnormal vaginal bleeding depends on:

- reproductive age (e.g. premenarchal, post menarche, pre/peri menopausal, menopausal)
- bleeding pattern (e.g. heavy, light, prolonged, cyclic or non-cyclic)
- occurrence of associated symptoms (e.g. pain and/or fever) and medical conditions\textsuperscript{18}

HISTORY

- last menstrual period (LMP)
- sexual activity - including recent change of sexual partner or symptomatic partner
- previous STIs, treatment and compliance
- contraceptive use - including:
  - type and length of use
  - presence/recent insertion of intrauterine device
  - compliance (to assess pregnancy risk)
  - change in normal bleeding pattern.
- use of other medications, particularly hormonal (HRT).

Specific questions to determine bleeding pattern:

- normal menstrual cycle and bleeding pattern
- history of changes to bleeding pattern in last six months
- history of intermenstrual, post coital or abnormal vaginal bleeding
- amount and duration of vaginal bleeding and if associated with pain
- compliance with prescribed hormonal contraception/medication
- other medication which may interfere with hormonal preparations
- previous investigations or management
- previous abnormal pap smears
- history of sexual assault or local trauma
- history of dyspareunia
- history of recent pregnancy e.g. termination of pregnancy, miscarriage or post partum
- history of gynaecological surgery
- abnormal vaginal discharge
- use of tampons, condoms or sponges which may be retained.

Note: Encourage the client to record all vaginal bleeding over a 2-3 month period if there is any doubt as to the ‘normality’ of their bleeding pattern.
**SIGNS / SYMPTOMS**

- Cervicitis with contact bleeding
- Intermenstrual or postcoital bleeding
- Lower abdominal pain
- Adnexal tenderness or cervical motion tenderness (CMT)
- Deep dyspareunia
- Abnormal vaginal discharge
- Lesions
- Presence of cervical polyps or other abnormalities.

**DIAGNOSIS**

- Hormonal abnormalities
- Drug related
  - side-effects of hormonal contraception/HRT treatments
  - other drugs such as anticoagulants, tamoxifen, corticosteroids, chemotherapy or antibiotics (Stevens-Johnson syndrome).^{19}
- PID
- Cervicitis
- Cervical abnormality e.g. benign growths, polyps or malignancy
- Uterine abnormality e.g. benign growths, submucous fibroids, polyps, malignancy or infections
- Vulval or vaginal abnormalities
- Ovarian abnormalities
- Pregnancy implantation bleed
- Pregnancy complications e.g. miscarriage or ectopic pregnancy
- Recent TOP/TOP complication e.g. infection or retained product of conception
- Sexual assault
- Trauma
- Foreign body

Abnormal vaginal bleeding is often attributed to a uterine source but may also result from other anatomical sites in the lower genital tract (vulva, vagina or cervix) or upper genital tract (uterine corpus, fallopian tubes or ovaries). The source of bleeding may also be a non-gynaecologic organ such as the urethra, bladder, bowel or other systemic diseases/conditions.^{19}
Vaginal bleeding is common in genital malignancy e.g. cervix or uterus. However genital malignancy is an uncommon cause of the presentation of vaginal bleeding.\textsuperscript{18, 20} It is important that any unexplained vaginal bleeding is referred for further investigation.

**EXAMINATION**

If there is moderate to heavy bleeding or positive bHCG, refer to MO immediately, prior to internal examination.

If bleeding minimal, spotting or intermittent only:

- palpate abdomen for size, tenderness and possible masses
- palpate inguinal lymph nodes for enlargement or tenderness
- examine vulva and perianal region for erythema, lesions, ulcers, rashes or abnormalities
- perform speculum examination
- examine vagina for inflammation, discharge, lesions or other abnormalities
- assess amount, colour and odour of bleeding and/or discharge
- assess cervix for inflammation, oedema, discharge, bleeding or abnormalities
- assess size and shape of cervical os i.e. open or closed
- determine origin of bleeding (if possible)
- assess presence of contact bleeding
- assess presence of cervical polyps, ectropion or other abnormalities
- perform bimanual examination (if pregnancy test negative)
  - assess cervix for cervical excitation
  - assess uterus for size, position and tenderness
  - assess adnexae for tenderness and masses.

**INVESTIGATIONS**

If there is spotting, minimal or intermittent bleeding:

- bHCG urine
- vaginal
  - high vaginal swab for M/C/S
  - gram stain and wet prep (onsite if available)
  - swab for trichomonas PCR.
- endocervical
  - swab for chlamydia PCR
- swab for gonorrhoea M/C/S
- swab for HSV endo/ecto PCR (if indicated)
  → pap smear and thin prep if indicated (repeat if >3 months since last pap smear).

• provide client with a menstrual chart to record bleeding pattern for two months (if indicated) and arrange for MO follow-up
• pelvic ultrasound (US)
• discuss additional STI screening as indicated by history.

**MANAGEMENT / TREATMENT**

Conditions requiring NO to **immediately** refer to a MO or NP (if appropriate/available):

- moderate to heavy vaginal bleeding
- suspicion of ectopic pregnancy
- client is pregnant or breast feeding
- abnormal findings of clinical significance i.e. abnormal appearance of cervix, polyps or other lesions within vagina, cervix or vulva, marked tenderness or heavy contact bleeding
- uncertain diagnosis
- immunosuppression i.e. HIV positive client
- outside NOs scope of practice.

Conditions requiring NO to non-urgently refer to or at minimum consult with a MO or NP (if appropriate/available):

- intermenstrual bleeding (IMB)
- postcoital bleeding (PCB). All women who have this should be referred for colposcopy
- post menopausal bleeding (PMB)
- unexplained breakthrough bleeding for women on hormonal therapy such as COC, POP, DMPA, Implanon, Mirena and HRT
- unexplained anogenital bleeding.

Although vaginal bleeding including IMB and PCB can commonly occur in women using hormonal contraception or therapies, any IMB, PCB, PMB, unexplained breakthrough or abnormal bleeding should be referred for MO review.

For all other cases:

- refer to section four, for management and treatment of specific pathogens and conditions.
**VAGINAL DISCHARGE**

Vaginal discharge is a normal physiological process which changes in response to hormonal influences, activity levels (including sexual activity), pregnancy and contraception.\(^2\) Cervical conditions can also cause a change in vaginal discharge. Changes in vaginal discharge are not necessarily pathological and could be due to normal physiological responses.

**HISTORY\(^{13,21,22,23}\)**

When taking a comprehensive history (sexual, gynaecological, menstrual, medical and surgical), be sure to ask about:

- last menstrual period (LMP) to determine any relationship to menstrual cycle
- sexual activity including recent change of sexual partner, symptomatic partner and previous STIs, including treatment and compliance
- contraceptive use including:
  - type and length of use
  - presence of or recent insertion of intrauterine device
  - termination of pregnancy (TOP).
- urinary symptoms
- characteristics of discharge e.g. amount, colour, odour or blood staining
- other associated symptoms e.g. dysuria, vulval irritation/burning/pain, dyspareunia, bleeding or skin lesions/rash
- previous vaginal or cervical infections, diagnosis and treatment
- current treatments and concomitant medications i.e. contraception, hormone replacement therapy, antibiotics or over the counter preparations including herbal treatments
- use of vaginal sprays/soaps or douching
- use of tampons, sponges, diaphragms or condoms
- clothing i.e. synthetic underwear, swimwear or layers of tight clothing.

Note: The client may have limited knowledge about what constitutes ‘normal’ vaginal discharge. For example, around ovulation and with pregnancy the quantity of cervical secretions increases approximately 10-fold and changes colour and consistency.

**SIGNS / SYMPTOMS**

Self-diagnosis and diagnosis based on clinical presentation are not considered as reliable without laboratory or histological confirmation of a specific disorder.\(^2\) Therefore, it is important to remember that diagnosis and management based on presentation and assessment of vaginal discharge may result in misdiagnosis and inappropriate therapy due to inconsistency and poor reliability of indicators.
Use the following table as a guide only. Symptoms highlighted in **bold** below, indicate an increase in likelihood of diagnosis if present.

**Comparison of indicators**

<table>
<thead>
<tr>
<th></th>
<th>Candidiasis</th>
<th>Trichomoniasis (TV)</th>
<th>Bacterial Vaginosis (BV)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PH</strong></td>
<td>4 – 4.5</td>
<td>5 – 6</td>
<td>5 – 6</td>
</tr>
<tr>
<td>Gram stain / Wet prep</td>
<td><strong>Psuedohyphae</strong> Yeasts (wet prep with KOH if available)</td>
<td><strong>Flagellated Protozoa</strong> (only detected with wet prep)</td>
<td><strong>Scant/absent Lactobacilli</strong> (clue cells)</td>
</tr>
<tr>
<td>Irritation</td>
<td>Yes</td>
<td>Yes/no</td>
<td>Yes/no</td>
</tr>
<tr>
<td>Inflammation</td>
<td>Inflammation +/-</td>
<td>Inflammation +/-</td>
<td>No inflammation</td>
</tr>
<tr>
<td>Whiff test (10% KOH)</td>
<td>No</td>
<td>+/- Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Discharge Colour</td>
<td>White</td>
<td>White/yellow/green</td>
<td>Greyish-white</td>
</tr>
<tr>
<td>Consistency Quantity</td>
<td><strong>Thick adherent</strong> (curd like)</td>
<td>Thin and frothy</td>
<td>Thin</td>
</tr>
<tr>
<td>Quantity</td>
<td>+/- normal</td>
<td>+/- normal</td>
<td>Increased</td>
</tr>
<tr>
<td>Client detected odour</td>
<td><strong>Non-offensive</strong></td>
<td>Offensive/ Non-offensive</td>
<td>Offensive</td>
</tr>
</tbody>
</table>

*Note:

- Disturbances in the vaginal environment including pH can alter the growth pattern of the normal vaginal flora. The pH can be altered by the use of feminine hygiene products, contraceptives, vaginal medications, antibiotics, STI, sexual intercourse, and stress.
- pH can differ depending on reproductive age and stage of menstrual cycle.
- The pH of pre-pubescent females and after menopause is often 6 or higher.
- From menarche to menopause it should be 4.5.
- Menstrual blood, semen (within 24 hours), douching, systemic anti-microbial and intra-vaginal products may affect the pH for hours or more.

**DIAGNOSIS**

Possible causes:

- Variants of normal physiological discharge
- Bacterial vaginosis
- Candidiasis
• Chlamydia
• Gonorrhoea
• Trichomoniasis
• Herpes simplex virus
• Vaginitis
• Cervicitis
• Contact irritation/chemically induced discharge due to vaginal sprays/douches
• Allergic reaction
• Foreign object insitu
• Seminal fluid
• Sexual arousal
• Atrophic vaginitis.

EXAMINATION
• palpate inguinal lymph nodes for enlargement/tenderness
• examine pubic hair and skin of the mons
• examine entire anogenital area for erythema, lesions, ulcers, rashes or other abnormalities. Note any tenderness
• perform speculum examination of vagina for inflammation, discharge, lesions or abnormalities (unless pain makes speculum insertion too uncomfortable)
• assess nature of vaginal discharge i.e. colour, consistency, odour, blood staining and pH
• assess cervix for inflammation, oedema, discharge, bleeding and abnormalities
• perform bimanual examination (if pregnancy test negative)
  – assess cervix for cervical excitation
  – assess uterus for size, position and tenderness
  – assess adnexae for tenderness and masses.

INVESTIGATIONS
• vaginal
  – gram stain and wet prep (onsite if available)
  – pH whiff test
  – high vaginal swab for M/C/S
  – swab for trichomonas PCR.
• endocervical
  – swab for chlamydia PCR (+/- gonococcal PCR)
  – swab for gonorrhoea M/C/S
  – swab for HSV PCR (if indicated).
• first catch urine or self-collected vaginal swab for chlamydia and gonorrhoea PCR (if examination declined)
• urinalysis (if indicated)
• mid-stream urine for M/C/S (if indicated)
• bHCG urine pregnancy test for all women aged 12 – 50 years
• discuss additional STI screening as indicated.

MANAGEMENT / TREATMENT

Conditions requiring NO to refer to or at minimum consult with a MO or NP (if appropriate/available):

• abnormal findings of clinical significance
• no response to treatment
• history of persistent or recurrent symptoms
• uncertain or unconfirmed diagnosis
• client is pregnant or breastfeeding
• immunosuppression i.e. HIV positive client
• contraindication to treatment
• findings outside NOs usual scope of practice.

For all other cases:

• refer to section four, for management and treatment of specific pathogens and conditions
• discuss with client:- vulval/vaginal health and hygiene, normal verses abnormal vaginal discharge, negative health outcomes of douching and availability of over-the-counter medication.
REFERENCES

1. Queensland Health, 2006
   Queensland Management Guidelines for the Detection and Treatment of Sexually Transmissible Diseases and Genital Infections (Version III)

2. Sexual Health Society of Victoria, 2008
   National Management Guidelines for Sexually Transmissible Infections

3. NHMRC (current version)
   The Australian Immunisation Handbook

   Queensland Clinical Practice Guidelines for Sexual and Reproductive Health Nursing Officers

5. Andrology Australia, 2005
   Erectile Dysfunction - A GP guide for assessment and Management and Examination of male genitals and secondary sexual characteristics

6. Andrology Australia, 2007
   Examination of male genitals and secondary sexual characteristics

7. Clinics, 2005
   Female Sexual Dysfunction: The Important Points to Remember
   Pasqualotto, E.B., et al.

8. American Family Physician, 2000
   Female Sexual Dysfunction: Assessment and Treatment
   Phillips, N

   Female Sexual Dysfunction

10. Department of Health (WA), 2006
    Guidelines for Managing Sexually Transmitted Infections
    C.D.C.D.H.P Group, Editor

    Testicular Cancer

12. Andrology Australia, 2006
    Testicular Self-examination

13. Centres for Disease Control and Prevention, 2006
    Sexually Transmitted Diseases Treatment Guidelines - Morbidity and Mortality Weekly Report (Volume 55 - No RR -11)

    Sexual Health Medicine
    Russell, D., B. D, and C. Fairley

15. Royal Woman's Hospital, 2005
    Clinical Practice Guidelines for Women's Health Nurse Practitioner

16. Melbourne: IP Communications, 2005
    Sexual Health an Australian perspective
    Temple-Smith, M. and S. Gifford

    Diagnosis in Colour Sexually Transmitted Diseases (2nd edition)
    Wisdom, A. and D. Hawkins

18. RANZCOG, July 2007
    Investigation of intermenstrual and postcoital bleeding
   *Overview of causes of genital tract bleeding in women*

   *Standardising Our Management Of Postcoital Bleeding*
   Khattab, A.F, V.Bamigboye, D.J. Cruickshank

   *Sexually Transmitted Diseases* (4th edition)

22. The Journal of the American Medical Association (JAMA), 2004
   *Evaluation of Vaginal Complaints* (p1368-1379)
   Anderson M., K. Klink and A. CohrsSEN,

23. Journal of Internal Medicine, 2005
   *“Shotgun” Versus Sequential testing: Cost Effectiveness of Diagnostic Strategies for Vaginitis* (p793-799)
   Carr, P., et al.


28. Australasian Society of HIV Medicine (ASHM), 2008
   *HIV, viral hepatitis and STIs: A guide for primary care providers*

29. Gor, H. B. 2006. eMedicine
   *Vaginitis*