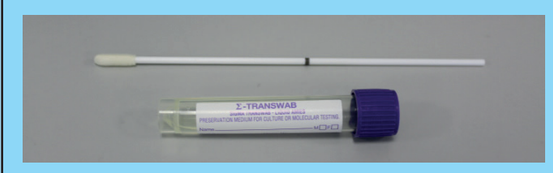
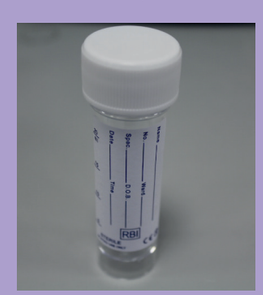
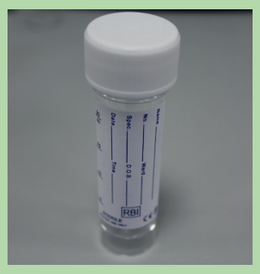
Liverpool Clinical Laboratories

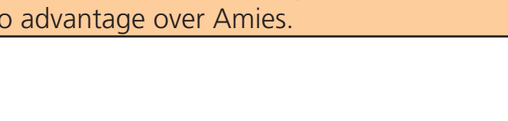
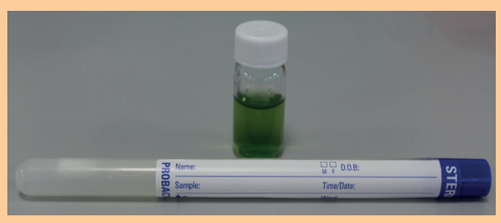
NHS

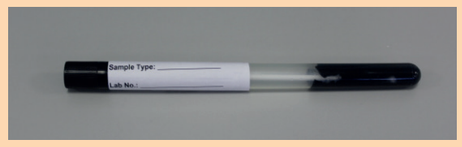
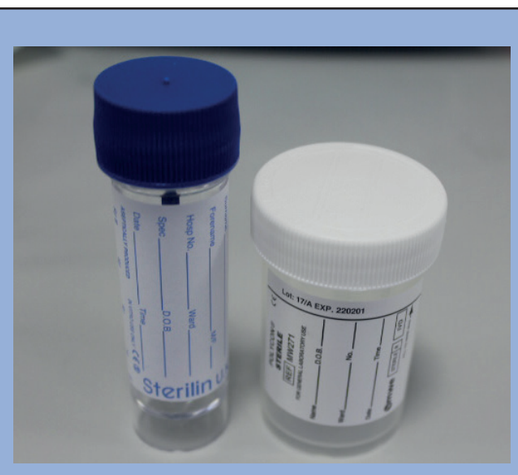
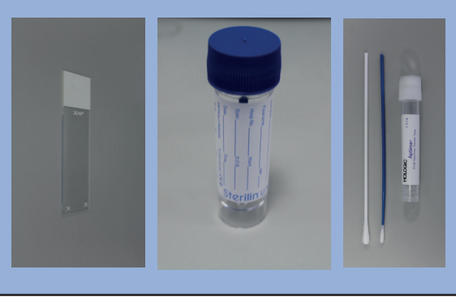
Sampling guidance

Condition	When to send a sample	Sampling instructions/other comments	Specimen type
Acute sore throat	- Throat swabs are not usually indicated in the investigation of acute sore throat. Point of care testing may become more common in future. - Throat swabs may be used to establish aetiology of recurrent severe episodes in adults when considering referral for tonsillectomy.	- Swab pus / exudate for bacterial culture.	Transport Swab Amies. Liquid Transport swab Amies.   May be refrigerated beyond 24h if necessary because transport is delayed.
Conjunctivitis	- Eye swabs are not usually useful for people with acute infective conjunctivitis. - Swab when infective conjunctivitis is hyperacute or persists for >2 weeks. - Neonates (<28 days): not usually necessary to swab unless severe or recurrent. - Ophthalmia neonatorum: urgent (same day) specialist referral.	- Send swabs for bacterial culture and chlamydia testing (eye swabs for neonates are automatically cultured for N. gonorrhoeae).	
Otitis externa	- Routine investigation for acute and chronic OE is not recommended but may be considered when treatment has failed.	- Swab ear canal for bacterial and fungal culture.	
Acute otitis media	- Microbiological testing not recommended. - Patients with grommets who present with acute discharge: consider taking an ear swab for C&S.	- Pus swab.	

Suspected influenza, Acute cough, Bronchitis	- Sampling not usually recommended.		
COPD exacerbations	- Send sputum if symptoms persist or worsen despite empirical antibiotic course.		Sterile universal / leak-proof container.  May be refrigerated if transport is delayed.
Bronchiectasis Cystic Fibrosis	- Send sputum for C&S in all cases of acute infective exacerbation, prior to the commencement of antibiotic treatment. Treatment may be commenced before results are available. - Pharyngeal swab after coughing may be a suitable alternative in very young children.	- Mycobacterial cultures are not routinely indicated, but should be considered if: - there are unexplained systemic symptoms (e.g. weight loss, night sweats etc). - there is unexplained clinical or radiological deterioration despite appropriate antibiotic treatment. - Mycobacterial infection is suspected cause of bronchiectasis.	
Pneumonia	- Microbiological sampling not routinely recommended. - Consider sending sputum for C&S in patients who do not respond to empirical therapy, or who have recently returned from abroad.	Consider sending sputum for Mycobacterial culture if TB is suspected.	

UTI	- May be diagnosed without investigation when symptoms are typical and severe. - <u>Urine dipstick testing:</u> perform if symptoms are mild / equivocal *and* urine appears cloudy. - <u>Midstream urine sample (MSU)</u>: send if any of the following apply: pregnancy, male, infants and children, failure of antibiotic therapy, recurrent UTI, suspected pylonephritis, renal impairment, genito-urinary tract abnormalities, risk factors for resistant bacteria (e.g. recent travel, recent hospitalisation).	- Specimen should be mid-stream; cleansing with water and holding the labia apart are not essential. Cleansing with antiseptic leads to false negative culture results. - Samples obtained using the yellow-topped V-monovette system are preferred from the point of view of laboratory processing and are associated with lower contamination rates. Only send tube to laboratory. - Samples received in sterile universal containers will also be processed. Unlabelled tubes will be discarded.	1. Urine V-monovette. 2. Sterile leak proof container.   Samples may be refrigerated if transport is delayed; however storage for >24h may result in unreliable results.
Asymptomatic bacteriurua	- Urine dipstick testing is inappropriate. - MSU is indicated in pregnancy only; repeat if positive, to confirm bacteriuria.	**- Do not perform urine dipstick testing or send MSU samples from asymptomatic elderly patients.**	
Urine sampling in the presence of long term urinary catheters	- **Urine dipstick testing is of no diagnostic value and must not be performed.** - Send urine for C&S only if there are signs of systemic or upper renal tract infection.	- Using aseptic technique, drain a few ml of urine, then collect a sample from catheter sampling port. - Microscopy is not performed on CSUs unless there is a specific request to do so, as the presence of pyuria is of no predictive value for infection.	

Vaginal discharge	- Consider risk of sexually transmitted infection and investigate as below or refer to GUM. - Send HVS if any of the following apply: postnatal or post miscarriage; pre or post gynaecological surgery or termination of pregnancy; symptoms not characteristic of BV or Candida; onset within 3 weeks of IUCD insertion; recurrent (≥ 4 cases/year); treatment failure; vaginitis without discharge. - If Trichomonas (TV) infection is suspected (yellow/green frothy discharge, offensive odour +/- pruritis / vaginitis / dysuria) – send HVS in TV broth and consider referral to GUM or investigating for other STIs. - Nucleic acid testing for TV may also be requested (see "STI screening").	- Bacterial vaginosis (BV) and vulvo-vaginal candidiasis (VVC) may be diagnosed clinically, without microbiological investigation. - HVS for culture: after introduction of speculum, roll swab anywhere on vaginal wall to obtain discharge. - HVS for suspected Trichomoniasis should arrive in the lab within 6h; Other swabs should be received within 48h. **Do not refrigerate Trichomonas broth after inoculation.**	1. Transport Swab with Charcoal*.  2. Transport Swab Amies.  3. Liquid Transport swab Amies.  4. Trichomonas broth.  - Refrigerate if not immediately sent to laboratory (except TV broth). *Charcoal medium is acceptable but offers no advantage over Amies.

Condition	When to send a sample	Sampling instructions/other comments	Specimen type
STI screening (note that investigation should be guided by type of sexual activity and symptoms reported)	<u>Nucleic acid tests (NAATs):</u> - Endocervical/self-taken vulvo-vaginal swab: preferred specimen for females. - 15-20mL first void urine for Chlamydia trachomatis and Neisseria gonorrhoeae nucleic acid tests (NAATs) – (males, or female patients as an alternative to swabs). - Throat, rectal and eye swabs (according to clinical presentation) are also accepted for nucleic acid testing, in appropriate Aptima tube. - NAATs for Trichomonas Vaginalis are also available and can be tested using the same sample, if specifically requested. - Endocervical swab (not HVS) for culture is recommended if gonococcal (GC) infection is suspected or positive NAAT result is obtained, prior to antibiotic treatment (Note that bacterial swabs (2) cannot be used for NAATs).	- NAATs: Yellow Aptima tube for urine (fill to "fill area" using pipette provided); - Orange Aptima tube for swabs: please break swab stick. **Note: Aptima tubes are preferred to universal containers, both from the point of view of stability and because of the lower risk of leakage. These may be ordered from the local Chlamydia Screening Office.** - Both chlamydia and gonorrhoea are automatically tested for, unless the request form specifies "Chlamydia testing only". - Endocervical swabs, or swabs from other sites depending on clinical presentation, may also be sent for NAATs – use Aptima tubes(1) not bacterial swabs (2). - Endocervical swab for GC culture: Clean the cervical os with a large sterile swab and discard. Insert a new swab into the endocervix and rotate 360 degrees.	1. Aptima tubes (NAATs).  2. Swabs for bacterial culture. Transport Swab with Charcoal / Transport Swab Amies (culture). 
Impetigo, cellulitis	- Microbiological sampling is not routinely recommended		
Recurrent boils, PVL screening	- Consider sending swabs to screen for PVL-producing. S. aureus strains if any of the following apply: Recurrent boils / abscesses; necrotising skin and soft tissue infections; ≥1 case in a home or closed community.	- Swab skin lesions & anterior nares. - Use swab moistened with water or saline; wipe around inside rim of each nostril for 5 seconds. - Explain indication and request PVL testing on request form.	Transport Swab Amies or Liquid Transport swab Amies  
Venous leg ulcers, diabetic foot ulcers	- Swab only when signs of infection are present (e.g. cellulitis, lymphangitis, disproportionate pain, increased odour / exudate, fever or systemic upset). - Swab before antibiotic treatment is commenced.	- Cleanse the wound with tap water or saline to remove surface contaminants, slough and necrotic tissue; swab viable tissue that displays signs of infection.	
MRSA screening	- Not routinely recommended. Patients awaiting elective surgery are usually screened through hospital preadmission clinics.		
Dermatophyte infections: skin, nail	- Samples are *not* indicated: in cases of uncomplicated athlete's foot, mild skin ringworm or mild groin infections. - Samples for fungal culture *are* indicated: when oral treatment is being considered (e.g. scalp ringworm or nail disease); in severe or extensive skin fungal infections eg moccasin-type athlete's foot; in skin infections refractory to initial treatment; when the diagnosis is uncertain.	- Wipe off any treatment creams before sampling. - <u>Skin scrapings:</u> collect skin scrape from the advancing edge of lesion, using blunt scalpel blade or similar (5mm2 required). - <u>Nail samples:</u> sample most proximal part of diseased nail with chiropody scissors; Include full thickness clippings of the diseased nail and debris from under the diseased part of nail. In superficial infections scrape surface of diseased nail plate with scalpel blade. - <u>Hair samples:</u> take scalp scrapings - hair plucking does not produce the best samples. A soft toothbrush can be used if scrapings are not possible.	- Skin, nail and hair: Fungal transport packet (e.g. Mycotrans, Dermapak). If unavailable: collect specimen into dark paper; fold and place into universal container  **Keep any samples at ROOM temperature, do NOT refrigerate**
Suspected infectious diarrhoea (including traveller's diarrhoea)	- Faecal culture usually not necessary. - Consider sending faeces for culture if: patient systemically unwell or thought to need antibiotics; blood, mucus or pus in stool; immunocompromised; children with acute painful or bloody diarrhoea (to exclude verotoxigenic E.coli infection including O157); after foreign travel; recurrent or prolonged diarrhoea (>14 days); to exclude infectious diarrhoea in the differential diagnosis, eg possible inflammatory bowel disease, close contacts of Giardia cases, or for public health reasons (outbreaks, children after farm visits, healthcare worker, food handler).	- Only unformed or liquid stool samples will be tested by the laboratory. - If recent travel, state countries; request ova, cysts and parasites (OCP) after "exotic" foreign travel. Requests for parasitological investigation should be clearly indicated. - The specimen container should not be filled to the brim (a walnut sized portion of stool, or about 10ml of liquid faeces, is all that is required).	
C. difficile infection	- Recent antibiotics, or hospitalisation (C. difficile).	- Only unformed or liquid stool samples will be tested by the laboratory. - Do not re-test patients with known C. difficile infection.	
Threadworm	- Faeces sample not appropriate. - If diagnosis is uncertain, adhesive tape test for eggs may be useful.	- Patient (or parent) should be instructed to apply transparent adhesive tape to the perianal skin first thing in the morning, before wiping or bathing, then remove the tape and either stick it to a glass slide or place it in a specimen container. - A perianal swab may also be sent for microscopy.	

References (including PHE primary care guidelines, Scottish Intercollegiate Guideline Network (SIGN), NICE clinical knowledge summaries, British Thoracic Society Bronchiectasis guidelines, British Association for Sexual Health and HIV):

http://www.sign.ac.uk/pdf/sign117.pdf,
http://cks.nice.org.uk,
www.nice.org.uk/CG12,
https://www.brit-thoracic.org.uk/document-library/clinical-information/bronchiectasis/bts-guideline-for-non-cf-bronchiectasis/,
https://www.gov.uk/government/publications/urinary-tract-infection-diagnosis,
https://www.gov.uk/government/collections/primary-care-guidance-diagnosing-and-managing-infections,
https://www.bashhguidelines.org/media/1084/sti-testing-tables-2015-dec-update-4.pdf