

Syndromic Testing and Antimicrobial Stewardship Glossary

Amplicons - (DNA or RNA) products of amplification or replication.

Anti-infective therapy - medicines used to prevent or treat infections (e.g. antimicrobials).

Broad-spectrum antibiotics - antibiotics that are effective against a wide number of bacterial types and are often used when the infecting pathogen is unknown.

Bronchoalveolar lavage - a diagnostic technique in which fluid is introduced into the lungs before being collected for examination.

Bronchopulmonary dysplasia (BPD) - a condition which commonly affects babies born prematurely (with underdeveloped lungs), and results in breathing difficulties. Also known as chronic neonatal lung disease.

Causative agent/pathogen - in disease, refers to the microorganism(s) responsible for causing the infection(s) at hand.

Central nervous system (CNS) - consists of the brain and the spinal cord, controlling most of the body's function.

Cerebrospinal fluid (CSF) - clear fluid which surrounds the brain and spinal cord.

Chronic lung disease - long-term diseases of the lung(s). Types of chronic lung diseases include asthma, COPD and asbestosis.

Cohorting - (of patients) to place patients with the same infection together (e.g. in the same bay on a ward).

Co-infection - infection of a host by multiple pathogen species at the same time.

Community-acquired pneumonia (CAP) - lung infection (i.e. pneumonia) that develops in people outside a hospital.

Congenital heart disease - an umbrella term for a range of birth defects resulting from one or more problems in the structure of the heart.

C-reactive protein (CRP) - a substance produced in the liver in response to inflammation. It is used as a biomarker for inflammation.

Ct value - the cycle number at which the fluorescence generated within a reaction crosses the fluorescence threshold (signal above background fluorescence).

Cystitis - bladder inflammation, usually as a result of an infection.

Defined Daily Dose (DDD) - the assumed average maintenance dose per day for a drug used for its main indication in adults. Used for comparisons of drug consumption (e.g. at an international level).

Diagnostic stewardship - promotes evidence-based use of diagnostic tests to improve patient care and outcome.

Diagnostics (or diagnostic tests) - tests/tools used to determine or confirm a patient's condition, disease and/or illness.

Diagnostic yield - the likelihood that a test or procedure will provide the information needed to establish a diagnosis.

Dyspnoea - difficult or laboured breathing.

Empiric/empirical therapy - therapy administered in the absence of complete information for a medical diagnosis. Empiric antimicrobial therapy can be in the form of administering broad-spectrum antibiotics, for unknown organisms, early on into hospital admission.

Encephalitis - a serious condition characterised by inflammation of the brain.

Febrile - having or showing signs of fever.

Fluorescence - a form of luminescence (spontaneous light emission) in which light is emitted following the absorption of radiation (usually visible light).

Fluorophore - a fluorescent chemical compound (i.e. can emit absorbed light).

Haematology - relating to blood.

Herniation - a cerebral/brain herniation occurs when there is a shift in brain tissue, blood and CSF inside the skull.

Hospital-acquired pneumonia - pneumonia in a patient who has either been hospitalised for ≥ 48 hrs or developed pneumonia within 7 days of being discharged.

Hypotensive - characterised by low blood pressure.

Hypoxia - where the body or region of it is deprived of sufficient oxygen supply. This can result from a low concentration of oxygen in the blood (i.e. hypoxemia).

Immunocompromised - (of a patient) with a weakened immune system (immunodeficiency), increasing susceptibility to infections and disease. This can be the result of certain treatments (e.g. immunosuppressant medication) or existing medical conditions.

Immunotherapy - a form of biological therapy in which the body's own immune system is used to combat disease (e.g. as seen in cancer immunotherapy).

Leukocytosis - white cell/leukocyte count which is above the normal range in the blood.

Lysis - cell disintegration by breaking down the cell membrane or cell wall.

Meninges - the three membranous layers covering the central nervous system: the dura, arachnoid and pia mater.

Meningococcal meningitis - a form of meningitis caused by a specific bacterium known as *Neisseria meningitidis*.

Meningococcal septicaemia - a form of septicaemia caused by *Neisseria meningitidis*. Also known as meningococcaemia.

Multiplex PCR - PCR using numerous different targets or primers (which are complementary to sequences of defined microbe DNA), as characteristic of syndromic testing panels.

Nosocomial - diseases or pathogens which originate in hospitals.

Nucleic acids - large, biological information-carrying molecules. The genetic information (in subunits called nucleotides) is stored and then expressed in the process of protein synthesis. The two main classes of nucleic acids are deoxyribonucleic acid (DNA) and ribonucleic acid (RNA).

Oncology - relating to cancer or the study of cancer.

Pharmacokinetics - the study of the movement of a drug into, through and out of the body — its absorption, bioavailability, distribution, metabolism, and eventual excretion.

Point-of-care testing (POCT) - diagnostic testing performed at or near where care is being given to a patient.

Polymerase chain reaction (PCR) - a method of rapid DNA synthesis in which new DNA strands — complementary to the template strands in the reaction — are synthesised by the enzyme DNA polymerase (*in vitro* amplification).

Primer - short pieces of complementary DNA which bind to nucleotide sequences along a target DNA strand (e.g. microbe-specific DNA). Used in PCRs to give DNA polymerase a starting point for DNA extension (and replication).

Prophylactic - (of a medication or antibiotic) given to prevent — rather than treat — disease.

Purulent - pus.

Pyelonephritis - kidney infection.

Rapid diagnostic tests (RDTs) - a type of point-of-care testing where diagnostic results can be provided almost immediately to the patient.

Reverse transcriptase - an enzyme which helps convert RNA to complementary DNA in the process of reverse transcription.

Secondary pneumonia - pneumonia (inflammation of the lung's air sacs) which develops as a result of a primary infection (second in order).

Septic - a patient becomes septic as a result of septicaemia (i.e. "blood poisoning" in which invading pathogens enter the bloodstream).

Source-tracking - in gastrointestinal infections (e.g. *C. difficile*), this relates to identifying the origin of an infection in a healthcare setting when it is believed to be the result of acquisition from other cases.

Surgical Site Infection (SSI) - post-surgical infection which occurs at the site of the surgery.

Symptom - a physical or mental feature indicative of a condition/disease.

Tachycardic - characterised by an abnormally fast heart rate (beats per minute/bpm).

Ventilator-acquired pneumonia - pneumonia following mechanical ventilation for ≥ 48 hrs.