



FACT SHEET

Module: Infectious Diseases

- A pathogen is any agent causing disease. A disease is infectious due to a living organism, which can multiply in or about one person, and be released in or on another person. This is known as **communicability**.
- How does a person get an infection?
 - There are six stages in the cycle of infection:
 - (i.) Means of infection:** bloodborne, airborne, droplet, common vehicle, vectorborne
 - (ii.) Portal of entry:** e.g. broken skin, mucous membrane, GI tract, respiratory tract, urinary tract
 - (iii.) Susceptible host:** neonate, diabetics, elderly, immunosuppressed, cardiopulmonary disease
 - **Infectious agent:** virus (e.g. Chicken pox, hepatitis, HIV/AIDS, influenza, tetanus, cold sores), bacteria (e.g. tuberculosis, pneumonia, strep throat, urinary tract infection, E. coli), fungi (e.g. ringworm, candidiasis, yeast infection), protozoa (e.g. malaria, giardiasis, Chagas disease), parasite (e.g. round worm, tape worm, trichinosis), protein (e.g. e.g. mad cow disease)
 - (iv.) Reservoir:** people, environment, water
 - (v.) Portal of exit:** excretions, secretions, droplets, skin contact
- Hosts are susceptible to infections because of:
 - Age, genetic predisposition, nutritional status, disease process, stress levels, hygiene habits, as well as living conditions (e.g. housing, water, and sanitation facilities)
- Recognize signs and symptoms of common infections:
 - **Common cold:** Symptoms include a runny nose, sneezing, and congestion. High fever or severe symptoms are reasons to see a doctor, especially in children.
 - **Flu:** Symptoms include fever, chills, muscle aches, cough, congestion, runny nose, headaches, and fatigue.
 - **Strep throat:** Common symptoms include sore throat, fever, and swollen lymph nodes in the neck. Rarely, complications can involve the heart or kidneys.
 - **Urinary tract infection:** A bladder infection may cause pelvic pain, increased urge to urinate, pain with urination, and blood in the urine.
A kidney infection may cause back pain, nausea, vomiting, and fever.
 - **Stomach flu:** Diarrhea, cramps, nausea, vomiting, and low-grade fever are common symptoms.
 - **Pneumonia:** Symptoms include cough with phlegm or pus, fever, chills, and difficulty breathing.
 - **Middle ear infection:** Ear pain and fever are common symptoms. Less commonly, there may be drainage of fluid from the ear or hearing loss.
 - **Sexually transmitted disease:** Some cases have no symptoms. When symptoms occur, they vary depending on the disease.
- When and where you should go if you suspect infection?
 - Immediate self-examination, seek information, visit doctor

- Some infectious diseases must be notified to the Board of Health, and this should be done immediately after the diagnosis is made. Responsibility for notifying falls both on the doctor in attendance and on the individual, but in practice, the notification of a doctor usually suffices.
 - Emergencies: e.g. Sepsis is a serious condition where an infection – such as a lung infection or a urinary tract infection – gets into the bloodstream and poisons it.
 - Special situations:
 - Hospital-acquired infections (HAIs), also known as **nosocomial infections**, are infections that were not present or incubating on admission of a patient to hospital. These infections can be readily diagnosed in patients who have appeared free of signs and symptoms of infection on admission and have then gone on to develop infection
 - The World Health Organization (WHO) has declared antibiotic resistance one of the biggest global health threats facing the world today e.g. Methicillin-resistant Staphylococcus aureus (MRSA) and Multi drug-resistant Tuberculosis (MDRTB) are of great concern worldwide
- How do you treat an infection?
 - Medicine (e.g. appropriate antibiotic use). But, antibiotics **don't** affect **viruses**, **fungi**, or **parasites** - they only affect **BACTERIA**.
- How do you prevent infection?
 - The two most important public health interventions, which have had the greatest impact on the world's health, are the provision of **clean drinking water** and **immunization**.
 - Hygiene, clean hands, disposal of solid wastes, maintain sanitation and chlorinate all water sources, and undertake fly control measures.
- When should we wash our hands?
 - After using the toilet
 - Before eating meals or drinks
 - After blowing our nose or coughing
 - After contact with any bodily fluids
 - Before contact with any susceptible patient or site (e.g. wound)
 - After handling waste or laundry
 - After touching animals (e.g. goat, cow)
- Why its important to know about and treat infections?
 - To help prevent or reduce avoidable infections and to control existing ones.
 - In India, there is an emergence of infectious diseases (e.g. dengue, swine flu, malaria) that is posing significant health challenges at present due to the changing environment, movement of people, increased reporting, and changes in the vectors and their biology.
 - Basic public health measures are lagging behind in India and pose a threat to the future prosperity of its citizens.
- What is an example of a national public health campaign to address the current infectious disease challenges in India?
 - Under the **Swacch Bharat Abhiyan** (Clean India Program), the government has committed to providing toilets and improving sewage systems, but these measures will take time to implement.