

Counselling for Infectious Diseases Prevention

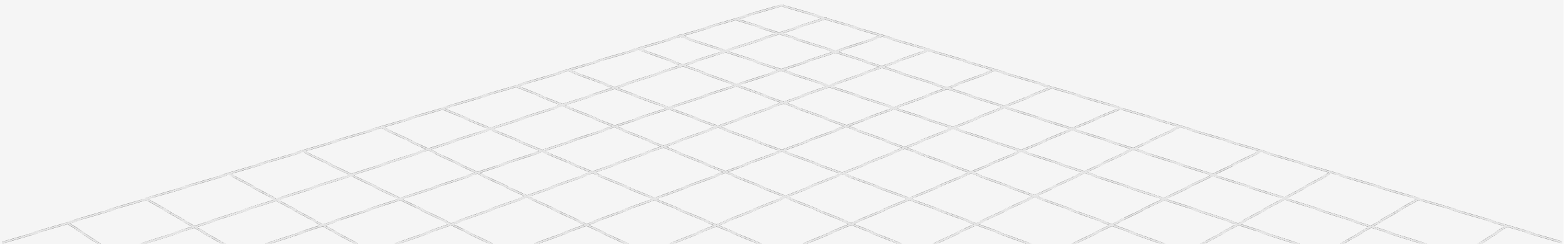
Dr Hussein Saad

**ASSISTANT PROFESSOR and CONSULTANT
FAMILY and COMMUNITY MEDICINE (MRCP) UK
COLLEGE of MEDICINE
KING SAUD UNIVERSITY**

Objectives

Demonstrate counselling skills using scenarios, on how to take risk factor history for infectious diseases:

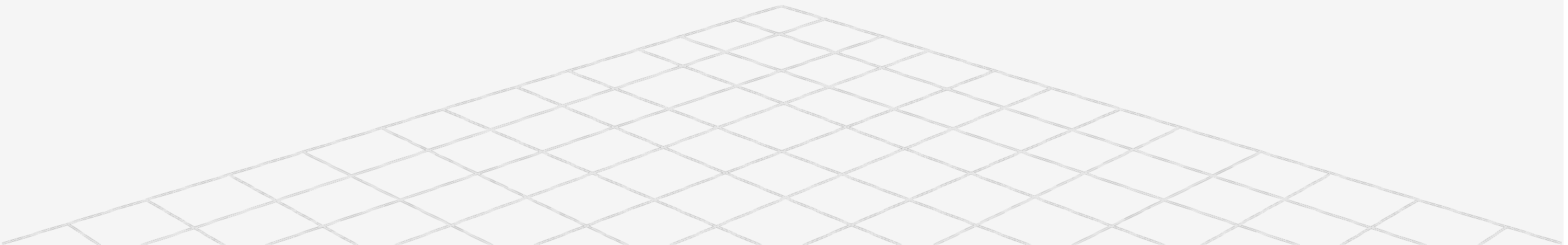
TB, Malaria, Hepatitis, Influenzas, Mers Cov, SARS, Brucellosis, HIV, Meningitis, Person going to Hajj



What is Counselling?

A Support process in which a counselor holds face to face talks with another person to help him or her solve a personal problem, or help improve that person's attitude, behavior, or character.

The act of helping the client to see things more clearly.



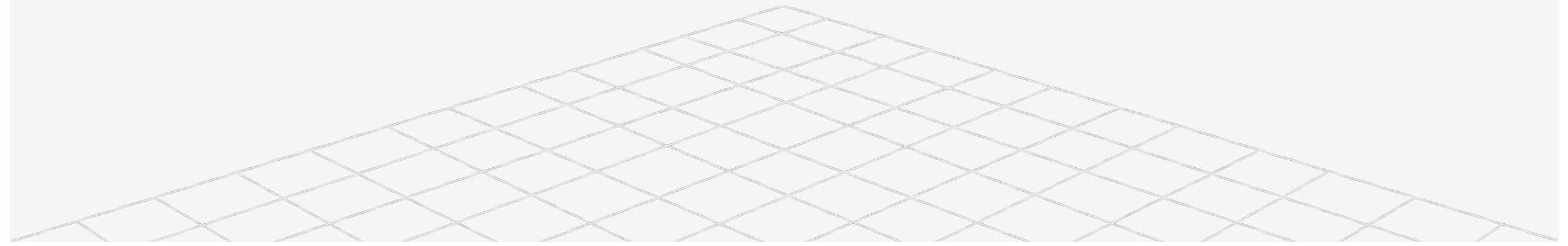
Aim: Disease Prevention

Primary prevention refers to efforts to eliminate health or functional problems at their source—that is, **preventing their occurrence**, (such as **immunizations**, **improving nutritional status**, and **increasing physical fitness** and **emotional well-being**) that reduce the incidence of disease or render a population at risk not vulnerable to that risk.

Secondary prevention involves efforts to detect **adverse health conditions early** in their course and to **intervene** promptly and effectively, or to reduce the spread of disease to others.

Standard Precautions—Key Steps

- Frequently wash hands or use alcohol-based handrubs.
- Use gloves.
- Wear an apron, mask, and eye protectors, as necessary.
- Properly handle and dispose of possibly infected linens and wastes.
- Properly handle and dispose of sharp instruments, such as needles.



Bloodborne and Other Common Infectious Diseases

Bloodborne Diseases:

- HIV/AIDS.
- Hepatitis B and C.

Other Common Infectious Diseases:

Bacterial:

- Staph skin infection.
- Pneumonia / TB
- Parasitic—*Giardia* diarrhea.

Viral:

- COVID-19
- Influenza, or the flu.
- Respiratory infections.
- Hepatitis A infection.
- Diarrhea.
- Chickenpox, measles, mumps.

Understanding How Infectious Diseases Spread

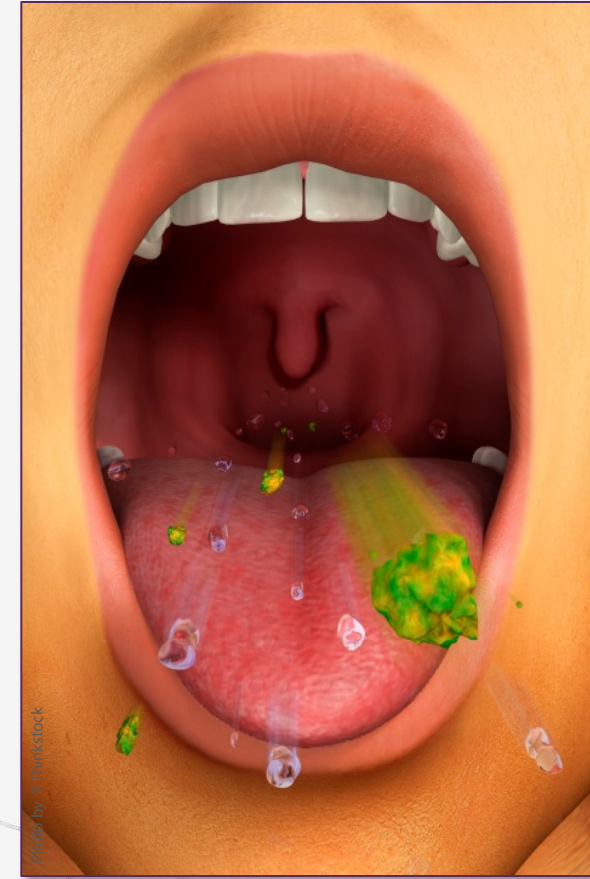
Where Infection Lives

Blood or Body Fluids:

- Urine
- Feces
- Tears
- Sputum
- Saliva
- Vomit
- Sweat
- Semen
- Vaginal fluid
- Food
- Water
- Organic matter
- Pets
- Pests

Pathways Through Which Infectious Diseases Spread

- ❑ Being stuck by a sharp with infected body fluids.
- ❑ Touching infectious people—or surfaces, objects, clothing, and linens that carry body fluids.
- ❑ Breathing spray from coughs, sneezes, talking.
- ❑ Eating, drinking, or handling infected food, water, or dirt.
- ❑ Being bitten by animals and insects, or by coming into contact with animals' body fluids.



Who is at Most Risk of Becoming ill When Exposed to Infection?

- Babies, children, and elders.
- People who are sick.
- Those with pre-existing conditions and weak immune systems.
- Those who don't eat a healthy diet.
- Those with poor personal hygiene or living conditions.
- Those who are over-tired or stressed.
- Those who don't wash their hands often.



**Anyone
CAN be at
risk!**

To Counsel for infectious disease

Take history of:

Exposure: when and how exposed

Symptoms: which symptoms he or she came with

Precautions: measures should be taken for the infected person

Prophylaxis: for which prevention he or she came for

Prevention: either primary or secondary prevention



CASES and **QUESTIONS**



A 26-year-old woman presents to clinic for advice as her brother is recently diagnosed as a case of hepatitis A 3 days ago. She asked for any intervention as she never received any vaccination for hepatitis before.

How are you going to counsel her?

☐ Hygienic measures:

- Hand washing, Limiting contact with him, Don't share his personal items, Avoid sharing drinking glasses or dining utensils.
- Isolation in one room

☐ Start vaccination:

For Hepatitis A and better immunoglobulins

A 32-year-old male married and has 2 children came for pre-employment check up. The following hepatitis B markers are shown:

Hepatitis B S antigen..... **Reactive**

Anti-Hepa B Core IgG..... **Reactive**

Hep- B e Antigen..... **Reactive**

Anti- Hepa B e Antigen ... Nonreactive

Anti-Hepa B Surface..... Nonreactive

- He has chronic hepatitis B virus as Core IgG is reactive or positive
- He is highly infectious as e antigen is reactive or positive

What measures are you going to take?

Measures for the patient:

- Break the news for the patient / Ask for a source of infection / exposure.
- Request Liver function tests, Ultrasound liver, PCR, Referral to hepatologist.
- Educate how to be careful in contact with body fluids, inform him that the infection could be transmitted through mainly blood, Protective measures for relation with his wife, No blood donation.

Measures for contacts:

- Ask about vaccination of children, Screen family contacts if they are immune or not and start vaccinate the non immune ones.

A 42-year-old man presents with one day H/O fever, sneezing and cough. He used to go his farm, which has camels and sheep. The nurse in vital signs informed you that we may have a case of Corona virus. An outbreak of corona virus (**MERS-CoV**) is running.

What general as well as specific measures should be taken?

☐ Take steps to ensure all persons with symptoms of a respiratory infection adhere to:

Respiratory hygiene Cough etiquette, and **Hand hygiene**.

☐ Wear a mask / Cover your mouth and nose with a tissue when coughing or sneezing.

☐ Use in the nearest waste receptacle to dispose of the tissue after use.

☐ **Consider posting visual alerts** (e.g. signs, posters) in strategic places (e.g., waiting areas, elevators, cafeterias) to provide patients and HCP with instructions (in appropriate languages) about hand hygiene, respiratory hygiene, and cough etiquette.

☐ **Provide supplies to perform hand hygiene** to all patients upon arrival to facility (e.g. at entrances of facility, waiting rooms, at patient check-in).

☐ **Personal Protective Equipment (PPE):** Gloves, Gowns, Respiratory Protection (N95 filtering facepiece respirator) and Eye Protection (eye goggles)

☐ **Patient Placement:** Place a patient who might be infected with MERS-CoV in an Airborne Infection Isolation Room (AIIR)

Take a nasopharyngeal swap (If positive, Isolate and treat) and (if negative, reassure and discharge)

☐ **Isolation for cases:** for 10 days or 72 hours after the fever and respiratory symptoms disappear whether at home or in quarantine facilities.

You are entering the room of a patient with confirmed MERS-CoV.

What precautions you should adhere to?

Standard, Contact, and Airborne precautions, including the following:

Hand Hygiene

Personal Protective Equipment (PPE):

- Gloves
- Gowns
- Respiratory Protection (N95 Mask)
- Eye Protection (eye goggles)



You have seen a 46-year-old man come for advice regarding malaria protection as he will travel after a week to a country endemic with malaria in Africa and will stay for 2 weeks.

How are you going to counsel him?

General:

No antimalarial drug is 100% protective and must be combined with the use of personal protective measures, (i.e., insect repellent, long sleeves, long pants, sleeping in a mosquito-free setting or using an insecticide-treated bednet).

Specific (Chemoprophylaxis):

- **Proguanil (Malarone):** Begin 1-2 days before travel, 1 tablet daily during travel, and for 7 days after leaving.
- **Mefloquine:** 1 tablet weekly. Begin 1-2 weeks before travel, weekly during travel, and for 4 weeks after leaving.
- **Doxycycline:** Begin 1-2 days before travel, daily during travel, and for 4 weeks after leaving.

A 56-year-old man came to you as planning to go to Haj. He asked is there any vaccines he should take and how to protect himself in crowded Tawaf.

Which disease are you afraid from other than flu?

Meningitis

Which Immunoprophylaxis are you going to give?

Vaccination is used for meningococcal disease due to A, C, Y, and W serogroups (MCV4).

How to protect himself in Tawaf?

Putting a face mask to protect against any nosocomial infections.

Chemoprophylaxis (when there is probability of presence of cases)

Person-to-person transmission can be interrupted by chemoprophylaxis, which eradicates the asymptomatic nasopharyngeal carrier state.

Rifampin, Ciprofloxacin, and Ceftriaxone are the antimicrobials that are used to eradicate meningococci from the nasopharynx.

A 58-year-old man came with his son because of fever and cough for 3 weeks. A sputum smear was sent and revealed TB bacilli positive.

How are you going to counsel him and his son regarding transmission of this infection?

Measures for the patient:

- Patient will put a face mask and should be admitted and isolated.
- Also should be learned for cough etiquette.
- Only discharged when 3 consecutive sputum smears are negative.

Measures for contacts:

Screen by history taking, Quantiferon, Chest X-ray

What percentage of people living with hepatitis KNOW they are infected?

A. Less than 5%

B. 30 %

C. 50%

D. More than 90%



A

You have a friend who is going to China for 7 months. He leaves in 2 weeks. He has never received either hepatitis A or B vaccines.

Which is the best choice today for his immuno-prophylaxis of hepatitis A?

- A) A dose of hepatitis A vaccine
- B) A dose of IM immunoglobulin
- C) A dose of IM immunoglobulin and a dose of hepatitis A vaccine
- D) First dose of hepatitis A vaccine today and a booster dose the day before he leaves

A

What is the most important patient education information to give your friend about avoiding hepatitis A exposure?

- A) Tell him to avoid sharing needles or using nonsterile needles.
- B) Remind him about using insect repellent and mosquito netting at night.
- C) Encourage him to take safe sex precautions.
- D) Explain good hand washing and food and water precautions.



D

A nurse sustains a needle stick from a patient who is known to be HBsAg-positive. She has been vaccinated previously with hepatitis B vaccine and is a known non-immune (No antibodies).

What postexposure prophylaxis should the nurse receive?

- A) One dose of hepatitis B vaccine.
- B) One dose of HB immunoglobulins and one dose of hepatitis B vaccine.
- C) No vaccination but proper cleaning of site of injury.
- D) Test the nurse for anti-HBs level; treat accordingly.

B

Which of the following viral causes of hepatitis is transmitted by contaminated food or water?

- A) Hepatitis B
- B) Hepatitis C
- C) Hepatitis D
- D) Hepatitis E

D

Hepatitis D is commonly associated with what other type of viral hepatitis?

- A) Hepatitis A
- B) Hepatitis B
- C) Hepatitis C
- D) Hepatitis E

B

A pregnant woman is known to be HBsAg positive delivered her baby.

Which of the following is the appropriate measure has to be taken with her baby?

- A. Check the baby for hepatitis B markers.
- B. Start Hepatitis B immune globulin (HBIG) and HBV vaccine within 12 hours of delivery.
- C. Start Hepatitis B immune globulin (HBIG) and delay HBV vaccine till age of 6 weeks.
- D. Start with HBV vaccine only within a week after delivery.



B



THANK YOU