URINE COLLECTION AND SAMPLING
**Urinalysis**

It is an array of tests performed on urine and one of the most common methods of medical diagnosis.
Urine test strip

It is a basic diagnostic instrument used to determine pathological changes in the urine in standard urinalysis.
URINE SPECIFIC GRAVITY

This test detects the ion concentration of urine. It determines patient’s hydration status.
WHITE BLOOD CELLS (WBCs) /LEUKOCYTES

WBC in urine is a marker of infection.
PROTEIN

The detection of protein in urine may indicate renal infections or it may be caused by other diseases that have secondarily affected the kidneys such as diabetes mellitus, jaundice, or hyperthyroidism.
Glucose presence in the urine can indicate underlined conditions such as diabetes.
KETONE BODIES

When there is carbohydrate deprivation, such as starvation or high protein diets, the body relies increasingly on the metabolism of fats for energy. Also in diabetic patients body makes ketones when there is not enough insulin in the blood.
BILIRUBIN

Waist product of haemolysed red blood cells.
BLOOD

May be present as intact RBC which indicates bleeding or discoloration.
Nitrite

The presence of nitrites in urine indicate the presence of bacteria.
Mid-stream specimen of urine

The aim is to get a specimen (sample) of urine from the middle of bladder.
EXPLAIN TO THE PATIENT HOW TO OBTAIN MIDSTREAM URINE SAMPLE

Women - hold open labia (entrance to the vagina).

Men - pull back your foreskin.

Pass some urine into the toilet. Then, without stopping the flow of urine, catch some urine in a sterile bottle. Once there is enough urine in the bottle, finish off passing the rest of urine into the toilet.
CATHETER COLLECTION SPECIMEN

This assisted procedure is conducted when a patient is bedridden or cannot urinate independently.
CATHETER
Aseptic technique

- The process of obtaining a sample of urine from a patient with an indwelling urinary catheter must be obtained from a sampling port. The sample must be obtained using an aseptic technique.

- This port is usually situated in the drainage tubing, proximal to the collection bag which ensures the freshest sample possible. The use of drainage systems without a sampling port should be avoided.
Aseptic technique

- Specimens should not be collected from the tap from the main collecting chamber of the catheter bag as colonization and multiplication of bacteria within the stagnant urine or around the drainage tap may have occurred.

- Aspirating urine from a sampling port has traditionally been performed using a syringe and needle. However, needle-free systems are commercially available, which may reduce the risk of inoculation injury.
Equipment required

- Sterile gloves;
- Apron;
- Syringe and needle;
- Alcohol-saturated swab;
- Gate clip or non-traumatic clamps;
- Universal specimen container;
- Appropriate documentation/forms.
TRANSPORTATION OF SPECIMENS

All specimens must be transported in specially designed plastic bag.
DOCUMENT EVERYTHING IN MEDICAL NOTES.

If it is not documented, it has not been done!
Any questions?
REFERENCES:
