

Eg: She was referred to the consultant orthopaedist.

(“MD” stands for “Doctor of Medicine”)

Nurse: a nurse looks after the daily needs of patients in hospital and acts as intermediary between doctors and relatives.

There are many types of nurses and they can be classified depending on different aspects: the level of education achieved, their medical speciality. The main kinds of nurses according to the level of education are the following:

- **An LPN (Licensed practical nurse)** usually has less than 2 years of training. They perform simple and some complex medical procedures. They work under other health care professionals to provide patient care.
- **An RN (Registered Nurse)** has a university degree in nursing and often is responsible for supervising the tasks of LPNs. RNs provide direct care, patient education and make decisions about proper patient care.
- **An APN (Advanced Practice Nurse)** has a masters or doctoral degree. They provide direct care, diagnose disease, prescribe medication, work in research and educate patients and other healthcare professionals.
- **Surgeon:** operates on patients and visits patients daily post-operatively to order any change in treatment.
- **Anaesthetist:** puts patients to sleep before an operation or gives local or spinal anaesthetic before an operation.
- **Radiographer:** takes X/Rays, MRI (Magnetic Resonance Imaging) and CAT scans (Computerised Axial Tomography).
- **Physiotherapist:** exercises injured limbs-arms and legs and helps patients with post-operative breathing exercises.
- **Pharmacist:** prepares and dispenses medications and can give advice about the quantity of a drug to give (dosages).
- **Dietician:** decides what food a patient can eat and organizes different diets for ill patients.
- **Speech therapist:** assists people of all ages who have problems communicating.
- **Laboratory technician:** tests specimens of urine, blood, sputum etc. for abnormalities.
- **Chiropodist:** looks after injured or diseased feet.
- **Paediatrician:** specializes in the treatment of the diseases of children.

- **Occupational therapist:** teaches patients to live as normally as possible with a disability.

3-3:A to Z of professionals:

Below you'll find a list of the professionals you're likely to come across in hospital.

This isn't an exhaustive list and hospitals vary in their range of staff and departments.

- **Administrative staff** work in a range of roles, usually out of sight of patients, to ensure the effective running of a department or the whole hospital.
- **Ambulance care assistants** transport non-emergency patients to and from hospital.
- **Ambulance technicians** assist paramedics in their accident and emergency work.
- **Anaesthetists** give local or general anaesthetics to patients. They vary in levels of seniority. Anaesthetists also monitor the condition of patients as they undergo treatment such as surgery and sometimes run outpatient pain management clinics.
- **Art therapists** enable patients of all ages to communicate and express their feelings through art.
- **Audiologists** identify and assess hearing and balance disorders. They provide appropriate rehabilitation and management, often working closely with ear nose and throat (ENT) consultants.
- **Biomedical scientists** carry out a range of laboratory tests to help doctors in their diagnosis and treatment of patients.
- **Cardiac physiologists** carry out investigations into the functioning of the heart and equipment fitted to help the heart, such as pacemakers.
- **Cardiographers** work in the cardiac (heart) department of hospitals, helping to operate machines that monitor heart function.
- **Cardiologists** are qualified doctors who diagnose, assess and manage patients with diseases of the heart and vascular system (circulation). Their experience ranges from junior hospital doctors to senior consultant level.
- **Catering staff** work in the kitchen and canteens. They are responsible for providing food to patients and staff.

- **Chaplains** are employed by the NHS to minister to patients and staff. Most religions are usually catered for and a chapel is found in most hospitals.
- **Children's nurses** are specialist nurses who care for sick children on the paediatric wards and outpatient departments. They provide support to children and their families.
- **Clinical biochemists** work in hospital laboratories to produce and interpret the results of tests performed on blood and other body fluids. This helps in the diagnosis and management of disease.
- **Clinical cytogeneticists** work in a rapidly expanding science in the NHS. They are experts in studying chromosomes from samples of blood, tissue, bone marrow or other bodily fluids. Their work is now very important in diagnosing genetic diseases.
- **Clinical immunologists** research and investigate the immune system (the body's defences).
- **Clinical microbiologists** identify bacterial, viral, fungal and parasitic infections, including hospital-acquired infections such as MRSA and C. difficile.
- **Communications (PR) managers** make information about the hospital available to staff and the public, sometimes through the media.
- **Computing staff** maintain the computer networks, hardware and software systems used by all hospital staff.
- **Counsellors** use various talking therapies to provide help and support to patients.
- **Cervical cytologists** use a microscope to examine cells taken from a cervical smear to screen for abnormalities that may be the first signs of cervical cancer.
- **Dental staff** work in a number of areas in hospitals. **Hospital dentists** usually deal with complex cases that have been referred by other dentists and GPs. **Dental technicians** make dentures, crowns, bridges and braces for patients.
- **Dietitians** work with people to promote nutritional wellbeing, prevent food-related problems and treat disease.
- **Doctors** diagnose symptoms and recommend treatment for patients. They have a wide range of clinical experience ranging from newly qualified junior doctors to senior consultants.

- **Emergency medical dispatchers** deal with urgent calls to the ambulance service. They send out and control the various accident and emergency vehicles at each hospital's disposal.
- **Estates and facilities managers** ensure the hospital provides safe and comfortable healthcare facilities for patients, carers, visitors and staff.
- **Finance managers** run hospital budgets to ensure that NHS funds are appropriately allocated, used and accounted for.
- **Gardeners** are responsible for the hospital grounds, helping to grow and cultivate plants, shrubs and lawns at NHS premises. They work alongside grounds staff who maintain the physical environment outside the hospital.
- **General managers** work alongside senior clinical staff in organising the provision and delivery of healthcare.
- **Gynaecologists** are qualified doctors who treat diseases and disorders of the female reproductive system.
- **Hand therapists** are either occupational therapists or physiotherapists with a special expertise in the treatment of hand injuries and conditions. They assess hand movement, sensation and function, and manage wounds and scars.
- **Health records staff** organize, retrieve and archive patient records on the wards and in outpatient clinics. They work with paper and computerized health records.
- **Health support workers** provide care to patients under the supervision of a healthcare professional such as a doctor or senior nurse.
- **Health visitors** are qualified nurses who have undergone specialist training on health promotion and illness prevention for babies and children under five.
- **Housekeepers** manage a wide range of services on the ward, including cleaning, catering and bedclothes.
- **Human resource (HR) managers** are responsible for the recruitment, selection, appraisal, development and training of all staff.
- **Laboratory staff** work in pathology laboratories, helping doctors and scientists to diagnose and treat disease.
- **Learning disability nurses** are often part of a wider care team who work with people with learning disabilities to help them become as independent as possible.

- **Library staff** support health professionals and management in their education, training and development. Volunteer librarians provide books to patients staying on a ward.
- **Laundry services** take items of clothing or linen from wards and other patient areas, then clean and return them.
- **Health service managers** are responsible for delivering quality local healthcare through the management of hospital, community and family health services.
- **Medical laboratory assistants** are clinical support staff who work in laboratories, helping doctors diagnose and treat disease.
- **Mental health nurses** care for people with mental health problems in hospitals and in the community, working with hospital consultants and GPs.
- **Midwives** offer individual care to pregnant women and their families. They assist women during labour on the obstetric ward and in the delivery suite.
- **Molecular geneticists** use chemical examination of cellular DNA to define genetic abnormalities.
- **Neurosurgeons** are highly trained surgeons who deal with the diagnosis and treatment of problems that affect the brain and nervous system.
- **Nurses** work in a variety of settings to provide and manage the care of individual patients. They work closely with doctors and other healthcare professionals.
- **Nursing assistants** help provide basic patient care under the guidance of nurses.
- **Nursery staff** provide care for children up to five years old. They often work in crèches that children of hospital staff can use.
- **Obstetricians** are doctors who mainly deal with the management of pregnancy and childbirth. They work in outpatient clinics and on hospital wards and can perform operations such as Caesarean sections.
- **Occupational therapists** help people overcome mobility problems arising from illness or disability. They concentrate on what patients can achieve, rather than focusing on their disabilities.
- **Ophthalmologists** are doctors who specialize in the medical and surgical management of eye conditions. They work closely with optometrists.

- **Optometrists** perform eyesight tests and examinations. They prescribe contact lenses or glasses to those who need them.
- **Orthoptists** assess and manage a range of eye problems, usually linked to the way eyes move.
- **Orthodontic specialists** work in the branch of dentistry concerned with the correction of misaligned teeth and jaws. This is done with braces, retainers or other dental appliances.
- **Orthopaedic technicians** work in trauma, orthopaedic and accident and emergency clinics to fix fractures and broken bones. They apply plaster and plastering techniques to align bones and heal injuries.
- **Orthotists** help patients with foot problems. They provide splints, braces and special footwear to improve movement, correct deformities and relieve discomfort.
- **Paediatricians** specialize in the diagnosis and treatment of childhood illnesses. They work in children's hospital wards and outpatient clinics.
- **Paramedics** are the senior members of accident and emergency ambulance crews. They are trained in all aspects of pre-hospital emergency care and in emergency driving. They are qualified to give emergency medical treatment.
- **Pathologists** are qualified doctors who study the causes of diseases and specialize in their detection. They perform post-mortem examinations on bodies after death if required and also analyze organs.
- **Pharmacists** are experts in drugs, including dosage and side-effects. They can be involved in all aspects of the use, preparation and development of a medicine. They work in the hospital pharmacy alongside pharmacy technicians.
- **Pharmacy technicians** help prepare and deliver medicines, store incoming drugs and make up sterile preparations.
- **Phlebotomists** take blood from patients in wards or outpatient clinics for examination in laboratories.
- **Physiotherapists** treat the physical problems caused by accidents, illness and ageing, particularly those that affect the muscles, bones, heart, circulation and lungs.
- **Podiatrists and chiropodists:** specialize in keeping the legs and feet healthy.

- **Porters** move patients between different departments and wards in safety and comfort. They also transport any equipment that may need moving around the hospital.
- **Prosthetists:** provide artificial limb replacements for patients who have lost or were born without a limb.
- **Psychiatrists** are qualified medical doctors who specialize in the diagnosis and treatment of mental health conditions. They can prescribe medicines and may also use psychological (talking) treatments to help patients.
- **Psychologists** have a degree in psychology, but are not qualified medical doctors. They use psychological approaches to bring about improvements in patients' mental health. They cannot prescribe medicines.
- **Psychotherapists** use psychological approaches to treat adults and children with a wide range of mental, emotional and behavioral problems. Again, they are not qualified medical doctors so can't prescribe medicines.
- **Radiographers** work in X-ray departments to produce and interpret images used in the diagnosis of injury and disease.
- **Radiologists** are specialist doctors who work either in clinical radiology (diagnostic scans) or clinical oncology (cancer treatment). **Therapeutic radiographers** treat cancer patients using high doses of radiation.
- **Respiratory physiology technicians** work with **respiratory consultants** to carry out investigations that help the diagnosis of breathing disorders, such as asthma and emphysema.
- **Medical secretaries** work for a consultant or a group of consultants. They type up letters from consultants to GPs and other departments. They also arrange consultants' timetables.
- **Speech and language therapists** work with people who have problems communicating because of speech defects and patients who have difficulty chewing or swallowing.
- **Sterile services managers** are responsible for supplying sterile equipment on wards and making sure all medical equipment is properly disinfected.
- **Stores staff** are responsible for general stock taking. They collect and deliver stores to wards, clinics and departments.

- **Surgeons** are qualified doctors who specialize in operating on particular parts of the body. These range from junior surgeons to highly qualified senior consultants.
- **Ward clerks** work under the supervision of the ward manager and other qualified staff on a hospital ward. They perform a range of administrative duties, including dealing with patient notes and records.
- **Ward managers** are senior nurses who are in charge of the budgets, staff and medical care of patients on their ward.

	
<p>Plastic Surgeons</p>	<p>Radiographers</p>
	
<p>Pharmacy Technicians</p>	<p>Medical Laboratory Scientific Officers</p>
	
<p>Porters</p>	<p>Physiotherapists</p>
	
<p>Laundry Staff</p>	<p>Dieticians</p>

3-4: Vocabulary revision:

Match up the person with the correct definition:

- 1) consultants
- 2) physiotherapists
- 3) ward sisters/charge nurses
- 4) plastic surgeons
- 5) speech therapists
- 6) chiropodists
- 7) social workers
- 8) medical laboratory scientific officers
- 9) radiographers
- 10) dieticians
- 11) porters
- 12) pharmacists
- 13) laundry staff
- 14) general practitioners
- 15) paediatricians
- 16) occupational therapists:
 - a. They assist patients who have difficulties speaking.
 - b. They take care of people's feet.
 - c. They work together with medical personnel in hospital and try to deal with a patient's problems at home.
 - d. They clean and organize bed linen.
 - e. They move patients on trolleys, beds and wheelchairs.
 - f. They work out special meals and give advice on the most appropriate food.
 - g. They are responsible for, prepare and dispense medicine.
 - h. They are specialized in children.
 - i. Senior medical people who give expert advice and are responsible for final decision making.
 - j. They give massage and exercise to restore specific bodily functions.
 - k. They operate on patients to repair skin damage or improve a patient's appearance.
 - l. Their work is rehabilitation and assistance of people recovering from or suffering from illness.

Hospital Equipment

4-1:introduction:

There are several basic types of equipment used by hospitals:

- Diagnostic equipment includes medical imaging machines, used to aid in diagnosis. Examples are ultrasound and MRI machines, PET and CT scanners, and x-ray machines.
- Treatment equipment includes infusion pumps, medical lasers and LASIK surgical machines.
- Life support equipment is used to *maintain* a patient's bodily function. This includes medical ventilators, anaesthetic machines, heart-lung machines, and dialysis machines.
- Medical monitors allow medical staff to measure a patient's medical state. Monitors may measure patient vital signs and other parameters including ECG, EEG, and blood pressure.
- Medical laboratory equipment automates or helps analyze blood, urine, genes, and dissolved gases in the blood.
- Diagnostic Medical Equipment may also be used in the home for certain purposes, e.g. for the control of diabetes mellitus
- Therapeutic: physical therapy machines like continuous passive range of motion (CPM) machines



4-2: Basic terms:

A biomedical equipment technician (BMET) is a vital component of the healthcare delivery system. Employed primarily by hospitals, BMETs are the people responsible for maintaining a facility's medical equipment. BMET mainly act as an interface between doctor and equipment.

Machine: a piece of equipment which does a particular type of work and which usually uses electricity or power from an engine.

Instrument: a tool or device used to do a specific scientific task or for measuring speed, altitude, pressure, density, etc.

Gadget: a small machine or device that does something useful. E.g: a corkscrew, a potato peeler, etc.

4-3: Instruments used in general medicine Instruments used in general medicine and clinics (i.e. internal medicine and pediatrics) are as follows:

- **Stethoscopes:**
Used to hear sounds from movements within the body like heart beats, intestinal movement, breath sounds, etc.
- **Reflex testing hammer (padded):**
To test motor reflexes of the body
- **Sphygmomanometer (Blood pressure meter):**
To record the patient's blood pressure
- **A thin beam electric torch:**
To see into the eye, body's natural orifices, etc., and to test for pupillary light reflex, etc.
- **A watch / stopwatch:**
Used in recording rates like heart rate, respiratory rate, etc.; for certain tests of hearing
- **A measuring tape:**
For size measurements
- **Tongue Depressor:**
for use in oral examination
- **A weighing machine:**
To record the weight
- **Tuning forks:**
To test for deafness and to categorize it
- **Kidney dish:**
As a tray for instruments, gauze, tissue, etc.
- **Bedpan:**
For patients who are unconscious or too weak to even sit up or walk to the toilet to defecate
- **Thermometer:**
To record the body temperature

- **Gas cylinders:**
Supply of oxygen, nitrous oxide, carbon dioxide, etc.
- **Oxygen mask or tubes:**
Delivering gases up to the nostrils to assist in oxygen intake or to administer aerosolized or gaseous drugs
- **Vaporizer:**
To produce vapors
- **Instrument sterilizers:**
Used to sterilize instruments in absence of an autoclave
- **Dressing drums:**
Storage of gowns, cotton, linen, etc.
- **Nebulizer:**
To produce aerosols of drugs to be administered by respiratory route
- **Positive pressure ventilator:**
To assist or carry out the mechanical act of inspiration and expiration so that the patient who cannot respire on his / her own may respire; it is a component of "life support"
- **Cardioverter / Defibrillator:**
To correct arrhythmias of the heart or to start up a heart that is not beating
- **Dialyser:**
To remove toxic materials from the blood that are generally removed by the kidneys; used in case of renal failure
- **Rubber catheter:**
To drain and collect urine directly from the bladder (primary use); also to act as a makeshift oxygen tube, etc.
- **Syringe of different sizes and needles:**
For injections and aspiration of blood or fluid from the body
- **Canula:**
A kind of a needle that is used to create a permanent pathway to a vein (or artery) for the purpose of repeated injections or infusion of intravenous fluids
- **Transfusion sets:**
Used to transfuse blood and blood products
- **Sucker:**
For sucking up blood or secretions.

- **Nasogastric tube:**
Used for nasogastric suction (or at times introduction of food or drugs).
vide link
- **Stomach tube:**
A tool used for feeding.
- **Levin's tube:**
A plastic catheter introduced through the nose and used in gastric intubation for gastric decompression or gavage feeding.
- **Kehr's "T" tube :** urinary
- **•Infant feeding tube:** -do-; for infants
- **Spectacles:**
For protection of the eyes or for refractive error correction
- **Enema set**
To passively evacuate the r:ectum of faeces; *vide link*
- **Bandage:**
To cover and protect certain areas of the body such as recent injury
- **Pipettes or droppers:**
To measure out doses of liquid, especially in children
- **Graduated spoons:**
To measure out doses of liquids
- **Ophthalmoscope:**
To look at the retina
- **Otoscope:**
To look into the external ear cavity
- **Endoscope:**
To look inside the esophagus, stomach, upper intestines, bile duct, larynx, trachea, bronchi-through the mouth; anal canal, rectum, colon-through anus; used mainly in Surgery or by surgical consultants
- **Proctoscope:**
To look inside anal canal and lower part of the rectum
- **Linen:**
For dressing and draping
- **Beds, bottle stands, etc.**
- **Gauze, cotton, antiseptics, gloves etc.**

Instruments used in general medicine		
		
Clinical mercury manometer	Syringe and needle	Blood infusion set
		
Stethoscope	Intravenous cannula (parts)	Bedpan
		
Tuning fork	Mercury thermometers	Kidney dish
		
Reflex hammer	Queen square reflex hammer	Weight scale
		
Enema bulb	Ophthalmoscope	Endoscope
		
Bandage	Defibrillator	Hemodialysis machine
		
Cylinder of oxygen	Nebulizer	High frequency ventilator

Hospital ward equipment:

- A **basin** or small bowl can be plastic or metal, sterilized or not and can be used for holding antiseptics and other solutions or as a container for gauze swabs, cotton balls, etc. They can also be disposable and made of fine plastic or cardboard.
- A **bed pan** is an object used for the toileting of a bedridden patient, usually made of a metal, glass, or plastic receptacle. A bed pan can be used for both urinary and fecal discharge.
- An **IV pole** is a device used to administer liquid substances into the veins of the patients. Also referred to as a drip.
- **Beakers** are deep wide mouthed thin-walled vessels usually with a lip for pouring that is used especially in science laboratories.
- An **examination table** can be plastic or metal, sterilized or not and can be used for holding antiseptics and other solutions or as a container for gauze swabs, cotton balls, etc. They can also be disposable and made of fine plastic or cardboard.
- **Disinfectant** is an agent that frees from infection.
- A **stretcher** is a device used to carry casualties or an incapacitated person from one place to another. It is a simple type of litter, and still called by that name in some cases.
- A **defibrillator** is an electronic device that applies an electric shock to restore the rhythm of a fibrillating heart.
- A **heart monitor** is a device that allows to control the patient's heart rate.
- A **hospital bed** is a bed specially designed for hospitalized patients or others in need of some form of health care. These beds have special features both for the comfort and well-being of the patient and for the convenience of health care workers. Common features include adjustable height for the entire bed, the head, and the feet, adjustable side rails, and electronic buttons to operate both the bed and other nearby electronic devices.

Hospital equipment			
	Basin		Disinfectant
	Bed pan		Stretcher
	IV pole		Defibrillator
	Heart monitor		Hospital bed
	Beakers		Examination table

4-4: Medical equipment:

- A **needle** is a slender hollow instrument for introducing material into or removing material from the body parentally.
- A **syringe** is an instrument (as for the injection of medicine or the withdrawal of bodily fluids) that consists of a hollow barrel fitted with a plunger and a hollow needle.
- A **percussion hammer** is used for testing reflexes.
- A **scalpel** is a small sharp pointed knife used in surgery.

- A **thermometer** is used for measuring body temperature. This may be taken orally, in the axilla or in the rectum.
- A **stethoscope** is used for listening to heart sounds or a “pulse” – the heartbeat.
- **Scissors** can be used to cut different types of things.
- An **otoscope** is an instrument used for examining the ear and for seeing the tympanic membrane.
- A **tongue depressor** is a device used in medical practice to depress the tongue to allow for examination of the mouth and throat.
- An **oxygen bag** is a device used for providing oxygen to the patients who need it.
- A **sphygmomanometer or blood pressure monitor** is an instrument used for taking blood pressure. It can be manual or electrical.
- **Sterile rubber gloves** are used for doing any sterile procedure and by all the staff in the operating theatres.
- **Forceps** are generally used for picking up something or holding things when using a “no-touch” sterile technique.
- A **Test Tube** is a plain or lipped tube usually of thin glass closed at one end and used especially in chemistry and biology.

Medical equipment			
	Needle		Sterile syringe
	Syringe		Scalpel
	Hammer		Thermometer
	Stethoscope		Sphygmomanometer/blood pressure monitor (manual/electric)
	Scissors		Rubber gloves
	Otoscope		Forceps
	Tongue depressor		Tubing
	Oxygen bag		Test tube

4-5: Patient equipment

- A **wheelchair** is a chair mounted on wheels especially for the use of disabled individuals.
- A **walker** is a framework designed to support an infirm or physically disabled person.
- A **brace** is an appliance that gives support to movable parts (as a joint or a fractured bone), to weak muscles (as in paralysis), or to strained ligaments (as of the lower back).
- A **sling** is a hanging bandage suspended from the neck to support an arm or hand.
- A **crutch** is a support typically fitting under the armpit for use as an aid in walking.
- A **cane** is a stick used in walking.

Patient equipment			
	Wheelchair		Cane
	Walker		Crutches
	Sling		Brace

