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**Prof. Bagyavathi Battini**  
Principal, MSc [N],  
Maheshkala Municipal  
Institute of Nursing Sciences,  
Howrah, West Bengal, India

**Mrs. Usha Rani Kandula,**  
MSc [N], Assistant Professor  
in Adult Health Nursing,  
Department of Nursing,  
College of Health Sciences,  
Arsi University, Asella,  
Ethiopia

**Mrs. Reetha Murugesan**  
MSc [N], Assistant Professor in  
Child Health Nursing,  
Department of Nursing,  
College of Health Sciences,  
Arsi University, Asella,  
Ethiopia

**Mrs. Siresha Inapagolla**  
MSc [N], Junior Lecturer,  
Department of Nursing,  
Intermediate Education, Govt.  
Junior College, Atmakur,  
SPSR Nellore, Andhra  
Pradesh, India

**Mrs. Gera VijithaVinni**  
Principal, MSc [N], OBG  
Department J Eashwari Bai  
Memorial School of Nursing,  
Secunderabad, Hyderabad,  
Telangana, India

**Corresponding Author:**  
**Prof. Bagyavathi Battini**  
Principal, MSc [N],  
Maheshkala Municipal  
Institute of Nursing Sciences,  
Howrah, West Bengal, India

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## Medical equipment: A brief insight on commonly use- in all health care settings

**Bagyavathi Battini, Usha Rani Kandula, Reetha Murugesan, Siresha Inapagolla and Gera VijithaVinni**

### Abstract

Medical equipment is essential in hospitals, and it also aids in the treatment of many medical diseases. In recent years, the healthcare sector is seeing the emergence of many other innovative medical devices. To provide better services to patients, the healthcare system, whether laboratories, health centers, or hospitals, incorporates a wide range of specialized technology and equipment. Every hospital necessitates medical equipment to deliver high-quality, premium care. Medical equipment will have specialized uses and applications, but all medical devices are designed to continue providing patients with treatment and safety. The difficulty of testing has dropped as technology has advanced. We now have a wide range of devices to do various types of testing, which now has improved health positive patient outcomes. This has also strengthened the quality of care in deserving and distant areas. The medical equipment in the restoration center is assisting patients in promptly recovering and resuming regular life. The digital revolution in health monitoring devices has made screening more accessible since we can now examine the patient's health status when they're at home. Every hospital should have the essentials medical equipment. The application of medical devices is very much an exceptionally crucial aspect of the work of a healthcare professional. All healthcare professional users must always be taught and enlightened frequently to ensure that they are proficient in the handling of medical devices. So, the researcher had the key interest to increase the familiarity with the various kinds of medical equipment or devices among the health care professionals to identify the specific device and its purpose of application in the health care sector.

**Keywords:** Medical equipment, hospital equipment, patient care devices, medical devices, patient care equipment

### Introduction

Hospital is a health care organization; it should be well organized with staffing and equipment which helps for the diagnosis of the patients and providing care to the patients [1]. The patients use to receive medical services from the various health organizations according to the specific organ problem. Effective care is provided to the patient by using medical equipment and skilled health care professionals. There is a different category of medical devices are available for providing care to hospitalized patients in any health care organization [2].

The health care professionals should be familiar with the hospital equipment, how to handle and utilization of this equipment or devices in delivering direct patient care. The hospitals should maintain the quality of the equipment for delivering prompt care to the patients [3]. Currently, the health organization is well established with new medical equipment. There is an essential need to maintain the efficiency of equipment by all health professionals, for better outcomes of the patient prognosis and to reduce the cost-effectiveness of the patient care [4].

### Clinical implications of hospital equipment


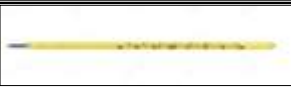






Advancing medical equipment and devices will play a crucial role in the diagnosis and management of the patient in the health care sector. Each category of hospital equipment will have a different purpose during the utilization and its applications while care of the patient in the hospital settings [5]. The current aim of the study will be to identify the commonly available equipment are discussed with graphical illustrations, which is used in the delivery of patient care. The newly engaged health professional are benefitted from the above title, to enhance knowledge in their regular clinical practices.









**Methods**









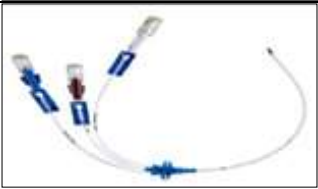

In this review paper, the researcher tries to address the commonly used hospital medical equipment for the patient's special and routine care purpose. This article tries to help all health professionals to know the main purpose of medical devices or equipment. The author analyzed there is a gap between the health care professionals, especially new joined health care people to identify the medical equipment and its major purposes. So, the author decided to bring awareness









among the health professionals to identify the medical equipment with image illustrations and try to address the commonly used major equipment in this article. To gather the manuscript data the author searched different online data sources related to medical equipment and its major purposes with images and carefully cited each equipment for to search the wide extensive manner by users and made easily available as per the need of the health care professionals (Table-1).









**Table 1:** List of medical equipments



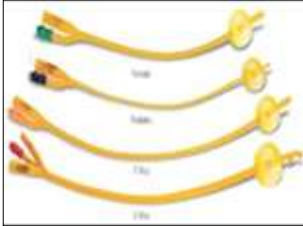





Sl. No	Name of the Medical Equipment	Purpose of the Medical Purpose	Image of the Medical Equipment
1.	Clinical Thermometer	Body temperature measurement (Oral and axilla) [6, 7]	
2.	Rectal Thermometer	Rectal temperature measurement [8]	
3.	Digital Thermometer	Body temperature measurement (Axilla) [9]	
4.	Non-contact Infrared Thermometer	Body temperature measurement (Forehead) [10]	
5.	Tympanic Thermometer	Body temperature measurement (Tympanic cavity) [11]	
6.	Cardiac Monitor	It is a device that displays the ECG waveforms of the cardiovascular system, and it records the vital signs of the patient (Blood pressure, Pulse or heart rate, Respiration, Spo2- Oxygen saturation) [12]	
7.	Mechanical Ventilator	It is an automatic machine, designed for the maintenance of respiratory function of the patient by assisting in the breathing process and maintenance of adequate ventilation of the lungs [13, 14]	
8.	AMBU Bag With Face Mask	It is a medical device, helps to send force air into the patient lungs, and is unable to breathe due to airway obstructions or due to respiratory complications and assists in delivering oxygen to the patient by a manual resuscitation bag [13, 15]	









9.	Endotracheal Tube	It is a flexible plastic tube, which is placed through the mouth into the trachea to assist the patient breathing process and adequate supply of oxygen to the lungs <sup>[16]</sup> . Non-cuffed and cuffed endotracheal tube	
10.	Guided Airways	Oropharyngeal airway (OPA) or guedel airways, it helps to establish an opening between the tongue and the posterior pharyngeal wall and maintain the airway patency; helps in airway management, prevents tongue fall, and restores pharyngeal airway patency <sup>[17, 18]</sup>	
11.	C-PAP Machine	It is a motor compressor, able to create continuous pressurized air passing through an air filter into a flexible tube, which helps to maintain or Increase air pressure in the lungs <sup>[19, 20]</sup>	
12.	Bi-PAP Machine	It supplies pressurized air into your airways. It is called "positive pressure ventilation <sup>[21]</sup>	
13.	APAP Machine	It is a mechanical device connected through a mask to the pressure generator and which help to maintain positive airway pressure of the lungs, especially during sleeping of the patient <sup>[22]</sup>	
14.	T-Piece Connector	It is T-shaped tubing connected to an endotracheal tube that will be used to deliver oxygen therapy to an intubated patient who does not require mechanical ventilation <sup>[6]</sup>	
15.	Pulse Oximeter	The device helps in measuring oxygen saturation level, or the oxygen levels in the blood <sup>[23]</sup>	
16.	Tracheostomy Tube	The tube placed in the trachea with the surgical incision in cases of respiratory failure, which helps in the direct delivery of airflow (oxygen) into the lungs <sup>[24]</sup> . Cuffed and Non-cuffed tracheostomy tube	

17.	Oxygen Cylinder With Flow Meter	Breathing oxygen is delivered from the storage tank to the patients, Oxygen flow meter- is mainly used to regulate the flow of oxygen, oxygen humidification <sup>[25]</sup>	
18.	Oxygen Mask	It helps in delivering oxygen with concentrations from 40 to 60% at flow rates between 10 to 12LPM <sup>[26]</sup>	
19.	Nasal Prongs	It allows the delivery of oxygen concentrations of between 24 to 40% at flow rates between 1 to 6LPM <sup>[26]</sup>	
20.	Oxy Hood	It is an oxygen delivery device, which is used for uncooperative patients or children or suffering from facial deformities and used to support the breathing pattern of the patient <sup>[27]</sup>	
21.	Oxy Tent	It is a tent-like device used to deliver continuous oxygen support to a bedridden patient, who is suffering from respiratory distress. It covers the patient head and upper part of the body to meet the oxygen demands of the patient <sup>[28]</sup>	
22.	Nebulizer with mask	A device that helps in delivering liquid medicine into aerosol or inhalations and the medicine delivered through a nebulizer mask into the respiratory passages <sup>[29]</sup>	
23.	Nasogastric Tube	Nasogastric tubes are part of the standard of care in treating intestinal obstruction and can also be used to provide nutritional support <sup>[30]</sup>	
24.	Colostomy Bag	A colostomy bag is a plastic bag that collects fecal matter from the digestive tract through an opening in the abdominal wall called a stoma <sup>[31]</sup>	
25.	Central Venous Catheter (CVC)	A central venous catheter, also called a central line, is a long, thin, flexible tube used to give medicines, fluids, nutrients, or blood products over a long period, usually several weeks or more <sup>[32]</sup>	
26.	Intravenous Cannulas	Intravenous cannulas are inserted into a vein to provide venous access for the administration of IV fluids and medications for the therapeutic purpose <sup>[33]</sup>	





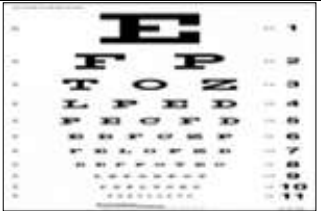




27.	Syringe and Needle Destroyer	It is an electronic device, which is used to destroy the used syringe with needles to prevent unwanted needle stick injuries <sup>[34]</sup>	
28.	Tourniquet	It is a compressing device, which is used to control peripheral blood circulation from an extremity during blood sample collection for diagnostic procedures <sup>[35]</sup>	
29.	Lumbar Puncture Needle	The needle used for the collection of CSF and by puncturing the lumbar area for the diagnostic purpose <sup>[36]</sup>	
30.	Scalp Vein Set	Scalp vein sets are is easy to access a superficial vein with flexible transparent tubing and a connector, which are used for drug administration <sup>[37]</sup>	
31.	Blood Transfusion Set	These are used for the transfusion of blood components, 170 - 260-micron filters <sup>[38]</sup>	
32.	Intravenous Transfusion Set	Intravenous administration or transfusion sets are in use to optimize the infusion delivery process, reduce or prevent the risk of infection from the patient, and to maintains IV access sites clean and protected to prevent complications <sup>[39]</sup>	
33.	IV (Intravenous) Stand or IV poles	Intravenous poles are also known as IV poles. The devices that keep intravenous bags full of medicine or fluid in place. The bags are hanging from the hooks at the top of the pole and they are connected by a tube into a patient's veins through intravenous cannulas to administer the IV fluids securely and efficiently <sup>[40]</sup>	
34.	Three-way Stop Cock Or Connector	The device helps in the administration of intravenous fluids by converting a single line into double line. Three-way stop cock or connector with Intravenous cannula	




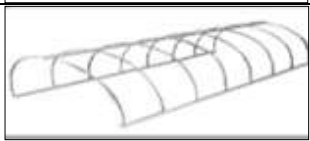




35.	Umbilical Clamp	It is a clamping device, which is used to clump the umbilical cord to stop the blood flow from the placenta after delivery of the baby within one minute of the duration to control the bleeding from the mother <sup>[41]</sup>	
36.	Mucus Sucker	It is a plastic sucking device, which is used for the removal of nasal or oral secretions from the patients to maintain airway patency <sup>[42]</sup>	
37.	Cardiac Table	A table in the hospital which is used for the patient's and staff comforts during hospitalization and carrying of any procedure to the patients and may assist the patient in many activities, helps in meals eating or resting in fowler's position. It is used to maximize the safety of both patients and staff <sup>[43]</sup>	
38.	Backrest	Backrest is a comfortable device that assists in providing suitable support and rest for the back of the patient in a sitting position during hospitalization and may use in the home environment if need identified <sup>[43]</sup>	
39.	Hemodialysis Machine	The machine helps in the removal of nitrogenous waste products from the blood in cases of kidney failure by using an artificial dialyzer by adding bicarbonates as dialysate <sup>[44]</sup>	
40.	Ultrasonography Machine	It is an electronic device that helps in an ultrasound scan and uses high-frequency sound waves to create images of the inside of the body for diagnostic procedures <sup>[45]</sup>	
41.	Phototherapy Machine	It is a mechanical device, which helps to exposure to fluorescent light bulbs or a different source of lights used to treat the different medical conditions (Jaundice, skin conditions) <sup>[46]</sup>	
42.	ICU baby Warmer	It is a radiant medical device, which helps to maintain the heat of the body and prevent hypothermia <sup>[47]</sup>	










43.	Suctioning Machine	A suction machine, also known as an aspirator a type of medical device that helps in removing airway obstructions from unconscious patients like mucus, saliva, blood, or secretions and maintains patient's airway clearance <sup>[48]</sup> . Wall suctioning machine (Fixed machine in the (ICU/Emergency).	
44.	Suctioning Catheter	It is a plastic flexible catheter that helps in the removal of oral or endotracheal secretion from the unconscious patients by the placement of guided airway and endotracheal catheter, to maintain the patency of the airway and enhance the breathing process <sup>[49]</sup>	
45.	Foley's Catheter	A urinary catheter is a flexible and soft rubber tube placed in the urinary bladder during a urinary catheterization procedure, to drain and collect urine from the bladder for the therapeutic management of diseases or surgeries <sup>[50]</sup>	
46.	Male External or Condom Catheter	External urinary catheters (Condom catheters) are a noninvasive method of urinary catheterization used for male patients, which helps to drain urine from the bladder through a thin tube inserted into the urethra and connected to the urinary drainage bag with gravity maintenance <sup>[51]</sup>	
47.	Kelly's Pad	It is a medical device that helps to funnel blood to a collection, to assist in the identification of postpartum hemorrhage (PPH). The pad is washable and sterilizable, and only for hospital use, especially for obstetrical cases <sup>[52]</sup>	
48.	Insulin Syringe (1ml)	The syringe helps for drug delivery into the subcutaneous tissue, commonly used by diabetes mellitus patients who are under treatment of insulin administration <sup>[53]</sup>	
49.	50ml Syringe	The 50 ml syringe specially used to perform certain procedures as Gastro-ental feedings, manual aspiration of liquids or gas from the stomach, and manual pharyngeal or tracheal aspiration/suction <sup>[54]</sup>	
50.	Hot Water Bag	These bags are designed with plastic materials and have a tightly closed lid, helps in reducing post-operative pain and relieving discomfort on local application <sup>[55]</sup>	










51.	Ice Bag	It helps to reduce body temperature, pain, swelling, and inflammation [56, 57]	
52.	Urine Specimen Bottle	It helps for the collection of the urine sample by the patients and to send for diagnostic purposes with patient identification in the hospitals [58]	
53.	Blood Culture specimen Bottle	It is a sterile specimen bottle, which is used for culturing process of blood, to identify the causative agent for the infections in the blood [59]	
54.	Vacutainer tubes / Blood sample collection tubes	These vacuum tubes are specially designed for the collection and storage of blood for laboratory diagnostic purposes [60]	
55.	Hospital Bed with Air Mattress	The specially designed hospital bed with air mattress helps to prevent bedsores or decubitus ulcers/pressure ulcers from the bedridden or immobility patients, and provide comforts to the patient during hospital stay [61]	
56.	Intercostal Drainage Bag (ICD)	It is a sterile surgical catheter, inserted into the pleural cavity for the collection of chest drains. It helps for the removal of air, blood, or fluid by the maintenance of gravity, allowing expansion of the lungs and removal of excess pressure in the thoracic cavity [62]	
57.	Urinary Collection Bags	It is a sterile urinary bag with a measurable meter connected with a urinary catheter for the collection of urine from the bedridden or surgical cases by the maintenance of the gravity force [63]. Uro-meter and uro-bag	
58.	Sputum Cup	It is a plastic sterile device, given to the patient who is suffering from respiratory illness with productive cough, for collection of sputum in a closed container for the diagnostic procedures and to prevent cross-infection among the hospitalized patients, recommended to use in the home also [64]	





















59.	Enema Can	It is used during the procedure of enema; the can is connected with the tubing for inserting liquid solution into the rectum, and to clean the intestine before surgeries and diagnostic procedures (Colonoscopy) or under the treatment of constipation <sup>[65]</sup>	
60.	Measuring Cup	It helps to measure the liquid medicine and to measure the liquid diet if the patient is under nasogastric gavage feedings <sup>[66]</sup>	
61.	Sitz Bath Tub	It is used during postoperative management of anal and rectal problems (hemorrhoids, anal fissure), by adding half of the tub with lukewarm water and 2ml of betadine solution and to be instructed to the patient to sit in the tub for 15 minutes, to get relief from anal and rectal problems <sup>[67]</sup>	
62.	Measuring Tape	It helps to measure the patient abdominal girth, in children it helps to measure the arm, head, and chest circumferences <sup>[68]</sup>	
63.	Snellen Chart	It helps to measure the visual acuity by determining the level of visual details that a person can discriminate <sup>[69]</sup>	
64.	Tonometer (Schiotz)	A tonometer is an instrument, used to measure the intraocular pressure (IOP) of the eye, the procedure name known as tonometry <sup>[70]</sup>	
65.	Eye Shield	It is a plastic sterile device, used to protect the cornea and lens of the patient after surgical interventions (cataract), helps to prevent foreign material entry into the eyes <sup>[71]</sup>	
66.	Percussion Hammer	It is a medical instrument used by physicians or health professionals to examine the deep tendon reflexes of the patients as an essential diagnostic confirmation test for neurological disorders; it may also assist in chest percussion examination <sup>[72]</sup>	
67.	Medicine Crusher	It helps to crush the tablets into powder form in case of medication administration to the unconscious patients, powdered medicine mixed with liquid feedings and administered through nasogastric tube feedings <sup>[73]</sup>	

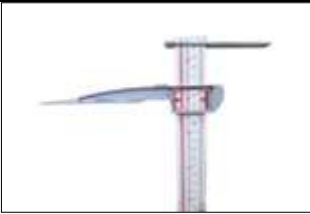

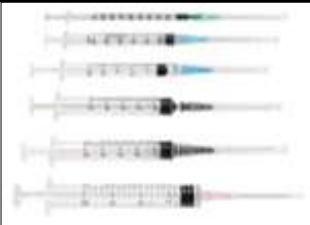


68.	Bath Thermometer	The device helps to measure the temperature of the water, which helps to prevent the excess temperature of the water, during sponge bath or bed bath of hospital admitted patients <sup>[74]</sup>	
69.	Nail cutter and Nail brush	Nail cutter and nail brush are used in the hospital to cut the patient nails and clean the fingertips of the nails Nail cutter and Nail brush	
70.	Asepto Irrigation Bulb-Syringe	The device helps for wound cleaning, enteral feedings, stomach aspirations, and urinary bladder irrigation, suctioning procedures <sup>[75]</sup>	
71.	Burns cradle	It maintains the privacy of the patient by covering it with the blanket	
72.	Stethoscope	The instrument used for the auscultation of the heart, lung, bowel sounds, blood flow of the peripheral vessels <sup>[76]</sup>	
73.	Sphygmomanometer	The device helps to measure the blood pressure (Systolic and diastolic) <sup>[77]</sup> Sphygmomanometer with indicator & with mercury	
74.	Infusion Pump	It is a medical device, used to deliver intravenous fluids into a patient's body in a controlled manner (according to drop setting rates) <sup>[78]</sup>	
75.	Syringe Pump	It is an electronic device, used to deliver a very small amount of medications (inotropes), mechanically moving the piston of a syringe to send the medication into IV tubing <sup>[79]</sup>	

76.	Defibrillator	A defibrillator is a mechanical device; used to send an electric shock to the heart to stop an arrhythmia and to control the electrical signals of the heart due to various causes <sup>[80]</sup>	
77.	Bed-Side Rails	These are the comfortable devices, helps in patient safety and prevent injury to the patient by avoiding fall from bed <sup>[81]</sup>	
78.	Hospital Bedside Locker	These are essential in the hospital and placed beside the patient bed, to preserve the patient medical reports and other personal belongings of the patient <sup>[82]</sup>	
79.	Foot Rest	It is a comfortable device, used to support the patient foot, it helps to reduce the pressure in the legs and prevent deep vein thrombosis <sup>[83]</sup>	
80.	Wheel chair	It helps the patients in the process of ambulation and who are unable to walk due to illness, injury, or disability <sup>[84]</sup>	
81.	Walker	The assistive device, which helps the patient to walk independently after the surgical intervention, or mobility restrictions due to fractured incidents <sup>[72]</sup>	
82.	Stretcher	It helps in hospital for shifting the patient from one place to another place, and supporting the patient by proper positioning during transportation <sup>[85]</sup>	
83.	Weighing-Machine	It helps the hospital, to check the patient body weight and helps in the calculation of body mass index <sup>[86]</sup>	
84.	X-ray Machine	It is one of the radio diagnostic devices, which helps to find the diagnostic findings of the patient disease condition <sup>[87]</sup>	

85.	ECG Machine	It is an electronic device with ten electrodes, which helps to detect cardiac problems by tracing the electrical activity generated by the heart <sup>[88]</sup>	
86.	2D echo Machine	It is a movable electronic device that helps to perform the cardiac investigation of a 2-Dimensional echocardiogram (Cardiac ultrasound). The test can be examined for valves of the heart and blood pumping strength, identifies structural defects, enlargement of the heart, or fluid buildup in the heart <sup>[89]</sup>	
87.	Blood-gas-Analyzer	It is a machine that helped to measure the arterial blood gas analysis and to detect the amount of oxygen, carbon dioxide, PH of the blood, and metabolic problems of the blood <sup>[90]</sup>	
88.	Computed Tomography (CT) Machine	It is a radio diagnostic device, which helps to detect the problems of the body like the spine and head imaging, vascular imaging (e.g., detection of blood clots), gastrointestinal imaging, cancer staging, and radiotherapy treatment planning, rapid imaging of trauma, imaging of musculoskeletal disorders, screening for cancers and heart disease, detection of signs of infectious disease, and guidance of certain interventional-procedures <sup>[58]</sup>	
89.	Magnetic Resonance Imaging Machine (MRI)	It is a radio diagnostic device that can produce three-dimensional anatomical images, which helps to detect the problems of the body like the brain, spinal cord and nerves, muscles, ligaments, and tendons, etc are seen much more clearly with MRI than with regular x-rays and CT <sup>[58]</sup>	
90.	Laparoscope	It is an electronic device that helps to perform laparoscopy examination, it is used to examine the internal organs of the abdomen <sup>[91]</sup>	
91.	Bronchoscope	It is a flexible fiber-optic device that helps to perform bronchoscopy examination, assist the pulmonologist to identify the problems in the airways or respiratory passages <sup>[92]</sup>	
92.	Flexible Endoscope	It is a flexible fiber-optic device, used to perform intra-abdominal or intra-thoracic surgeries <sup>[93]</sup>	
93.	Colonoscopy Device	A colonoscopy is a flexible fiber-optic device with a light source, colonoscopy is the examination used to diagnose intestinal cancers and to detect colon abnormalities <sup>[94]</sup>	

94.	Medical Emergency Crash Cart	Crash cart is a self-contained emergency drug trolley, which consists of life-saving drugs, airway management devices, and other necessary equipment for the immediate resuscitation of the patient <sup>[95]</sup>	
95.	Surgical Gloves	Surgical gloves are very essential protective materials that need to work by the health care professionals during care of the patient, which keeps away the patient from infection during surgeries and while performing invasive procedures by the physicians, and maintains protection by the health care professionals <sup>[96]</sup>	
96.	Wound Swab Stick	It is a sterile swab stick, which helps to collect the wound swab specimen for the culture and sensitivity microbiology lab investigation purpose <sup>[64]</sup>	
97.	Glucometer	It is a small portable machine, used to measure the level of glucose in the blood. Patients with diabetes use a blood glucose meter, to monitor their blood glucose levels regularly <sup>[97]</sup>	
98.	Hospital Screen	It helps to maintain the privacy of the patient during the physical examination and under the diagnostic procedures of the patient	
99.	Incentive Spirometer	It is a device used for increasing the breathing pattern by increasing the lung capacity <sup>[98]</sup>	
100.	Male Urinals	It helps the male patients for urinary elimination in an easy manner, who have undergone surgical interventions or fractured cases with restricted body movements, which assist in measuring and monitoring urinary output <sup>[99]</sup>	
101.	Nelson Inhaler	The medical device helps in steam inhalation of the vapor by adding medication which is mixed with the hot water and instructs the patient for inhalation through the mouth. It may help the patients who are suffering from nasal congestion or blockages <sup>[100]</sup>	
102.	Ophthalmoscope	Ophthalmoscope is an instrument; the ophthalmoscope is a test that helps for the examination of the eye to rule out eye diseases <sup>[101]</sup>	

103.	Otoscope	Otoscope is an ear examination instrument, which helps to identify the ear abnormalities with a light source as a condition of the ear <sup>[102]</sup>	
104.	Torchlight	These are used for examination of the patient with a light source, as different areas of mouth and throat; wound examination; assessment of papillary reflux, etc <sup>[103]</sup>	
105.	Laryngoscope	The light source device which helps in examination of the throat and larynx, may assist with light source during the procedure of mechanical ventilation <sup>[104]</sup>	
106.	Cystoscopy	Cystoscope is a flexible fiber-optic device that performs cystoscopy test, helps in the examination of the urinary bladder to detect abnormal changes in the urinary bladder <sup>[105]</sup> . Flexible and Rigid cystoscopy	
107.	Rhino scope	It is an instrument, which to examine the nose to identify the nasal obstruction, nasal polyps or to detect abnormalities in the nasal cavity <sup>[106]</sup>	
108.	Proctoscopy	Proctoscopy is an instrument that helps to examine anal and rectal problems <sup>[107]</sup>	
109.	CVP- Manometer	The device helps to estimate the right arterial pressure; Helps in the assessment of cardiac preload and volume status in critically ill patients; helps in diagnosis of right-sided heart failure and guides in fluid resuscitation <sup>[108]</sup>	
110.	Double lumen catheter	The catheters help in procedures of blood filtration in cases of renal failure under the management of the hemodialysis or for the administration of the medication by the placement of the central line <sup>[109]</sup>	
111.	Nasogastric Feeding Bag	The feeding bags help for meeting the nutritional status of the patient by the placement of the nasogastric tube into the stomach <sup>[110]</sup>	

112.	Height-Measuring-Scale	It helps for the measurement of the patient height <sup>[111]</sup>	
113.	Refrigerator	It helps in the hospital for the preservation of certain drugs; example: insulin, vaccination <sup>[112]</sup>	
114.	Disposable Syringes	The disposable syringes help in the hospital for administration of the medication to the patient by intramuscular injections or intravenous injections, may assist to insert the air into the inflated devices <sup>[80]</sup>	
115.	ICU Beds	The specially designed ICU beds provide comforts to the patient by the maintenance of proper position by the patient and prevent pressure sores and maintaining normal skin integrity <sup>[113]</sup>	
116.	Bio-Medical Waste Management System	It helps for proper segregation of the waste generated from various procedures in the hospital <sup>[114]</sup>	

**Conclusion**

People can access medical interventions in a multitude of ways. There are hospitals, clinics, and other emergency personnel that assist people in need. The hospital should be happy to address its patients with high-quality care. Medical equipment and supplies are vital in maintaining a person's life or completing out any therapy. With the increased number of medical devices as technology advances, it becomes more intimately embedded into patient care. Medical equipment and instruments must be constantly maintained to maintain optimum performance and to be accessible for use by medical professionals at a specific place and time. When medical equipment is hygienic, approachable, and efficient working order, the medical personnel not only become more successful, but the facilities for patients enhance as well. The performance of the healthcare industry extends from improving asset utilization to increasing the value of health care.

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**References**

1. Hospital | Definition, History, Types, Services, & Facts. Encyclopedia Britannica. <https://www.britannica.com/science/hospital>. Accessed 15 May 2021.
2. Montgomery H. The importance of medical equipment. Camp Media Inc. 2017.

3. <https://www.campshuttersisters.com/the-importance-of-medical-equipment/>. Accessed 15 May 2021.
4. How to maintain hospital equipment to provide top-notch medical care. EZ Office Inventory Blog - Asset Tracking Software, 2019. <https://blog.ezofficeinventory.com/hospital-equipment/>. Accessed 15 May 2021.
5. The importance of equipment efficiency for the healthcare sector - electronic health reporter. Electronic health reporter. <https://electronichealthreporter.com/the-importance-of-equipment-efficiency-for-the-healthcare-sector/>. Accessed 15 May 2021.
6. Keil O, Widmann DE. Assessment of the impact of medical devices on the quality of care. QRB Qual Rev Bull. 1984;10:278-80. <https://pubmed.ncbi.nlm.nih.gov/6436769/>.
7. Judith M. Wilkinson, Leslie S. Treas, Karen L. Barnett, Mable H. Smith. Fundamentals of nursing: Theory, Concepts, and applications. 3rd edition. FA Davis company.
8. Thermometer - procedure, blood, tube, adults, time, infection, operation, types. Encyclopedia of surgery. <https://www.surgeryencyclopedia.com/St-Wr/Thermometer.html>. Accessed 15 May 2021.
9. Wise J. Rectal thermometer should be used for accurate temperature reading, analysis finds. BMJ. 2015;351:h6125. doi:10.1136/BMJ.h6125.
10. How to use a thermometer to take your temperature. Cleveland Clinic.

- <https://my.clevelandclinic.org/health/articles/9959-thermometers-how-to-take-your-temperature>. Accessed 15 May 2021.
10. Ultimate guide for the non-contact infrared thermometer. <https://buythermopro.com/guides/non-contact-infrared-thermometer-guide/>. Accessed 15 May 2021.
  11. Gasim GI, Musa IR, Abdien MT, Adam I. Accuracy of tympanic temperature measurement using an infrared tympanic membrane thermometer. *BMC Res Notes*. 2013;6:194. DOI:10.1186/1756-0500-6-194.
  12. Cardiac monitor - blood, time, operation, heart, rate, definition, purpose, description. *Encyclopedia of surgery*. <https://www.surgeryencyclopedia.com/A-Ce/Cardiac-Monitor.html>. Accessed 15 May 2021.
  13. Smeltzer SC, Bare BG, Cheever KH, Hinkle JL. *Brunner and Suddarth's Textbook of Medical-Surgical Nursing*. 12<sup>th</sup> edition. Wolters Kluwer Health/Lippincott Williams & Wilkins. <https://www.pdfdrive.com/brunner-and-suddarths-textbook-of-medical-surgical-nursing-in-one-volume-d176802193.html>.
  14. Chatburn RL, Mireles-Cabodevila E. Design and function of mechanical ventilators. Oxford University Press. <https://oxfordmedicine.com/view/10.1093/med/9780199600830.001.0001/med-9780199600830-chapter-92>. Accessed 15 May 2021.
  15. The ultimate Ambu bag. AED Superstore Resource Center. 2018. <https://www.aedsuperstore.com/resources/ultimate-ambu-bag-faq/>. Accessed 15 May 2021.
  16. Eldridge L, Paul D. Endotracheal tube definition, purpose, and procedure. *Very well Health*. <https://www.verywellhealth.com/endotracheal-tube-information-2249093>. Accessed 15 May 2021.
  17. Habrat D. How to Insert an Oropharyngeal Airway - Critical Care Medicine. *Merck Manuals Professional Edition*. <https://www.merckmanuals.com/professional/critical-care-medicine/how-to-do-basic-airway-procedures/how-to-insert-an-oropharyngeal-airway>. Accessed 13 May 2021.
  18. Trauma service: Airway procedures. The royal children's hospital Melbourne. <https://www.rch.org.au/trauma-service/manual/airway-procedures/>. Accessed 15 May 2021.
  19. Bouloukaki I, Giannadaki K, Mermigkis C, Tzanakis N, Mauroudi E, Moniaki V, *et al*. Standard follow-up to improve continuous positive airway pressure compliance. *Eur Respir J*. 2014;44:1262-74. DOI: 10.1183/09031936.00021314.
  20. What is a CPAP machine? How it works, pros, cons, other options. *Healthline*. 2020. <https://www.healthline.com/health/what-is-a-cpap-machine>. Accessed 15 May 2021.
  21. BiPap. *Johns Hopkins Medicine*. <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/bipap>. Accessed 13 May 2021.
  22. Brooks R. Pros & cons of APAP therapy. *AAST*. <https://www.aastweb.org/blog/pros-cons-of-apap-therapy>. Accessed 15 May 2021.
  23. Stephens C. Pulse Oximetry: Uses, Readings, and How It Works. *Healthline*. 2017. <https://www.healthline.com/health/pulse-oximetry>. Accessed 13 May 2021.
  24. Tracheostomy. *NHS.uk*. 2017. <https://www.nhs.uk/conditions/tracheostomy/>. Accessed 13 May 2021.
  25. Am care med medical gas solutions. Medical Gas Flowmeter with Humidifier | Oxygen Flowmeter | Medical Air Flowmeter. *Medical Gas System*. <https://www.amcaremed.com/knowledge/importance-using-medical-gas-flowmeter/>. Accessed 13 May 2021.
  26. Easy oxygen. Should I use a Nasal cannula or Oxygen mask with my oxygen concentrator? *Easy Oxygen Australia*. <https://easyoxygen.com.au/blogs/articles/should-i-use-a-nasal-cannula-or-oxygen-mask-with-my-oxygen-concentrator>. Accessed 13 May 2021.
  27. Oxygen hood - an overview. <https://www.sciencedirect.com/topics/nursing-and-health-professions/oxygen-hood>. Accessed 16 May 2021.
  28. Oxygen tent. *Medicine Net*. [https://www.medicinenet.com/oxygen\\_tent/definition.htm](https://www.medicinenet.com/oxygen_tent/definition.htm). Accessed 16 May 2021.
  29. Healthline. What is a Nebulizer Machine? Overview, Uses & Function. *Healthline*. 2017. <https://www.healthline.com/health/asthma-nebulizer-machine>. Accessed 13 May 2021.
  30. Sigmon DF, An J. Nasogastric Tube. In: *StatPearls. Treasure Island (FL): StatPearls Publishing; 2021*. <http://www.ncbi.nlm.nih.gov/books/NBK556063/>. Accessed 13 May 2021.
  31. Colostomy bag: Types, uses, and living with one. 2019. <https://www.medicalnewstoday.com/articles/326353>. Accessed 13 May 2021.
  32. Central Venous Catheters. *Health Link BC*. <https://www.healthlinkbc.ca/health-topics/tc4109spec>. Accessed 13 May 2021.
  33. Goldy. What is an IV catheter? And what is it used for? *IPU Industries Ltd*. 2016. <http://www.ipu.co.il/en/iv-catheter/>. Accessed 13 May 2021.
  34. Syringe & needle destroyer. *GPC medicals*. <https://www.gpcmedical.com/855/syringe-&-needle-destroyer.html>. Accessed 16 May 2021.
  35. What is the purpose of a tourniquet? <https://askinglot.com/what-is-the-purpose-of-a-tourniquet>. Accessed 16 May 2021.
  36. Lumbar Puncture Needle. *Pathology Made Simple*. 2016. <http://ilovepathology.com/141/>. Accessed 13 May 2021.
  37. Scalp Vein Set. *Accu Point Injection Instruments*. <https://www.accupointinjectioninstruments.com/product/scalp-vein-sets/>. Accessed 13 May 2021.
  38. Blood transfusion requires an infusion set and filter. *Clin lab navigator*. <http://www.clinlabnavigator.com/blood-infusion.html>. Accessed 13 May 2021.
  39. The Different Types of IV Sets and Their Uses. *Wolf Medical Supply*. 2019. <https://www.wolfmed.com/blog/the-different-types-of-iv-sets-and-their-uses/>. Accessed 13 May 2021.
  40. Steel M. What are IV Poles and Why Does Your Hospital Need Reliable Ones? <https://www.marlinwire.com/blog/reliable-iv-poles-for-hospitals>. Accessed 14 May 2021.



41. Bernando GD. Delayed umbilical cord clamping in elective cesarean section: what are the benefits. Clinical trial registration. [clinicaltrials.gov](https://clinicaltrials.gov/ct2/show/NCT03878602); 2021. <https://clinicaltrials.gov/ct2/show/NCT03878602>. Accessed 13 May 2021.
42. Suctioning your child's nose and mouth. way to grow - chkd. <https://www.chkd.org/patients-and-families/health-library/way-to-grow/suctioning-your-childs-nose-and-mouth/>. Accessed 16 May 2021.
43. Nurse info. in. Types of comfort devices (Role of Nurse in Comfort Measures). Nurse info, 2020. <https://nurseinfo.in/types-of-comfort-devices/>. Accessed 14 May 2021.
44. How does a dialysis machine work. <https://www.davita.com/treatment-services/dialysis/in-center-hemodialysis/how-does-a-dialysis-machine-work>. Accessed 14 May 2021.
45. Ultrasound scans: How do they work? 2017. <https://www.medicalnewstoday.com/articles/245491>. Accessed 14 May 2021.
46. Phototherapy is and what it can treat. Very well Health. <https://www.verywellhealth.com/phototherapy-overview-4177939>. Accessed 16 May 2021.
47. Radiant heat warmer / intensive care warmer. <https://www.pediatriconcall.com/medical-equipment/incubators/4/radiant-heat-warmer--intensive-care-warmer/21>. Accessed 16 May 2021.
48. What Is a Suction Machine? - Portable Aspirator Q&A - ZOLL Medical. <https://www.zoll.com/resources/what-is-a-suction-machine>. Accessed 14 May 2021.
49. Suctioning. Physiopedia. <https://www.physio-pedia.com/Suctioning>. Accessed 14 May 2021.
50. Urinary catheters: Medline Plus Medical Encyclopedia. <https://medlineplus.gov/ency/article/003981.htm>. Accessed 14 May 2021.
51. Condom Catheters: How to Use, What to Know. Healthline. 2019. <https://www.healthline.com/health/condom-catheter>. Accessed 14 May 2021.
52. Kelly Pad. <https://www.surgicalmall.com/product/48>. Accessed 14 May 2021.
53. What is an Insulin Syringe? Info Bloom. <http://www.infobloom.com/what-is-an-insulin-syringe.htm>. Accessed 14 May 2021.
54. Syringe, feeding, 50ml, luer tip, ster. <https://supply.unicef.org/s0366020.html>. Accessed 14 May 2021.
55. New-generation hot water bags: a guide to buy the best one | Seniority. <https://www.seniority.in/blog/complete-guide-to-new-generation-hot-water-bags/>. Accessed 14 May 2021.
56. Schmidler C. How to Make and Use an Ice Pack | ice bag. <https://www.healthpages.org/health-a-z/how-to-make-and-use-an-ice-bag/>. Accessed 14 May 2021.
57. Using Ice and Cold Packs. Health Link BC. <https://www.healthlinkbc.ca/health-topics/sig43888spec>. Accessed 14 May 2021.
58. Clean catch urine sample: Medline Plus Medical Encyclopedia. <https://medlineplus.gov/ency/article/007487.htm>. Accessed 14 May 2021.
59. Blood cultures - preparation - procedure - aftercare. Teach Me Surgery. <https://teachmesurgery.com/skills/clinical/blood-cultures/>. Accessed 16 May 2021.
60. Vacutainer and their use in blood sampling. Medcaretips. 2018. <https://medcaretips.com/vacutainer-use-in-blood-sampling/>. Accessed 16 May 2021.
61. L H, man. Benefits and Features of Medical Air Mattresses. Avacare Medical Blog. 2018. <https://www.avacaremedical.com/blog/benefits-features-medical-air-mattresses.html>. Accessed 14 May 2021.
62. Clinical Guidelines (Nursing): Chest drain management. [https://www.rch.org.au/rchcpg/hospital\\_clinical\\_guideline\\_index/Chest\\_drain\\_management/](https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Chest_drain_management/). Accessed 14 May 2021.
63. Duraisamy R. Urometer -closed urine measuring system. Surgical World. 2018. <https://surgicaltechie.com/urometer-closed-urine-measuring-system/>. Accessed 14 May 2021.
64. Instructions for Collecting Sputum for TB (Tuberculosis). Minnesota Dept. of Health. <https://www.health.state.mn.us/diseases/tb/basics/factsheets/sputum.html>. Accessed 14 May 2021.
65. What is an enema and how do I use one? Medical news today. 2019. <https://www.medicalnewstoday.com/articles/325086>. Accessed 14 May 2021.
66. How to use liquid measuring devices. Self-medications. <http://www.safemedication.com/safemed/MedicationTipsTools/HowtoAdminister/How-to-Use-Liquid-Medications/How-to-Use-Liquid-Measuring-Devices>. Accessed 14 May 2021.
67. Sitz bath. WebMD. <https://www.webmd.com/digestive-disorders/sitz-bath>. Accessed 14 May 2021.
68. How to take body measurements of patients who are bedridden or immobile. Seca. [https://www.seca.com/en\\_hr/company/stories/details/article/how-to-take-body-measurements-of-patients-who-are-bedridden-or-immobile.html](https://www.seca.com/en_hr/company/stories/details/article/how-to-take-body-measurements-of-patients-who-are-bedridden-or-immobile.html). Accessed 15 May 2021.
69. Snellen chart | optometry. Encyclopedia Britannica. <https://www.britannica.com/science/Snellen-chart>. Accessed 14 May 2021.
70. Tonometry. Michigan Medicine. <https://www.uofmhealth.org/health-library/hw201323>. Accessed 16 May 2021.
71. Eye shield - an overview. ScienceDirect Topics. <https://www.sciencedirect.com/topics/nursing-and-health-professions/eye-shield>. Accessed 16 May 2021.
72. Knee hammer - true care surgical. True Care Surgical. <https://www.truecarehealth.in/shop/orthopedic/knee-hammer/>. Accessed 16 May 2021.
73. Pill Crusher. Medical search. <https://www.medicalsearch.com.au/pill-crusher/p/136734>. Accessed 15 May 2021.
74. Bath thermometer. <https://collection.maas.museum/object/288673>. Accessed 15 May 2021.
75. Asepto Syringe - Asepto Irrigation Syringe / Bulb syringe. Asepto Syringe - Asepto Irrigation Syringe / Bulb syringe 60ml - Philippine. <https://infolaptophpmurah.blogspot.com/2021/01/asepto-syringe-asepto-irrigation.html>. Accessed 14 May 2021.
76. Stethoscope - procedure. Encyclopedia of the surgery. <https://www.surgeryencyclopedia.com/St->

- Wr/Stethoscope.html. Accessed 14 May 2021.
77. Sphygmomanometer - test. Encyclopedia of the surgery. <https://www.surgeryencyclopedia.com/Pa-St/Sphygmomanometer.html>. Accessed 14 May 2021.
  78. US food and drug administration. What is an infusion pump? FDA. 2018. <https://www.fda.gov/medical-devices/infusion-pumps/what-infusion-pump>. Accessed 14 May 2021.
  79. Syringe Pump - an overview | Science Direct Topics. Science direct. <https://www.sciencedirect.com/topics/engineering/syringe-pump>. Accessed 14 May 2021.
  80. Defibrillation - procedure. Encyclopedia of the surgery. <https://www.surgeryencyclopedia.com/Ce-Fi/Defibrillation.html>. Accessed 14 May 2021.
  81. Uses of side rails on home hospital beds. Transfer Master. 2020. <https://www.transfermaster.com/4-uses-of-side-rails-on-home-hospital-beds>. Accessed 14 May 2021.
  82. Dutta R. Bedside lockers are an essential item in any hospital or nursing home. Sooper Articles. 2018. <https://www.sooperarticles.com/health-fitness-articles/bedside-locker-essential-item-any-hospital-nursing-home-1659351.html>. Accessed 14 May 2021.
  83. Why do you need a footrest? Human Solution. <https://www.thehumansolution.com/blog/top-5-reasons-why-you-need-a-footrest/>. Accessed 14 May 2021.
  84. How to Use a Wheelchair. <https://together.stjude.org/en-us/care-support/rehabilitation/how-to-use-a-wheelchair.html>. Accessed 14 May 2021.
  85. General purpose medical transport stretcher. Rehabmart.com. <https://www.rehabmart.com/product/6000-series-medical-stretcher-46058.html>. Accessed 14 May 2021.
  86. Contributor NT. Accurate assessment of patient weight. Nursing Times, 2014. <https://www.nursingtimes.net/clinical-archive/assessment-skills/accurate-assessment-of-patient-weight-14-03-2014/>. Accessed 14 May 2021.
  87. X-Rays: Uses, Dangers, Definition & Pregnancy Safety. Medicine Net. <https://www.medicinenet.com/x-rays/article.htm>. Accessed 14 May 2021.
  88. ECG test. Better health channel. <http://www.betterhealth.vic.gov.au/health/conditionsandtreatments/ecg-test>. Accessed 14 May 2021.
  89. 2-Dimensional Echocardiogram (Cardiac Ultrasound). Mid-Michigan health. <https://www.midmichigan.org/conditions-treatments/tests-procedures/2-dimensional-echocardiogram-cardiac-ultrasound/>. Accessed 14 May 2021.
  90. Blood gas test. Healthline, 2012. <https://www.healthline.com/health/blood-gases>. Accessed 14 May 2021.
  91. Laparoscopy. Healthline, 2012. <https://www.healthline.com/health/laparoscopy>. Accessed 14 May 2021.
  92. Bronchoscopy. Healthline, 2012. <https://www.healthline.com/health/bronchoscopy>. Accessed 14 May 2021.
  93. Spaun GO, Goers TA, Pierce RA, Cassera MA, Scovil S, Swanstrom LL. Use of flexible endoscopes: sterilization or high-level disinfection? Surg Endosc. 2010;24:1581-8. DOI: 10.1007/s00464-009-0815-6.
  94. Twitter, LinkedIn. The Purpose of a Colonoscopy. Verywell Health. <https://www.verywellhealth.com/the-purpose-of-a-colonoscopy-5083351>. Accessed 14 May 2021.
  95. Crash carts. ACLS Medical Training. <https://www.aclsmedicaltraining.com/crash-carts/>. Accessed 14 May 2021.
  96. Wearing gloves in the hospital. Medline Plus Medical Encyclopedia. <https://medlineplus.gov/ency/patientinstructions/000452.htm>. Accessed 14 May 2021.
  97. Definition: Blood Glucose Meter (for Parents) - Nemours Kids Health. <https://kidshealth.org/en/parents/glucose-meter.html>. Accessed 14 May 2021.
  98. Incentive spirometry. Physiopedia. [https://www.physio-pedia.com/Incentive\\_Spirometry](https://www.physio-pedia.com/Incentive_Spirometry). Accessed 14 May 2021.
  99. What are Bedpans and Urinals Used for? Allanda. 2018. <https://www.allaboutincontinence.co.uk/blog/what-are-the-benefits-of-bedpans-and-urinals>. Accessed 14 May 2021.
  100. Manufacturer DNII 1861-; I. Dr. Nelson's Improved Inhaler. Heritage. 1930. <https://heritage.rcpsg.ac.uk/items/show/46>. Accessed 14 May 2021.
  101. Ophthalmoscopy. Healthline. 2016. <https://www.healthline.com/health/ophthalmoscopy>. Accessed 14 May 2021.
  102. Otolaryngology examination. Medline Plus Medical Encyclopedia. <https://medlineplus.gov/ency/imagepages/8771.htm>. Accessed 14 May 2021.
  103. Uses of a penlight. Techwalla. <https://www.techwalla.com/articles/uses-of-penlight>. Accessed 14 May 2021.
  104. What Is Laryngoscopy? WebMD. <https://www.webmd.com/oral-health/what-is-laryngoscopy>. Accessed 15 May 2021.
  105. Cystoscopy. Healthline. 2015. <https://www.healthline.com/health/cystoscopy>. Accessed 15 May 2021.
  106. Rhinolaryngoscopy. The Center for Allergy & Immunology. <https://www.kcallergycenter.com/rhinolaryngoscopy>. Accessed 15 May 2021.
  107. Proctoscopy: Purpose, Prep, Procedure, Results, and Recovery. Healthline. 2018. <https://www.healthline.com/health/proctoscopy>. Accessed 15 May 2021.
  108. Central Venous Pressure: Principles, Measurement, and Interpretation. Vet Folio. <https://www.vetfolio.com/learn/article/central-venous-pressure-principles-measurement-and-interpretation>. Accessed 15 May 2021.
  109. Double lumen catheter procedure. <https://eshakidneycare.com/services/double-lumen-catheter-procedure/>. Accessed 15 May 2021.
  110. Tube feeding using the gravity method. Memorial Sloan Kettering Cancer Center. <https://www.mskcc.org/cancer-care/patient-education/tube-feeding-using-gravity-method>. Accessed

15 May 2021.

111. Height Measuring Device, stadiometer. International federation of Red Cross and Red Crescent societies. <https://itemscatalogue.redcross.int/health--3/medical-equipment--15/medical-equipment--78/height-measuring-device-stadiometer-20-205cm--XMEQMEAS02.aspx>. Accessed 15 May 2021.
112. Refrigeration is essential for health institutions. Refrigeration Club. 2015. <https://refrigerationclub.com/refrigeration-is-essential-for-health-institutions/>. Accessed 15 May 2021.
113. Gita Mediquip Pvt. Ltd. (last). Difference between ICU beds and other beds, 2018. <https://www.gitamediquip.com/2018/06/14/how-are-icu-beds-different-from-other-beds/>. Accessed 15 May 2021.
114. Need of biomedical waste management system in hospitals - An emerging issue - A review. Current World Environment, 2012, 7pp. DOI: <http://dx.doi.org/10.12944/CWE.7.1.18>.