

Global Health Care System

Health care system is dramatically evolving with the advance in medical sciences, technology and evidenced based scientific clinical researches. Based on World Health Organization 2002 strategic plan for Nurses and midwives “Nursing is the key profession in the healthcare provision, effective systems for regulation, education, research and management are the key to strengthening the contribution of nursing services in order to achieve the required improvement in health outcomes” [\(1\)](#).

Health system in Sri Lanka

According to the annual health report, in Sri Lanka, government health sector fill the sixty percentage of the total health care of the population, and 95% of inpatient care whereas the private health sector which provides mainly curative aspects which fill the 40% of the total health care.

Global Nursing Shortage

Even though nursing profession is the “backbone” of any healthcare system however, there is a global nursing shortage [\(2-6\)](#). This Shortage is due to overarching imbalance of qualified nursing panel and increasing health demand both in developed and developing countries. For example a recent national based study revealed that, there will be shortage of 36,000 nurses by 2030 in the UK and USA [\(7\)](#).

Nursing Shortage in Sri Lanka

According to the former Health Minister Hon. Dr. Rajitha Senarathne Sri Lanka is facing a shortage of nearly 30,000 nurses. Currently there is 35,000 nurses are working in government Sector even though the country needs 65,000. The shortage of nurses is due to increasing demand as a result of aging population, increasing incidences of Non Communicable Diseases (NCD), inadequate supply of nurses to meet the current demand as a result of limited number of training school and restricted entry criteria to the nursing program.

Nursing Education in Sri Lanka

Currently nursing education is take places in Nursing Training Schools (NTS) and the state universities which are regulated by Ministry of Health and University Grant Commission (UGC) respectively. There is also considerable number of private sector nursing schools; however there are discrepancies and non-consistencies in program durations and standards.

The first NTS commenced in 1939 in Colombo. Currently, fifteen numbers of NTS throughout the country provide three year general diploma in Nursing [\(8\)](#). The diploma program is covering 60 credits for three years, which is equivalent to Sri Lankan Qualification Framework (SLQF) IV according to SLQF 2020 developed by UGC [\(9\)](#).

From 2006, state universities such as University of Jaffna, University of Peradenia, University of Colombo, University of Ruhuna, University of Jeyawardanapura, Sir John Kotelawala Defense University and Eastern University are providing a four year (120 credits) BSc (Hons) degree program. Open University of Sri Lanka is providing a two year BSc (Hons) top degree program (SLQF 6) which is approved by the UGC to the diploma nurses graduated from the NTS, Sri Lanka.

Need of Qualified Nurses in the Private Health Sector

Also as mentioned the private sector which is providing 40% contribution of the total health needs, facing a high shortage of qualified nursing panel which need to be addressed. Thus, to support the private care system especially in the northern private sector, we especially the nursing and allied health (BPharm) graduates initiated this nursing program,

Currently our college is running Nursing Assistant program (1 year- NVQ IV) and we would like to continue this program into diploma level (NVQ VI). Thus to ensure the quality and recognition of the nursing program (diploma level), we would like to register our institution under PHSRC. We are kindly asking to consider our request.

The course details, training details, curriculum (skeletal) plan is attached herewith. (Annexure B)

5. ii. UNITS & FACILITIES

premises

College of medical science is located in the centre town of Jaffna; it is a two-storey building

Physical infrastructure of College of Allied Medical Science

It consist of 2 major lecture halls which can accommodate 30 students, 3 lecture halls which can accommodate 20 students and 1 open lecture hall, 2 nursing demonstration area with basic nursing lab, advance nursing lab, emergency nursing lab and Audio Visual aid room, 1 conference room, 1 office room and a library.

Student's facilities

- An Online Learning and LMS
- Students library
- Student's lunch area (with dinner table and chairs)
- Playing area and garden
- Students representative for academic meeting



Item	No.of Units	Floor Area (in sq. ft.)
Class/Lecture Rooms	3	1100
Workshops	4	1160
Office Rooms	2	400
Toilets	5	140
Student activity area	1	180

Facilities of physical and basic needs

Amenities	Description	Value
Water Supply	Total No.of Taps:	16
Ventilation (Classrooms/Workshops)	No. of Windows:	36
	No. of Doors:	16
No. of Lighting (Classrooms/Workshops)	Classrooms:	16
	Workshops:	18
Electricity Supply	Single Phase:	<input type="radio"/> (Single Phase)
	Three Phase:	<input checked="" type="radio"/> (Three Phase)
Safety	Hazards within Institute Premises due to Physical, Chemical, Biological Mitigated:	<input checked="" type="checkbox"/> (Tick if yes)
	Maintain Accident Records:	<input checked="" type="checkbox"/> (Tick if yes)
First Aid	Staff Trained for First Aid:	<input checked="" type="checkbox"/> (Tick if yes)
	Availability of First Aid Box:	<input checked="" type="checkbox"/> (Tick if yes)

Fire extinguisher - We are having emergency exist through all over (which is instructed to everyone)
Further we have sand bucket and water bucket at emergency points

We are following WHO guided colour code – institution has its own waste management policy

Further we are following infection control measures guided by CDC - (Institutional IC policy)

Both institutional infection control and waste management policies are attached. (Annexure C)

Description of any machines or equipment used for training – CAMS

IMS premises area	Equipment and articles	Descr iption
Lecture hall – 3 Nos	Equipped with computer and internet facilities with the LED panel display with effective sound system	For effective physical and virtual learning.
Demonstration room – 4 Nos	Surgical forceps, trays, scissors, suture based articles, dressing equipments, gallipots, drug trolley, dressing trolley, emergency trolley, IV stands, IV sets, catheter sets, Sucker apparatus, autoclave, Nebulizer, blood pressure apparatus (both digital and manual), thermometers, SPO ₂ meter, oxygen supply system, advance manikin, pediatric manikins, basic nursing manikins, CPR manikins	For practicing basic nursing procedure and advance nursing procedures
	CPR equipment, airways, tracheotomy sets, laryngoscopes, intubation set, First aid kit	To practice emergency and ICU care
	Anatomical model, skeletal model, pelvic set	To understand the human anatomy
	Surgical forceps, trays, scissors, suture based articles, dressing equipments, gallipots, drug trolley, dressing trolley, emergency trolley, IV stands, IV sets, catheter sets, Sucker apparatus, autoclave, Nebulizer, blood pressure apparatus (both digital and manual), thermometers, SPO ₂ meter, oxygen supply system, students demonstration cupboard, incinerator, sterilizer	To practice the basic and advanced nursing procedures during the clinical appointment

Brief list off tools, machines and equipments are attached. (Annexure D)

Infection control policy – CAMS

WHY IT IS IMPORTANT?

Management of health care waste is an integral part of hygiene and infection control. Health care waste should be considered as a reservoir of pathogenic microorganisms, which can cause contamination and give rise to infection.

SEQUENCES AND LEVEL OF INFECTION CONTROL

At finance & Admin office level
Kitchen & dining room level
At Lecture Hall level, IT lab & library level
Demonstration room level
Hostel level
Surrounding environmental level

At finance, Admin office level

Hand hygiene

- ✦ Perform hand hygiene by mean of hand rubbing or hand washing.
- ✦ Hand washing with soap and water will remove transient micro-organisms and visible dirt/soiling.
- ✦ Hand wash liquid and hand towel should be kept near to the sink.
- ✦ Liquid soap and running water is required for this level of hand hygiene.
- ✦ The towel has to be given to laundry once a week.
- ✦ Daily clean the sink.

Cleaning & Disinfection

- ✦ Dusting and carbolizing the furniture, window, door, and cupboards.
- ✦ Cleaning and disinfection (sweeping & mopping) admin, financial room & conference hall of environmental surface.
- ✦ Curtin's and Hand towel will be sent to laundry.
- ✦ Properly remove the tea cups and clean it after the tea break.
- ✦ Daily dusting the computers and land phone in the financial, admin office & conference room.

Waste disposal

- ✦ Ensure safe waste management.
- ✦ Two small size dustbin (black & green) in color.
 - Black - Non-Risk degradable waste (paper waste, food waste & non-risk organic waste)*
 - Green - Non-risk nondegradable waste (packing, polythene & plastic etc.)*
- ✦ The waste things should be transported to the main waste system from admin & financial room every day.

Hand washing

- † Always wash your hands before eating, before making food and after cleaning up the food prep area.
- † Hand wash liquid and hand towel should be kept near to the sink.
- † Hand washing with soap and water will remove transient micro-organisms and visible dirt/soiling.
- † Liquid soap and running water are required for this level of hand hygiene.
- † The towel has to be given to laundry once a week.
- † Daily clean the sink

Cleaning & Disinfection

- † All utensils, plates should be cleaned (Detergent with water) and dried.
- † Dusting the furniture's, window, doors and cupboards. † Table cloth should be sent to laundry every week.
- † Cleaning and disinfection (sweeping & mopping) kitchen and dining room of environmental surface.

Apron

- † Workers should be wear apron and cap, when working into the kitchen.
- † Apron and cap are thoroughly wash and dried daily.

Waste disposal

- † Ensure safe waste management.
- † Two medium size dustbins (black & green).

Black - Non-Risk degradable waste (paper waste, food waste & non-risk organic waste) Green - Non-risk nondegradable waste (packing, polythene & plastic etc.)

- † The waste things should be transported to the main waste system from kitchen every day.

At Lecture hall, IT lab & library level**Hand hygiene**

- † Liquid hand washing has to be available at each lecture hall, IT lab and library.
- † Hand washing with soap and water will remove transient micro-organisms and visible dirt/soiling.
- † Hand wash liquid and hand towel should be kept near to the sink.
- † Liquid soap and running water is required for this level of hand hygiene.
- † The towel has to be given to laundry once a week.
- † Daily clean the sink.

Environmental hygiene

- † Dusting the furniture, window, door, and cupboards.
- † Cleaning and disinfection (sweeping & mopping) lecture hall, IT lab and library of environmental surface.
- † Curtin's and table cloths will be sent to laundry.
- † Dusting the fan and ceiling every month.
- † Daily dusting the computers with table and Television in the lecture hall and computer lab.

Waste disposal

- ✚ Two small size dustbins (black & green)

Black - Non-Risk degradable waste (paper waste, food waste & non-risk organic waste) Green - Non-risk nondegradable waste (packing, polythene & plastic etc.)

- ✚ The waste things should be transported to the main waste system from lecture hall, IT lab and library every day.

Demonstration room level

Hand hygiene

- ✚ Liquid hand washing and sink has to be available at demonstration room.
- ✚ Proper hand washing with soap and water will remove transient micro-organisms and visible dirt/soiling.
- ✚ Hand wash liquid and hand towel should be kept near to the sink.
- ✚ Liquid soap and running water is required for this level of hand hygiene.
- ✚ The towel has to be given to laundry once a week.
- ✚ Daily clean the sink.

Environmental hygiene

- ✚ Dusting and carbolizes the furniture, window, door, under the ceiling and fan.
- ✚ Dusting and carbolizes the student's inventory.
- ✚ All the articles (specially nursing procedure related articles) need to be clean with soapy water and let it dry and should be arranged.
- ✚ Cleaning and disinfection (sweeping & mopping) demonstration of environmental surface.
- ✚ Curtin's and others cloths (specially bed sheet, draw sheet, check cloths) should be sent to laundry every month.
- ✚ Every week dusting and cleaning the manikins and bed linens then re-arranged.

Waste disposal

- ✚ Two medium size dustbins (black & green)

Black - Non-Risk degradable waste (paper waste, food waste & non-risk organic waste) Green - Non-risk nondegradable waste (packing, polythene & plastic etc.)

- ✚ The waste things should be transported to the main waste system from demonstration room every day.

Hostel level

Hand hygiene

- ✚ Liquid hand washing and sink has to be available at each room, kitchen and bath rooms.
- ✚ Hand wash liquid and hand towel should be kept near to the sink.
- ✚ Liquid soap and running water is required for this level of hand hygiene.
- ✚ The towel has to be given to laundry once a week.
- ✚ Daily clean the sink.

Environmental hygiene

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- ✦ Dusting and carbolizes the furniture, window, door, under the ceiling and fan every week.
- ✦ Cleaning and disinfection (sweeping & mopping) hostel rooms, kitchen, study hall and washroom environmental surface.
- ✦ All utensils, plates should be cleaned (Detergent with water) and dried & should be arrange properly.
- ✦ Curtin's should be sent to laundry.
- ✦ daily dusting and cleaning the student's bed and bed linens then re-arranged.

Waste disposal

- ✦ Two medium size dustbins (black & green)

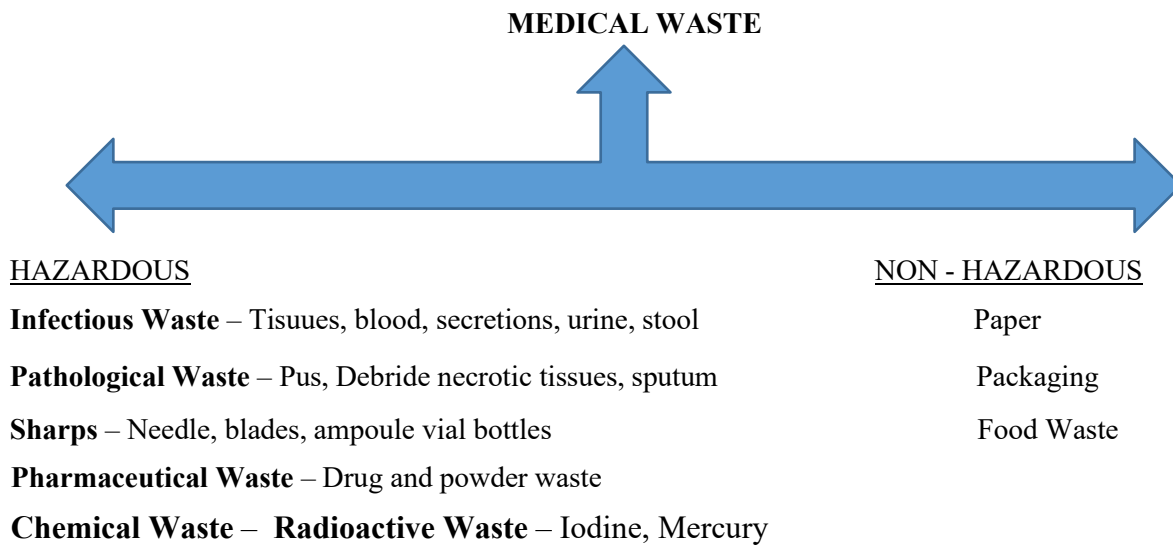
Black - Non-Risk degradable waste (paper waste, food waste & non-risk organic waste) Green - Non-risk nondegradable waste (packing, polythene & plastic etc.)

- ✦ The waste things should be transported to the main waste disposal storage.

WASTE TRANSPORTATION TO THE MAIN WASTE DISPOSAL STORAGE

- All level waste have to be transported using segregated method to the main waste storage system at the end of each week.
- Main waste system will consist four color coded large waste box protected by metal net cover to avoid exposure to the animals and rodents.
- Sanitary labors will be responsible for this process.
- All the sub level waste have to be sealed by garbage bag. The infected (Yellow) and sharp (Red) waste have to be sealed by double garbage bag and labelled as bio hazardous.
- Proper universal precaution measures have to be confirmed during transport such as wearing water proof knee level gloves, protection aprons, shoes, mask and sharps containers should only be filled up 75% full water proofed container.

BIO WASTE MANAGEMENT SYSTEM



WHY IT IS IMPORTANT?

“All persons exposed to hazardous hospital waste are potentially at risk which includes all those who either handle the waste at any stage, or are exposed”

UNIVERSAL COLOUR CODE SYSTEM (WHO GUIDE – BWM)

<u>Black:</u>	<i>Non-Risk degradable waste</i> -	Paper, non-risk organic waste (leaves), food
<u>Green:</u>	<i>Nonrisk nondegradable waste</i> -	Packing, polyethene, plastic etc
<u>Red:</u>	<i>Risk waste with Sharps</i> -	Needle, blades, ampoule vial bottles
<u>Yellow:</u>	<i>Risk Waste without sharps</i> -	tissues, blood, secretion, used gauze, cotton, sanitary pads

SEQUENCES AND LEVELS OF WASTE DISPOSAL

- ✚ At patient room (NRC & elder home) level
- ✚ At NRC ward level (Including Doctor & Nurse room)
- ✚ Other Clinic and unit – Eg: Pediatric Clinic level
- ✚ Kitchen level
- ✚ Dining room level
- ✚ Hostel level
- ✚ At lecture hall, demonstration room level
- ✚ At finance & admin office level
- ✚ Surrounding Environmental level

ACTION PLAN OF WASTE MANAGEMENT AT EACH LEVEL

1. Kitchen, Dining room level

- 2 medium size dust bins (Green and black)

2. Hostel level

- 2 medium size dust bins (Green and black) at hostel

3. At lecture hall, demonstration room level

- 2 small size dust bins (Green and black) at nurses station which should be easily access from both doctors and nurses room

4. At finance & admin office level

- 2 small size dust bins (Green and black) at finance office which should be easily access from both finance & admin office

5. Surrounding Environmental level

- 2 medium size dust bins (Green and black) at garden area

WASTE TRANSPORTATION TO THE MAIN WASTE DISPOSAL STORAGE

- All level waste have to be transported using segregated method to the Main waste storage system at the end of each week
- Main waste system will consist four colour coded large waste box protected by metal net cover to avoid exposure to the animals and rodents
- Sanitary labours will be responsible for this process
- All the sub levels waste have to be sealed by garbage bag. The infected (Yellow) and sharp (Red) wastes have to be sealed by double garbage bag and labelled as bio hazardous
- Proper universal precaution measures have to be confirmed during transport such as wearing water proof knee level gloves, protective aprons, shoes, mask and sharps containers should only be filled up $\frac{3}{4}$ full water proofed container.
- As showed in the table each level waste have to be transported to the main waste storage system at the mentioned time.
- From the main waste storage system the waste should be disposed at end of each week as follow.

Black –Should be disposed by using sanitary land filling method and it can be used as fertilizer

Green – Can be disposed with the municipal waste removal system

Yellow – Should be incinerated

Red – Should be autoclaved. Autoclaved sharp can be buried in deeper.

Annexure C – Brief list off tools, machines and equipments are attached

CAMS EQUIPMENT LIST

Machines

- PC set - 4
- Laptop - 2
- LED TV - 41 INCHES DISPLAY - 2 (SMART AND MUTTI DIRECTION VISION)
- Portable air conditioner - 1
- AC - 4
- Table fan - 1
- Drug trolley - 1
- Injection Trolley - 1
- Ambu bag - 1
- 12 Lead ECG machine with leads - 1

Furniture's

- Wheel chair - 1
- Hospital Bed - 1
- Beds set - 2
- Examination Bed - 1
- Hospital cupboards set - 3

Metal equipments

- Forceps and scissors set (artery forceps, catch forceps, myo forceps, mosquito forceps, moth gag, retractors, cheattle forceps, suture removal forceps, needle holder, cutting scissors, suture removal scissors, myo scissors, surgical scissors)
- suture needle and blade sets
- Rectangular trays, Kidney trays, injection trays, sterile metal containers, gallipots, sputum mug, measuring cubs

Linens and utensils

- Hospital linen set (draw sheets, top sheets, bottom sheets, checked cloths, clean bags, sponge bags, GS towels, face towels, dusters, hand towels, body towels, perineal towels)
- Plastic buckets, basin, containers (in different sizes)
- Colour code waste management system as WHO guide (each colour), Sharp bin container, infectious waste container (with adjustable lid)

Models

- Anatomical 3d systems model (Atlas - 3D models) - (CVS, RS, GUS, NS, SNS, ES, GIT, EYE, EAR)
- Anatomical skeleton 3D model-1
- Manikins full - 2 (advance nursing, basic nursing)
- Half manikins - 3 (CPR, and advance nursing procedures)
- Peadiatric Manikins and dolls - 4
- Bed pan - 1
- Urinal -1
- Hot bag - 2

- Autoclave - 1
- Breathing exerciser- 1
- MDI set, Spacer set
- Glucometer with strips - 2
- Stop watch - 1
- Electric Nebulizer - 1
- Oxygen regulator set - 1
- Stethoscope - 3
- Ophthalmoscope and auroscope set - 1
- Ophthalmoscope set - 1
- Laryngoscope - 1
- Digital BP meter - 2
- Manual BP apparatus- 2
- Digital SPO2 and HR meter - 1
- Temporal thermometer - 1
- Digital Thermometer - 3
- Mercury thermometer - 6
- Examination torch (portable) - 1
- Vaginoscope- 1
- Fetoscope -1
- Airways models (Oral airways (each size), Laryngeal Mask Airway, Endotracheal tube, Tracheostomy)
- Weighing scale (digital) - 1
- Weighing Scale (Children) - 1
- Stadio meter - 1
- Laser pointer -1

Consumables

- Cotton, gauze, spirit, betadine, normal saline, sterile water for injection, clean gloves, sterile gloves, masks (needed amounts)
- Soap, toothpaste, tooth brush, powder, shampoo, olive oil, odicolon, Vaseline (needed amounts)
- Injection needle sets (in each size), Cannula set (in each size), IV infusion sets, Catheter tubes (in each size) and catheter bags,
- NG tube sets, suction catheter sets, needle (different size), PEG set, colostomy bags
- Drug bottles samples, medication samples, injection vial and ampoules