









Frontline Health Caregiving Associate(Elective 1: Emergency Care, Elective2: Sample Collection, Elective 3:Medical Equipment Care)

Electives: Emergency Care/ Sample Collection/ Medical Equipment Care

QP Code: HSS/Q2306

Version: 1.0

NSQF Level: 4









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HSS/Q2306: Frontline Health Caregiving Associate (Elective 1: Emergency Care, Elective 2: Sample Collection, Elective 3: Medical Equipment Care)

Brief Job Description

Individuals in this job need to provide support to patients and healthcare providers in different domains of emergency care, sample collection support and medical equipment care. Their work involves working with basic equipment like Oxygen Concentrator, Oxygen Cylinder, Nebulizer, steam inhalation and Pulse-oximeter. They are also responsible to maintain records manually or digitally as per protocols.

Personal Attributes

This job requires individuals to work in a team and be comfortable in making decisions pertaining to their area of work. Individuals should be able to maintain composure in extremely stressful conditions in order to assess medical situations and perform emergency lifesaving procedures according to the methods in which training has been imparted to them. Individuals must always perform their duties in a calm, reassuring and efficient manner. The individual must be able to lift between 45 99 kilograms of weight with a partner, as the weight of patients will typically fall within that range. The fitness of the individual should be assessed using the Defence Man & Woman guidelines.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. HSS/N5615: Assist in the use of basic equipment
- 2. HSS/N9622: Follow sanitization and infection control guidelines
- 3. HSS/N9624: Maintain a safe and secure working environment
- 4. DGT/VSQ/N0102: Employability Skills (60 Hours)

Electives(mandatory to select at least one):

Elective 1: Emergency Care

Providing necessary emergency support to patient and transport them to a medical facility

- 1. HSS/N3016: Provide first aid as per the emergency
- 2. HSS/N2332: Respond to emergency calls & size up the scene at the site
- 3. HSS/N2336: Carry out activities related to patient triage
- 4. HSS/N2337: Manage patient transport and handover to the identified provider institute







Elective 2: Sample Collection

Provide sample collection support to diagnostic facilities for Blood, Sputum, Urine, Stool, Nasal and Throat swab

1. <u>HSS/N0513</u>: Perform sample collection activities for Blood, Sputum, Urine, Stool, Nasal and Throat <u>swab</u>

2. HSS/N9619: Follow etiquette for site visit

Elective 3: Medical Equipment Care

Providing medical equipment care through calibration and maintenance of basic equipment

- 1. HSS/N5608: Calibration and maintenance of basic equipment
- 2. HSS/N5607: Understanding the working of basic equipment

Qualification Pack (QP) Parameters

Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Emergency Services, Diagnostic, Non-Direct Care
Country	India
NSQF Level	4
Credits	25
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2240.0501
Minimum Educational Qualification & Experience	12th Class OR Pursuing 2nd year of 3-year regular Diploma (after 10th) OR 10th grade pass with 1-2 Years of experience OR 11th grade pass with 1-2 Years of experience OR Previous relevant Qualification of NSQF Level (3.5) with 1-2 Years of experience OR Previous relevant Qualification of NSQF Level (3) with 2-3 Years of experience









Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	31/01/2029
NSQC Approval Date	31/01/2024
Version	1.0
Reference code on NQR	QG-04-HE-01990-2024-V2-HSSC
NQR Version	2

Remarks:

This is a crash course designed to skill individuals to provide emergency care to COVID patients during COVID pandemic by selecting required NOS from Emergency Medical Technician- Basic, HSS/Q2301 Version 1.0 QP. After completion of this crash course, the individual will not be equivalent to a certified Emergency Medical Technician- Basic.







HSS/N5615: Assist in the use of basic equipment

Description

Demonstrate the use of basic equipment.

Scope

The scope covers the following :

- Identify the basic equipment
- Functioning of equipment

Elements and Performance Criteria

Identify the basic equipment

To be competent, the user/individual on the job must be able to:

- PC1. spot and name the different variant of basic medical equipment
- **PC2.** differentiate between the different variant of basic medical equipment
- PC3. identify the importance and use of basic medical equipment

Functioning of equipment

To be competent, the user/individual on the job must be able to:

- **PC4.** Recognize the risk factor associated with the use of equipment, complexity, manufacturer's instruction and specification, and effective use of instruments
- **PC5.** Demonstrate the use of of basic equipment (oxygen concentrator, oxygen cylinder, nebulizer, ECG machine, pulse oximeter, digital thermometer, digital BP apparatus, syringe pump, Glucometer, steam inhaler, and suction Apparatus)
- PC6. Follow the cleaning and safety protocols before, during and after handling of equipment
- **PC7.** identify the faults and trouble-shoot it to competent authorities timely

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. names and principles of basic medical equipment
- **KU2.** clinical use and principle of operation of different types and models
- **KU3.** cleaning and safety measures, risk factor associated with the use of equipment, complexity, manufacturer's instruction and specification, effective use of equipment

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** maintain code of conduct, professional accountability and responsibility
- **GS2.** observe ethical practices









- GS3. maintain confidentiality and seek consent when appropriate
- **GS4.** maintain appropriate body language
- GS5. read and interpret internal communications correctly
- **GS6.** structure brief and logical messages
- **GS7.** speak clearly and slowly in a gentle tone







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Identify the basic equipment	37	30	20	25
PC1. spot and name the different variant of basic medical equipment	-	-	-	-
PC2. differentiate between the different variant of basic medical equipment	-	-	-	-
PC3. identify the importance and use of basic medical equipment	-	-	-	-
Functioning of equipment	65	61	29	45
PC4. Recognize the risk factor associated with the use of equipment, complexity, manufacturer's instruction and specification, and effective use of instruments	-	-	-	-
PC5. Demonstrate the use of of basic equipment (oxygen concentrator, oxygen cylinder, nebulizer, ECG machine, pulse oximeter, digital thermometer, digital BP apparatus, syringe pump, Glucometer, steam inhaler, and suction Apparatus)	-	_	-	-
PC6. Follow the cleaning and safety protocols before, during and after handling of equipment	-	-	-	-
PC7. identify the faults and trouble-shoot it to competent authorities timely	-	-	-	-
NOS Total	102	91	49	70









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N5615
NOS Name	Assist in the use of basic equipment
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Non-Direct Care
NSQF Level	3
Credits	1.5
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024







HSS/N9622: Follow sanitization and infection control guidelines

Description

This OS unit is about following ways for sanitization to prevent the spread of infection as per sectoral working requirements.

Scope

The scope covers the following :

- Social distancing practices
- Personal and workplace hygiene
- Waste disposal methods
- Reporting and information gathering
- Mental and emotional wellbeing

Elements and Performance Criteria

Social distancing practices

To be competent, the user/individual on the job must be able to:

- **PC1.** maintain appropriate social distance as per specified protocols, for example, while greeting people, when in crowded places, using contactless mode of delivery of goods, etc.
- PC2. carry out daily tasks using alternate methods e.g. virtual meetings, e-payments, etc.

Personal and workplace hygiene

To be competent, the user/individual on the job must be able to:

- **PC3.** follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing, using PPE, etc.
- **PC4.** follow recommended workplace hygiene and sanitation practices, for example, sanitizing workstation and equipment regularly, using disposable wipes and utensils, using alternative systems to mark attendance, etc.
- **PC5.** clean and disinfect all materials/supplies before and after use.

Waste disposal methods

To be competent, the user/individual on the job must be able to:

- PC6. segregate waste as per guidelines
- PC7. dispose waste as per guidelines

Reporting and information gathering

To be competent, the user/individual on the job must be able to:

- PC8. keep abreast of the latest information and guidelines from reliable sources.
- **PC9.** report signs and symptoms related to illness of self and others immediately to appropriate authority

Mental and emotional wellbeing

To be competent, the user/individual on the job must be able to:









PC10. seek help and guidance in case of stress and anxiety

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. solid waste management Rules 2016
- KU2. significance of personal hygiene practice including hand hygiene
- KU3. social distancing norms
- KU4. correct method of donning and doffing of PPE
- **KU5.** significance of appropriate waste disposal methods and organizational and national waste management principles and procedures
- KU6. ways to handle waste appropriately to reduce the risk of contamination
- KU7. the logistics of waste management
- KU8. the current national legislation, guidelines, local policies, and protocols related to work
- KU9. ways to manage infectious risks in the workplace
- KU10. the path of disease transmission
- KU11. different methods of cleaning, disinfection, sterilization, and sanitization
- KU12. the types of cleaning agents
- KU13. symptoms of infections like fever, cough, redness, swelling and inflammation
- KU14. signs of stress and anxiety

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. write formal and informal letters/emails, memos, reports, etc
- GS2. read and interpret internal communications correctly
- **GS3.** communicate the information effectively during interactions
- GS4. analyze situations and make appropriate decisions
- GS5. prioritize, organize, and accomplish work within prescribed timelines









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Social distancing practices	5	3	-	-
PC1. maintain appropriate social distance as per specified protocols, for example, while greeting people, when in crowded places, using contactless mode of delivery of goods, etc.	-	-	-	_
PC2. carry out daily tasks using alternate methods e.g. virtual meetings, e-payments, etc.	-	-	-	-
Personal and workplace hygiene	4	4	-	-
PC3. follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing, using PPE, etc.	-	-	-	_
PC4. follow recommended workplace hygiene and sanitation practices, for example, sanitizing workstation and equipment regularly, using disposable wipes and utensils, using alternative systems to mark attendance, etc.	-	-	-	_
PC5. clean and disinfect all materials/supplies before and after use.	-	-	-	-
Waste disposal methods	3	2	-	-
PC6. segregate waste as per guidelines	-	-	-	-
PC7. dispose waste as per guidelines	-	-	-	-
Reporting and information gathering	3	2	-	-
PC8. keep abreast of the latest information and guidelines from reliable sources.	-	-	-	-
PC9. report signs and symptoms related to illness of self and others immediately to appropriate authority	-	-	-	-
Mental and emotional wellbeing	2	2	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. seek help and guidance in case of stress and anxiety	-	-	-	-
NOS Total	17	13	-	-









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N9622
NOS Name	Follow sanitization and infection control guidelines
Sector	Healthcare
Sub-Sector	Generic
Occupation	Generic
NSQF Level	3
Credits	2
Version	2.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2029
NSQC Clearance Date	30/04/2024









HSS/N9624: Maintain a safe and secure working environment

Description

This OS unit is about the ensuring a safe and secure working environment

Scope

The scope covers the following :

• Workplace safety and security

Elements and Performance Criteria

Workplace safety and security

To be competent, the user/individual on the job must be able to:

- PC1. identify potential hazards of safe work practices
- PC2. use various hospital codes for emergency situations
- **PC3.** comply with safety, and security procedures within the defined scope of competence and authority
- PC4. provide Basic Life Support (BLS) and first aid whenever applicable under defined scope of work
- PC5. follow organizations' procedures related to any emergency efficiently
- **PC6.** report any identified breaches in health, safety, and security procedures to the designated person
- **PC7.** complete any health and safety records accurately

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. the importance of health, safety, and security in the workplace
- **KU2.** how to identify safety and security hazards
- **KU3.** the importance of identifying individual responsibilities in relation to maintaining workplace safety and security requirements
- KU4. the relevant up-to-date information on safety, and security that applies to the workplace
- **KU5.** how to report any emergency
- KU6. various hospital codes for emergency situations
- KU7. how to create safety records and maintain them
- KU8. concept of first aid and BLS
- **KU9.** the importance of raising alarm about hazards for safety of others

Generic Skills (GS)

User/individual on the job needs to know how to:









- GS1. read and understand organization policies and procedures
- **GS2.** prepare status and progress reports
- GS3. communicate information (for example, facts, ideas, or messages) in a brief, clear, and• organized manner
- **GS4.** make decisions pertaining to the area of work
- GS5. plan for safety of the work environment
- GS6. identify hazards, evaluate possible solutions and suggest effective solutions
- **GS7.** analyze the seriousness of hazards







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Workplace safety and security	10	10	-	10
PC1. identify potential hazards of safe work practices	-	-	-	-
PC2. use various hospital codes for emergency situations	-	-	-	-
PC3. comply with safety, and security procedures within the defined scope of competence and authority	-	-	-	-
PC4. provide Basic Life Support (BLS) and first aid whenever applicable under defined scope of work	-	-	-	-
PC5. follow organizations' procedures related to any emergency efficiently	-	-	-	-
PC6. report any identified breaches in health, safety, and security procedures to the designated person	-	-	-	-
PC7. complete any health and safety records accurately	-	-	-	-
NOS Total	10	10	-	10









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N9624
NOS Name	Maintain a safe and secure working environment
Sector	Healthcare
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2029
NSQC Clearance Date	30/04/2024







DGT/VSQ/N0102: Employability Skills (60 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

- PC1. identify employability skills required for jobs in various industries
- PC2. identify and explore learning and employability portals

Constitutional values - Citizenship

To be competent, the user/individual on the job must be able to:

- **PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4. follow environmentally sustainable practices

Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

- PC5. recognize the significance of 21st Century Skills for employment
- **PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

To be competent, the user/individual on the job must be able to:









- **PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- **PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9. write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

To be competent, the user/individual on the job must be able to:

- PC10. understand the difference between job and career
- **PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

To be competent, the user/individual on the job must be able to:

- **PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13. work collaboratively with others in a team

Diversity & Inclusion

To be competent, the user/individual on the job must be able to:

- PC14. communicate and behave appropriately with all genders and PwD
- PC15. escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

- PC16. select financial institutions, products and services as per requirement
- PC17. carry out offline and online financial transactions, safely and securely
- **PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- **PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

- PC20. operate digital devices and carry out basic internet operations securely and safely
- PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22. use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

To be competent, the user/individual on the job must be able to:

- **PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- **PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- **PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

To be competent, the user/individual on the job must be able to:

- **PC26.** identify different types of customers
- PC27. identify and respond to customer requests and needs in a professional manner.









PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

- PC29. create a professional Curriculum vitae (Résumé)
- **PC30.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively
- PC31. apply to identified job openings using offline /online methods as per requirement
- **PC32.** answer questions politely, with clarity and confidence, during recruitment and selection
- PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** need for employability skills and different learning and employability related portals
- KU2. various constitutional and personal values
- KU3. different environmentally sustainable practices and their importance
- KU4. Twenty first (21st) century skills and their importance
- **KU5.** how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up
- KU6. importance of career development and setting long- and short-term goals
- **KU7.** about effective communication
- KU8. POSH Act
- KU9. Gender sensitivity and inclusivity
- KU10. different types of financial institutes, products, and services
- KU11. how to compute income and expenditure
- KU12. importance of maintaining safety and security in offline and online financial transactions
- KU13. different legal rights and laws
- KU14. different types of digital devices and the procedure to operate them safely and securely
- **KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.
- KU16. how to identify business opportunities
- KU17. types and needs of customers
- KU18. how to apply for a job and prepare for an interview
- KU19. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. read and write different types of documents/instructions/correspondence
- GS2. communicate effectively using appropriate language in formal and informal settings









- GS3. behave politely and appropriately with all
- **GS4.** how to work in a virtual mode
- GS5. perform calculations efficiently
- **GS6.** solve problems effectively
- GS7. pay attention to details
- **GS8.** manage time efficiently
- GS9. maintain hygiene and sanitization to avoid infection







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Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
Constitutional values – Citizenship	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
Basic English Skills	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	1	2	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	_
Communication Skills	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	_	_
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	_
Financial and Legal Literacy	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	_	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	_









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Entrepreneurship	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	_	-	_	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	_	-	-	-
NOS Total	20	30	-	-









National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024







HSS/N3016: Provide first aid as per the emergency

Description

This unit is about handling the casualty appropriately and calling Emergency Medical Service (EMS) or Response team or ambulance at the place of incident promptly. It also entails providing first aid care to the victim in an emergency condition while awaiting EMS response.

Scope

The scope covers the following :

- Ensure scene safety while responding to an emergency
- Call for Help
- Evaluate the victim
- Ensure self-safety before providing first aid care
- Provide Cardio Pulmonary Resuscitation (CPR)
- Provide first aid care to the victim complaining of medical emergencies
- Provide first aid care to the victim of trauma emergencies

Elements and Performance Criteria

Ensure scene safety while responding to an emergency

To be competent, the user/individual on the job must be able to:

- **PC1.** check if the scene is safe for oneself, victim and bystanders by identifying potentially hazardous items, individuals or environments at the scene
- **PC2.** move the victim away from source of injury to safe area to prevent further danger such as during road traffics, snake/dog bites, fire, eye splash and drowning
- PC3. position the victim in comfortable posture keeping the injured body part immobilized
- PC4. ensure all tight clothing is loosened and environment is conducive, illuminated & ventilated
- **PC5.** seek assistance of trained lifeguard or trained swimmer to extricate the drowning person
- **PC6.** keep oneself calm while responding to the emergency
- PC7. reassure the victim
- **PC8.** triage the victim(s) in case of mass disasters as per standard protocol and arrange their transport to nearest healthcare facility accordingly

Call for Help

To be competent, the user/individual on the job must be able to:

- **PC9.** inform the local emergency service provider as per type of emergency situations such as Emergency Medical Service (EMS) team, ambulance, police, fire brigade, etc.
- PC10. identify if assistance from bystanders needs to be taken
- **PC11.** arrange alternate transport of the victim to nearby healthcare facility timely and carefully, in case EMS team is unreachable
- PC12. convey incident details to emergency response services accurately

Evaluate the victim

To be competent, the user/individual on the job must be able to:









- **PC13.** assess the victim for any limb deformity, swelling, coughing, bleeding, or breathing difficulties
- **PC14.** check if the victim is awake and conscious by asking the victim to identify point where it exactly hurts after incident
- **PC15.** check for the victim's response to sound and touch (Tap and Talk) and signs of life, if victim is apparently unconscious
- PC16. reassess the responsiveness every 1 to 2 minutes until help arrives

Ensure self-safety before providing first aid care

To be competent, the user/individual on the job must be able to:

- **PC17.** wear personal protective equipment for self-safety as per availability
- PC18. maintain hand hygiene by washing with soap/alcohol based sanitizers
- PC19. introduce oneself to victim for obtaining permission (if responding) before providing first aid

Provide Cardio Pulmonary Resuscitation (CPR)

To be competent, the user/individual on the job must be able to:

- **PC20.** position the individual and oneself appropriately for applying external chest compression and/or ventilation safely and effectively
- PC21. perform Cardio Pulmonary Resuscitation (CPR) as per standard procedure
- **PC22.** evaluate the individual's respiratory function and the effectiveness of chest compressions and ventilation
- **PC23.** carry out the procedure until the help arrives or individual regains airway and circulation

Provide first aid care to the victim complaining of medical emergencies

To be competent, the user/individual on the job must be able to:

- **PC24.** assess and record breathing difficulty/patterns, abnormal facial expressions, deficit in speech, any weakness, warning signs of convulsions, cyanosis, the pattern and duration of fits
- **PC25.** obtain information from the victim if on any medication or treatment in case of chest pain/discomfort
- **PC26.** perform CPR only if victim loses consciousness, stops breathing and complains of chest pain
- **PC27.** provide Heimlich maneuver or abdominal thrust for dislodging an obstruction from a person's windpipe in case of choking in adult victim
- **PC28.** provide back slaps in between the shoulders of infant by placing the infant in one hand in case of choking
- PC29. ensure nothing is given orally to the semi-conscious victim
- **PC30.** support the victim to protect from falling down and rest his head and shoulders with a makeshift pillow in case of paralytic attack/stroke
- **PC31.** position the victim in lie down posture with foot end elevated or sit with his/her head between their knees in case of giddiness/fainting
- **PC32.** clear all nearby objects that may cause injury while victim is shaking in case of fits or convulsions
- PC33. check if jerky movements of victim could be avoided to prevent fractures
- **PC34.** ensure that swallowing, speaking, sniffing, spitting, coughing and blowing nose is avoided in case of nose bleed









PC35. pinch the soft part of nose and clean dribbling from nose with a clean cloth in case of nose bleed/epistaxis

Provide first aid care to the victim of trauma emergencies

To be competent, the user/individual on the job must be able to:

- **PC36.** ensure that the movement of victim is restricted in case of penetrating injury by objects like knife, metal or glass pieces as well as immobilization of bitten limb
- PC37. ensure that no penetrating object is removed from the wound
- **PC38.** apply direct pressure on bleeding site with a clean cloth and tie it directly over it, if bleeding profusely
- **PC39.** apply splints or any other available substitute to stabilize the broken segments, in case of fractures
- PC40. cut off loose burnt clothes
- **PC41.** soothe the burnt area by either immersing it in cool water/under running water or covering it with a clean cloth
- PC42. remove encircling tight clothing and jewellery from the bitten limb to prevent constriction
- **PC43.** clean the snake/dog bite site with soap and running water after wearing plastic cover or gloves to decrease infection
- **PC44.** ensure that tying any tourniquet, giving herbal medicine, sucking venom out of limb, elevating the area to heart level and unnecessary limb movement or physical activity of victim is avoided in case of bites
- **PC45.** obtain information about the snake, if possible without comprising on self and others safety
- **PC46.** follow standard protocol while providing first aid care in case of eye injury such as looking for any foreign object in the eye, rinsing the eyes immediately using normal water and covering the eye with a loose cloth
- **PC47.** ensure that putting any ointment in the eye, pressure on the eye dressing and rubbing of the eyes are avoided in case of eye injury
- **PC48.** follow standard protocol while providing first aid care in case of drowning such as covering the victim with a blanket, assessing them for breathing and consciousness
- PC49. ensure that water is not taken out from stomach or lungs actively in case of drowning

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. the importance of dealing with accidents and casualties promptly, calmly and correctly
- **KU2.** signs and symptoms of common emergencies which require first aid response
- **KU3.** local emergency numbers as prevalent in region
- KU4. good Samaritan Law and general principles
- KU5. about local help agencies and their contact details
- **KU6.** importance of switching off the ignition of the motor vehicle in case of a motor vehicle accident
- **KU7.** about other emergency response agencies such as bomb disposal squads, fire departments, etc









- **KU8.** importance of cutting off main electrical switch before approaching a victim of suspected electrocution
- **KU9.** hand washing techniques
- **KU10.** triage and its modalities
- **KU11.** breathing assessment protocol by going close to the person to see the chest movements (In and Out)
- **KU12.** importance of providing clear and accurate information regarding location, number of casualties or any other relevant information
- KU13. how to take help from the bystanders to provide efficient first aid
- KU14. the procedures to be followed to protect the casualty and others
- **KU15.** importance of providing comfort and reassurance
- KU16. body mechanics, lifting and carrying techniques, and principles of moving casualties
- KU17. uses of personal protective equipment
- **KU18.** how to prevent crowd from in-appropriate actions such as lifting victim / providing liquids etc.
- KU19. how to compress in case of external bleeding for stopping it
- KU20. how to use splint for suspected fractures
- **KU21.** packing procedure of amputated part for keeping it viable for re-implantation, in case of amputation
- KU22. the roles and responsibility of oneself
- **KU23.** dos and donts for all kinds of common medical emergencies for providing first aid like avoiding giving anything orally to the victim and direct contact with blood, urine or vomitus etc.
- KU24. how to identify and follow procedures for safe practice
- KU25. how to monitor the necessary environmental conditions to maintain safety
- KU26. local emergency numbers as prevalent in States
- **KU27.** importance of avoiding re-alignment of the wound by moving it as it may cause further damage, bleeding or pain
- **KU28.** importance of avoiding rubbing or massaging the area if there is any suspicion of broken bones underneath
- KU29. how to maintain recovery position of patient
- KU30. heimlich maneuver, its indications and contraindications
- **KU31.** assessment procedure of an adult, child or infant presenting with any medical emergency
- **KU32.** role and its scope, responsibilities and accountability in relation to the assessment of health status and needs
- KU33. what information will be obtained and stored in records
- **KU34.** with whom the information might be shared
- **KU35.** the indicators of high risk or life-threatening conditions in relation to the above parameters
- **KU36.** the basic features of anatomy and physiology as relevant to the provision of first aid
- KU37. the priorities in life support
- **KU38.** how to maneuver an individual safely, quickly and effectively into the appropriate position







Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. prepare checklist, document findings and observations
- **GS2.** read instructions given by the healthcare professional
- GS3. explain instructions to the patient/attendant as per need
- **GS4.** set goals and timelines with clearly defined key performance indicators
- GS5. keep abreast with the latest knowledge by reading relevant materials
- GS6. communicate in polite, calm, empathetic and congenial manner
- GS7. manage relationships with relevant stakeholders and use patient and safety centric approach
- GS8. identify immediate or temporary issues and report for early resolution
- **GS9.** prioritize the task as per allocation of work







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure scene safety while responding to an emergency	10	10	8	5
PC1. check if the scene is safe for oneself, victim and bystanders by identifying potentially hazardous items, individuals or environments at the scene	-	-	-	-
PC2. move the victim away from source of injury to safe area to prevent further danger such as during road traffics, snake/dog bites, fire, eye splash and drowning	-	-	-	-
PC3. position the victim in comfortable posture keeping the injured body part immobilized	-	-	-	-
PC4. ensure all tight clothing is loosened and environment is conducive, illuminated & ventilated	-	-	-	-
PC5. seek assistance of trained lifeguard or trained swimmer to extricate the drowning person	-	-	-	-
PC6. keep oneself calm while responding to the emergency	-	-	-	-
PC7. reassure the victim	-	-	-	-
PC8. triage the victim(s) in case of mass disasters as per standard protocol and arrange their transport to nearest healthcare facility accordingly	-	-	-	-
Call for Help	10	10	8	5
PC9. inform the local emergency service provider as per type of emergency situations such as Emergency Medical Service (EMS) team, ambulance, police, fire brigade, etc.	-	-	-	-
PC10. identify if assistance from bystanders needs to be taken	-	-	-	-
PC11. arrange alternate transport of the victim to nearby healthcare facility timely and carefully, in case EMS team is unreachable	-	-	-	-
PC12. convey incident details to emergency response services accurately	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Evaluate the victim	12	10	5	5
PC13. assess the victim for any limb deformity, swelling, coughing, bleeding, or breathing difficulties	-	-	-	-
PC14. check if the victim is awake and conscious by asking the victim to identify point where it exactly hurts after incident	-	-	-	-
PC15. check for the victim's response to sound and touch (Tap and Talk) and signs of life, if victim is apparently unconscious	-	-	-	_
PC16. reassess the responsiveness every 1 to 2 minutes until help arrives	-	-	-	-
Ensure self-safety before providing first aid care	12	10	5	5
PC17. wear personal protective equipment for self-safety as per availability	-	-	-	-
PC18. maintain hand hygiene by washing with soap/alcohol based sanitizers	-	-	-	-
PC19. introduce oneself to victim for obtaining permission (if responding) before providing first aid	-	-	-	-
Provide Cardio Pulmonary Resuscitation (CPR)	10	15	5	10
PC20. position the individual and oneself appropriately for applying external chest compression and/or ventilation safely and effectively	-	-	_	-
PC21. perform Cardio Pulmonary Resuscitation (CPR) as per standard procedure	-	-	-	-
PC22. evaluate the individual's respiratory function and the effectiveness of chest compressions and ventilation	-	-	-	-
PC23. carry out the procedure until the help arrives or individual regains airway and circulation	-	-	-	-
<i>Provide first aid care to the victim complaining of medical emergencies</i>	20	15	5	10









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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks		
PC24. assess and record breathing difficulty/patterns, abnormal facial expressions, deficit in speech, any weakness, warning signs of convulsions, cyanosis, the pattern and duration of fits	-	-	-	-		
PC25. obtain information from the victim if on any medication or treatment in case of chest pain/discomfort	-	-	-	-		
PC26. perform CPR only if victim loses consciousness, stops breathing and complains of chest pain	-	-	-	-		
PC27. provide Heimlich maneuver or abdominal thrust for dislodging an obstruction from a person's windpipe in case of choking in adult victim	-	-	-	-		
PC28. provide back slaps in between the shoulders of infant by placing the infant in one hand in case of choking	-	-	-	-		
PC29. ensure nothing is given orally to the semi- conscious victim	-	-	-	-		
PC30. support the victim to protect from falling down and rest his head and shoulders with a makeshift pillow in case of paralytic attack/stroke	-	-	-	-		
PC31. position the victim in lie down posture with foot end elevated or sit with his/her head between their knees in case of giddiness/fainting	-	-	-	-		
PC32. clear all nearby objects that may cause injury while victim is shaking in case of fits or convulsions	-	-	-	-		
PC33. check if jerky movements of victim could be avoided to prevent fractures	-	-	-	-		
PC34. ensure that swallowing, speaking, sniffing, spitting, coughing and blowing nose is avoided in case of nose bleed	-	-	-	-		
PC35. pinch the soft part of nose and clean dribbling from nose with a clean cloth in case of nose bleed/epistaxis	-	-	-	-		









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Provide first aid care to the victim of trauma emergencies</i>	23	21	5	10
PC36. ensure that the movement of victim is restricted in case of penetrating injury by objects like knife, metal or glass pieces as well as immobilization of bitten limb	-	-	-	-
PC37. ensure that no penetrating object is removed from the wound	-	-	-	-
PC38. apply direct pressure on bleeding site with a clean cloth and tie it directly over it, if bleeding profusely	_	-	-	-
PC39. apply splints or any other available substitute to stabilize the broken segments, in case of fractures	-	-	-	-
PC40. cut off loose burnt clothes	-	-	-	-
PC41. soothe the burnt area by either immersing it in cool water/under running water or covering it with a clean cloth	-	-	-	-
PC42. remove encircling tight clothing and jewellery from the bitten limb to prevent constriction	-	-	_	-
PC43. clean the snake/dog bite site with soap and running water after wearing plastic cover or gloves to decrease infection	-	-	-	-
PC44. ensure that tying any tourniquet, giving herbal medicine, sucking venom out of limb, elevating the area to heart level and unnecessary limb movement or physical activity of victim is avoided in case of bites	_	-	-	-
PC45. obtain information about the snake, if possible without comprising on self and others safety	-	-	-	-
PC46. follow standard protocol while providing first aid care in case of eye injury such as looking for any foreign object in the eye, rinsing the eyes immediately using normal water and covering the eye with a loose cloth	_	_	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC47. ensure that putting any ointment in the eye, pressure on the eye dressing and rubbing of the eyes are avoided in case of eye injury	-	-	-	_
PC48. follow standard protocol while providing first aid care in case of drowning such as covering the victim with a blanket, assessing them for breathing and consciousness	-	-	-	-
PC49. ensure that water is not taken out from stomach or lungs actively in case of drowning	-	-	-	-
NOS Total	97	91	41	50









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N3016
NOS Name	Provide first aid as per the emergency
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Curative Services, Emergency Services
NSQF Level	3
Credits	1
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024







HSS/N2332: Respond to emergency calls & size up the scene at the site

Description

This OS unit is about the individual's first response to a call received and preparing to move to the emergency site, response upon arrival at the emergency site, evaluating the situation and ensuring the safety of self, patients and others.

Scope

The scope covers the following :

- Coordinate with control room
- Respond to emergency calls
- Size up the scene

Elements and Performance Criteria

Coordinate with control room

To be competent, the user/individual on the job must be able to:

- **PC1.** collate all information pertaining to the patient location, landmark, type & seriousness of emergency on receiving a call from the control room
- **PC2.** intimate the control room post admitting the patient in the hospital/dropping him to specified location or in case of inability to reach the patient location in case of traffic jams or ambulance breakdowns

Respond to emergency calls

To be competent, the user/individual on the job must be able to:

- **PC3.** report to the designated ambulance parking location on time as per the schedule
- PC4. identify the emergency codes used in the hospital for emergency situations
- **PC5.** use appropriate language while speaking to the dispatch team to reflect professionalism
- **PC6.** use communication equipment such as mobile phones, radio communication equipment, megaphones and other equipment as required by the (Emergency Medical Services) EMS provider
- **PC7.** assist during evaluation of the situation of the patient(s) based on the call with the dispatch center
- PC8. seek support when situations are beyond one's competence and authority
- PC9. perform Body Substance Isolation (BSI) procedure as per standards and requirements
- **PC10.** prepare the ambulance with the required medical equipment, supplies, medications and other items as per the medical emergency

Size up the scene

To be competent, the user/individual on the job must be able to:

- PC11. check that all safety precautions are taken at the scene of the emergency
- **PC12.** introduce oneself to patient(s) / attendant and seek confidence of casualty/attendant, as applicable









- **PC13.** identify the implications of nuclear, radioactive, biological, chemical and explosive incidents and take precautions for self and others as per organizational policies
- PC14. estimate the total number of patient(s) involved and call for backup, when required
- **PC15.** explain the situation clearly to other emergency response agencies, when required and collaborate effectively
- **PC16.** reassure the patient(s), relatives and bystanders who are in stressful situations by communicating effectively, and working in a confident and efficient manner
- **PC17.** obtain information regarding the incident through accurate and complete scene assessment and document it accordingly
- PC18. work to optimize and save time while avoiding mishandling of patient(s)
- PC19. provide information and cooperate with law agencies in case of medico-legal emergencies

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. basic structure and function of the healthcare system in the country
- **KU2.** basic structure and function of healthcare facilities available at various levels, hospice care, clinics
- KU3. codes used in the hospital for all emergency situations
- **KU4.** relevant legislation, standards, policies, and procedures followed in the hospital such as the EMS Act
- KU5. about Samaritan law
- **KU6.** how to engage with the medical officer for support in case the situation is beyond one's competence
- KU7. response time decided by the EMS provider/ state government in which EMT operates
- **KU8.** contact details of emergency medical agencies which includes bomb disposal squads, fire departments, chemical, biological and nuclear agencies
- **KU9.** protocols designed by the state or EMS providers
- **KU10.** importance of health, safety, and security protocols followed by the health care provider at the emergency scene
- **KU11.** healthcare provider's emergency procedures and responsibilities in nuclear, radioactive, biological, chemical and explosive incidents
- **KU12.** what constitutes a hazard encountered at the scene and how to report the hazard to the competent authority
- **KU13.** relevant information on health, safety, and security that applies to the emergency scene role and importance of the ECA in supporting hospital/Ambulance operations
- KU14. relevant medical equipment used in different types of emergencies
- **KU15.** basic medical terms and principles to evaluate the patient's condition
- **KU16.** how to prepare for dealing with different types of hazardous materials like nuclear, radioactive, biological, chemical and explosive substances
- KU17. basic medicolegal principles
- KU18. how to create a safe environment around the patient(s) and others
- KU19. importance of being alert to health, safety, and security hazards at the emergency site









- **KU20.** common health, safety, and security hazards that affect people working at the emergency site and how to identify them
- KU21. importance of warning others about hazards and what to do until the hazard is dealt with
- **KU22.** how to work efficiently in a team to ensure patient safety
- **KU23.** hazards and risks associated with handling medical samples, precautions to be taken and appropriate handling and reporting in case of emergency
- **KU24.** importance, uses and process of putting on and discarding off of Body Substance Isolation equipment which includes hospital gowns, medical gloves, shoe covers, surgical masks, safety glasses, helmets, reflective clothing
- **KU25.** how to sum up the scene quickly and ensuring that it is safe by taking appropriate measures
- **KU26.** how to collaborate with other emergency response agencies, if required
- **KU27.** how to estimate the total number of casualties involved and call for backup, if required

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. document call logs, reports, task lists, and schedules
- **GS2.** read and correctly interpret written instructions for specific emergency situations, briefs from the dispatch centre and other important communications
- **GS3.** read and correctly interpret about changes in legislations and organizational policies with respect to safety procedures at emergency or crime scenes
- **GS4.** read and extract relevant information from internal communications and legal framework changes related to roles and responsibilities to keep abreast of latest professional knowledge
- **GS5.** listen actively during interactions with the dispatch team, colleagues and the medical officer
- **GS6.** communicate with the patient(s) and other people around the patient(s) clearly and give them clear instructions for their safety
- **GS7.** make decisions pertaining to the scope of work and actions to be taken as per defined limits and competence
- GS8. plan and organize activities required to respond to an emergency call
- GS9. maintain patient confidentiality and dignity at all times
- **GS10.** cope with stress on the job without affecting job quality







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Coordinate with control room	20	-	10	12
PC1. collate all information pertaining to the patient location, landmark, type & seriousness of emergency on receiving a call from the control room	-	-	-	-
PC2. intimate the control room post admitting the patient in the hospital/dropping him to specified location or in case of inability to reach the patient location in case of traffic jams or ambulance breakdowns	-	-	-	-
Respond to emergency calls	10	10	5	6
PC3. report to the designated ambulance parking location on time as per the schedule	-	-	-	-
PC4. identify the emergency codes used in the hospital for emergency situations	-	-	-	-
PC5. use appropriate language while speaking to the dispatch team to reflect professionalism	-	-	-	-
PC6. use communication equipment such as mobile phones, radio communication equipment, megaphones and other equipment as required by the (Emergency Medical Services) EMS provider	-	-	-	-
PC7. assist during evaluation of the situation of the patient(s) based on the call with the dispatch center	-	-	-	-
PC8. seek support when situations are beyond one's competence and authority	-	-	-	-
PC9. perform Body Substance Isolation (BSI) procedure as per standards and requirements	-	-	-	-
PC10. prepare the ambulance with the required medical equipment, supplies, medications and other items as per the medical emergency	-	-	-	-
Size up the scene	17	15	5	6









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. check that all safety precautions are taken at the scene of the emergency	_	-	-	-
PC12. introduce oneself to patient(s) / attendant and seek confidence of casualty/attendant, as applicable	-	-	_	-
PC13. identify the implications of nuclear, radioactive, biological, chemical and explosive incidents and take precautions for self and others as per organizational policies	-	-	-	-
PC14. estimate the total number of patient(s) involved and call for backup, when required	_	-	_	-
PC15. explain the situation clearly to other emergency response agencies, when required and collaborate effectively	-	-	-	-
PC16. reassure the patient(s), relatives and bystanders who are in stressful situations by communicating effectively, and working in a confident and efficient manner	-	-	-	-
PC17. obtain information regarding the incident through accurate and complete scene assessment and document it accordingly	-	-	-	-
PC18. work to optimize and save time while avoiding mishandling of patient(s)	_	-	_	-
PC19. provide information and cooperate with law agencies in case of medico-legal emergencies	_	-	_	-
NOS Total	47	25	20	24









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N2332
NOS Name	Respond to emergency calls & size up the scene at the site
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Emergency Services
NSQF Level	4
Credits	4
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024







HSS/N2336: Carry out activities related to patient triage

Description

This unit deals in detail with identification of injured or sick patients who require immediate treatment.

Scope

The scope covers the following :

• Patient triage

Elements and Performance Criteria

Patient triage

To be competent, the user/individual on the job must be able to:

- PC1. coordinate for setting up of separate areas for triage, treatment, and transport
- PC2. use appropriate personal protective equipment while conducting initial triage
- PC3. conduct initial triage of patients by using defined methods and protocols
- **PC4.** assess whether the patient requires immediate lifesaving intervention or whether they could wait
- PC5. record the vital signs of patients
- PC6. identify a high-risk case and tag as per orders
- PC7. extract patients from the casualty area based on initial triage to designated treatment areas
- PC8. re-triage patients extracted to the triage and treatment areas
- PC9. alert healthcare facilities in advance of possible arrival of multiple patients

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. basic structure and function of the healthcare system in the country
- **KU2.** basic structure and function of healthcare facilities available at various levels, hospice care, clinics
- KU3. codes used in the hospital for all emergency situations
- **KU4.** relevant legislation, standards, policies, and procedures followed in the hospital such as the EMS Act
- **KU5.** how to engage with the medical officer for support in case the situation is beyond one's competence
- **KU6.** response times decided by the EMS provider/ state government in which EMT operates
- **KU7.** contact details of emergency medical agencies which includes bomb disposal squads, fire departments, chemical, biological and nuclear agencies
- **KU8.** protocols designed by the state or EMS providers









- **KU9.** importance of health, safety, and security protocols followed by the health care provider at the emergency scene
- **KU10.** what constitutes a hazard encountered at the scene and how to report the hazard to the competent authority
- **KU11.** how to use Sort, Assess, Lifesaving interventions, Treat and Transport (SALT) triage system and Simple Triage and Rapid Treatment (START) plan accordingly, as per the triage guidelines and protocols
- **KU12.** about do's and don'ts of ECA on arrival at the scene
- KU13. how to set up separate areas for treatment, triage and transport
- **KU14.** how to conduct an initial triage of patients by using the START triage model for adult patients, Jump START Triage for pediatric patients and the SMART triage tagging system
- KU15. how to use appropriate personal protective equipment while conducting initial triage
- KU16. how to tag severity/ criticality of patient using color coded tags
- **KU17.** how to set up direct non-injured and/or slightly injured victims to the triage area for victims with minor injuries
- **KU18.** how to monitor patients with minor injuries for changes in their condition
- **KU19.** how to extract patients from the casualty area based on initial triage to designated triage and treatment areas
- KU20. how to use equipment like cots and litters for extraction where required
- KU21. how to re-triage patients extracted to the triage and treatment areas
- KU22. how to transport patients to healthcare facility
- **KU23.** importance of intimating healthcare provider facilities in advance of a mass casualty incident and possible arrival of multiple patients
- **KU24.** hazards and risks associated with handling medical samples, precautions to be taken and appropriate handling and reporting in case of emergency
- KU25. how to measure vital signs and accordingly allocate the patient to a treatment area
- KU26. how to coordinate to work with separate functional teams at the site
- KU27. how to coordinate for initial triage, patient extraction and secondary triage
- **KU28.** how to coordinate with other first responder teams

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. document call logs, reports, task lists, and schedules
- GS2. write accurate, concise and to the point report with the provider institute physician
- **GS3.** read and correctly interpret about changes in legislations and organizational policies from reports and notifications
- GS4. communicate with the patient in simple, clear and unambiguous language
- **GS5.** make decisions pertaining to the scope of work and actions to be taken as per defined limits and competence
- GS6. plan and organize activities that are assigned to him/her to achieve task in a timely manner







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Patient triage	17	20	10	10
PC1. coordinate for setting up of separate areas for triage, treatment, and transport	-	-	-	-
PC2. use appropriate personal protective equipment while conducting initial triage	-	-	-	-
PC3. conduct initial triage of patients by using defined methods and protocols	-	-	-	-
PC4. assess whether the patient requires immediate lifesaving intervention or whether they could wait	-	-	-	-
PC5. record the vital signs of patients	-	-	-	-
PC6. identify a high-risk case and tag as per orders	-	-	-	-
PC7. extract patients from the casualty area based on initial triage to designated treatment areas	-	-	-	-
PC8. re-triage patients extracted to the triage and treatment areas	-	-	-	-
PC9. alert healthcare facilities in advance of possible arrival of multiple patients	-	-	-	-
NOS Total	17	20	10	10









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N2336
NOS Name	Carry out activities related to patient triage
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Emergency Services
NSQF Level	4
Credits	3.5
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024







HSS/N2337: Manage patient transport and handover to the identified provider institute

Description

This unit deals in detail about managing and maintaining ambulance for handling emergency as per the specified standards, transporting the patient by an appropriate means based on the contextual considerations (emergency, weather conditions, patient's history and economic status), and handing over the patient to the medical staff.

Scope

The scope covers the following :

- Prepare ambulance for the emergency
- Transport the patient by appropriate means
- Handover the patient to the concerned staff of provider institute

Elements and Performance Criteria

Prepare ambulance for the emergency

To be competent, the user/individual on the job must be able to:

- **PC1.** stock the ambulance with essential medical and non- medical equipment/consumables as per organizational policies and procedures
- PC2. check if minimum staffing is maintained for an ambulance as per policies
- PC3. ensure the unit is fueled sufficiently
- **PC4.** conduct daily inspections of the ambulance in terms of supply, cleaning and sterilization of equipment, their maintenance and working condition
- PC5. maintain record of inspection done and escalate concerns if any
- PC6. ensure readiness for usage of safety protocols and seat belts

Transport the patient by appropriate means

To be competent, the user/individual on the job must be able to:

- PC7. transport the patient to the nearest provider institute in adherence with the legal regulation
- PC8. adhere to the rules and regulations related to the usage of ground and air transport
- PC9. adhere safety norms for patient during transportation
- PC10. provide pre-arrival information to the receiving hospital
- **PC11.** escalate concerns to appropriate authority in situations where transport is a problem and alternative steps and measures to be taken
- **PC12.** take alternative steps and measures as directed by concerned authority and update and record it accordingly

Handover the patient to the concerned staff of provider institute

To be competent, the user/individual on the job must be able to:

- **PC13.** provide a verbal report to the medical staff on the condition of the patient and initial findings
- PC14. complete the Patient Care Report (PCR) and hand it over to the medical staff









PC15. hand over the consent form signed by the patient or a relative

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** basic structure and function of the healthcare system in the country
- **KU2.** basic structure and function of healthcare facilities available at various levels, hospice care, clinics
- KU3. codes used in the hospital for all emergency situations
- **KU4.** relevant legislation, standards, policies, and procedures followed in the hospital such as the EMS Act
- **KU5.** how to engage with the medical officer for support in case the situation is beyond one's competence
- KU6. response times decided by the EMS provider/ state government in which EMT operates
- **KU7.** contact details of emergency medical agencies which includes bomb disposal squads, fire departments, chemical, biological and nuclear agencies
- KU8. protocols designed by the state or EMS providers
- **KU9.** importance of health, safety, and security protocols followed by the health care provider at the emergency scene
- **KU10.** what constitutes a hazard encountered at the scene and how to report the hazard to the competent authority
- KU11. how to assess and select the best healthcare facility for the patient
- KU12. rules of driving and road safety
- **KU13.** use of the SBAR (Situation, Background, Assessment, and Recommendation) technique (WHO recommended) during patient handover communication relevant legislation, standards, policies, and procedures followed in the hospital such as the EMS Act
- **KU14.** procedure of hospital allocation starting from assessment of the patient's medical condition, consolidation of the complete information related to hospitals, directions from the medical officer and then arrangement of transport to the allocated medical facility
- KU15. risks involved in the process of allocating a hospital to the patient and steps to mitigate risks
- KU16. appropriate means for patient transport considering weather conditions
- KU17. basic structure and function of the ambulance
- KU18. different types of medical and non-medical equipment in ambulance
- KU19. traffic rules and regulations as per state/country norms
- **KU20.** requirements to ensure health and safety in the ambulance
- KU21. how to create a safe environment around the patient
- KU22. how to manage and maintain medical and non-medical equipment of the ambulance unit
- KU23. how to sterilize and disinfect medical equipment and ambulance
- KU24. how to discard the used equipment and consumables
- KU25. inventory management, its need, principles and procedures

Generic Skills (GS)









User/individual on the job needs to know how to:

- GS1. document call logs, reports, task lists, and schedules
- GS2. write accurate, concise and to the point report with the provider institute physician
- **GS3.** read and correctly interpret about changes in legislations and organizational policies from reports and notifications
- **GS4.** interact with the patient in simple, clear and unambiguous language
- **GS5.** make decisions pertaining to the scope of work and actions to be taken as per defined limits and competence
- GS6. plan and organize activities that are assigned to him/her to achieve task in a timely manner









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare ambulance for the emergency	15	20	10	10
PC1. stock the ambulance with essential medical and non- medical equipment/consumables as per organizational policies and procedures	-	-	-	-
PC2. check if minimum staffing is maintained for an ambulance as per policies	-	-	-	-
PC3. ensure the unit is fueled sufficiently	-	-	-	-
PC4. conduct daily inspections of the ambulance in terms of supply, cleaning and sterilization of equipment, their maintenance and working condition	-	-	-	-
PC5. maintain record of inspection done and escalate concerns if any	-	-	-	-
PC6. ensure readiness for usage of safety protocols and seat belts	-	-	-	-
Transport the patient by appropriate means	10	-	10	13
PC7. transport the patient to the nearest provider institute in adherence with the legal regulation	-	-	-	-
PC8. adhere to the rules and regulations related to the usage of ground and air transport	-	-	-	-
PC9. adhere safety norms for patient during transportation	-	-	-	-
PC10. provide pre-arrival information to the receiving hospital	-	-	-	-
PC11. escalate concerns to appropriate authority in situations where transport is a problem and alternative steps and measures to be taken	_	_	_	-
PC12. take alternative steps and measures as directed by concerned authority and update and record it accordingly	_	_	_	-
Handover the patient to the concerned staff of provider institute	15	-	10	13









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. provide a verbal report to the medical staff on the condition of the patient and initial findings	-	-	-	-
PC14. complete the Patient Care Report (PCR) and hand it over to the medical staff	-	_	-	-
PC15. hand over the consent form signed by the patient or a relative	-	-	-	-
NOS Total	40	20	30	36









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N2337
NOS Name	Manage patient transport and handover to the identified provider institute
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Emergency Services
NSQF Level	4
Credits	4
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024









HSS/N0513: Perform sample collection activities for Blood, Sputum, Urine, Stool, Nasal and Throat swab

Description

This Occupational Standard covers preparation of equipment and supplies used during blood and other sample collection for testing. It also covers performing sample collection following best practices and carrying out various standard operating procedures for sample storage and transportation as per sample type.

Scope

The scope covers the following :

- Perform Pre-procedural activities of sample collection
- Perform procedural activities of sample collection
- Perform Post Procedural activities of sample collection

Elements and Performance Criteria

Perform Pre-procedural activities of sample collection

To be competent, the user/individual on the job must be able to:

- **PC1.** Provide information about the procedure to be performed
- PC2. seek patient's information as required on the laboratory form
- **PC3.** ensure accurate identification
- PC4. obtain consent of the patient as per organizational procedure
- PC5. Prepare and maintain necessary equipment and supplies
- PC6. ensure all equipment to be used is clean, sterilized and in working condition
- PC7. Prepare and label the blood samples for test, procedures and identification purposes

Perform procedural activities of sample collection

To be competent, the user/individual on the job must be able to:

- PC8. Prepare an appropriate venipuncture site for blood collection
- PC9. Use correct techniques for blood collection
- **PC10.** Guide patients and follow best practices in collection of samples of Sputum, Urine, Stool, Nasal and Throat swab

Perform Post Procedural activities of sample collection

To be competent, the user/individual on the job must be able to:

- **PC11.** handle, transfer and store samples safely and appropriately avoiding leakage, spilling, decaying and delay
- PC12. maintain patient's record accurately and updated as per institutional protocol
- PC13. ensure the stocks are stored safely, securely and as per organizational standard practices

Knowledge and Understanding (KU)









The individual on the job needs to know and understand:

- **KU1.** relevant legislation, standards, policies, and procedures followed in the hospitals/laboratories/medical centres
- **KU2.** how to engage with the medical officer for support in case the situation is beyond ones competence
- **KU3.** importance of the role of Phlebotomist in supporting operations of the department
- KU4. how to dress appropriately as per the organizational policies
- **KU5.** how to meet organizational expectations as defined by the Employee Standards of Performance, organizations policies and procedures, and the organization's strategic goals
- **KU6.** employee policies and procedures applicable to own work
- KU7. basic structure and function of the healthcare system in the country
- KU8. features, need and usage of Laboratory Management Information System (LMIS)
- **KU9.** how to establish a routine that is comfortable for patient in preparing him / her for blood specimen collection
- **KU10.** how to check that the patients 2 identifiers on the ID armband match with the information on the laboratory requisition form or sample label
- KU11. all protocols for establishing the identification of patient
- KU12. all safety and hygiene measures applicable to blood sample collection
- **KU13.** list of equipment required for drawing blood samples equipment such as sterile glass with rubber caps, vacuum blood collection tubes, bloodsampling devices, alcohol hand rub etc.
- KU14. labelling procedures and related standard practice
- KU15. process to discard biomedical waste as per pollution control guidelines
- KU16. measures to ensure stock availability
- **KU17.** significance of various tube color caps for distinguishing which tube to use as per the test requested
- **KU18.** guidelines related to tube mixing and transportation
- **KU19.** the hazards and risks associated with handling medical samples, precautions to be taken while handling samples and reporting in case of emergency
- KU20. basic structure and function of the body system
- KU21. process, condition & resources required by the body to support healthy functioning
- **KU22.** bodily processes including maintenance of body temperature, fluid & electrolyte balance, elimination of body wastes, maintenance of blood pressure
- KU23. measures and process of protection from infection

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** document patient related information under guidance
- **GS2.** file patients information as per the organizational protocols
- **GS3.** complete all written communications
- GS4. label all collected samples clearly









- GS5. read written instructions to follow all procedures related to sample collection
- **GS6.** read internal communications and legal framework changes related to roles and responsibilities to keep abreast of the latest knowledge
- **GS7.** be updated with general and specialized medical terms, basic medical knowledge and specialized phlebotomy procedures
- **GS8.** match required paperwork
- **GS9.** maintain interpersonal relationships
- **GS10.** distinguish between ways of communication when communicating with patients of all ages, supervisors, and peers/coworkers
- **GS11.** interact with a supervisor in clear terms following professional protocols
- **GS12.** avoid using jargon, slang or acronyms when communicating with patient/donor, colleagues or the medical officer
- GS13. interact with the patient clearly and reassure them
- **GS14.** ask questions to collect all necessary information regarding the patients condition and other personal details like his/her address, DOB
- GS15. make decisions to ensure consistent quality
- GS16. make decisions on good laboratory practices without making errors during phlebotomy
- GS17. use resources effectively when carrying out work
- **GS18.** communicate effectively with patients of all ages, supervisors, and peers/co-workers
- GS19. maintain patients confidentiality
- **GS20.** follow practices that respect the rights of the patient(s)
- **GS21.** identify immediate or temporary solutions to resolve delays
- GS22. identify appropriate solutions to patients problems
- GS23. analyze patients behaviour to identify their state of mind
- **GS24.** analyze, evaluate and apply the information gathered from the patient for carrying out the blood drawing procedures







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Perform Pre-procedural activities of sample collection	38	34	30	20
PC1. Provide information about the procedure to be performed	-	-	-	-
PC2. seek patient's information as required on the laboratory form	-	-	-	-
PC3. ensure accurate identification	-	-	-	-
PC4. obtain consent of the patient as per organizational procedure	-	-	-	-
PC5. Prepare and maintain necessary equipment and supplies	-	-	-	-
PC6. ensure all equipment to be used is clean, sterilized and in working condition	-	-	-	-
PC7. Prepare and label the blood samples for test, procedures and identification purposes	-	-	-	-
Perform procedural activities of sample collection	79	46	30	35
PC8. Prepare an appropriate venipuncture site for blood collection	-	-	-	-
PC9. Use correct techniques for blood collection	-	-	-	-
PC10. Guide patients and follow best practices in collection of samples of Sputum, Urine, Stool, Nasal and Throat swab	-	-	-	-
Perform Post Procedural activities of sample collection	19	36	14	20
PC11. handle, transfer and store samples safely and appropriately avoiding leakage, spilling, decaying and delay	-	-	-	-
PC12. maintain patient's record accurately and updated as per institutional protocol	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. ensure the stocks are stored safely, securely and as per organizational standard practices	-	-	-	-
NOS Total	136	116	74	75









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N0513
NOS Name	Perform sample collection activities for Blood, Sputum, Urine, Stool, Nasal and Throat swab
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Diagnostic
NSQF Level	4
Credits	4.5
Version	1.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024







HSS/N9619: Follow etiquette for site visit

Description

This Occupational Standard describes the knowledge, understanding and skills required by an allied health professional for making site visits and following related etiquette

Scope

The scope covers the following :

- Prepare for site visits
- Follow visit etiquette

Elements and Performance Criteria

Prepare for site visits

To be competent, the user/individual on the job must be able to:

- PC1. follow telephone etiquette while talking to client/patient
- PC2. confirm purpose, time and site information for making the site visit
- **PC3.** ensure that adequate required material and equipment are carried as per organizational procedures for required on-site activities
- PC4. plan route for site visit and determine travel time for arriving on time at the site
- **PC5.** carry requisite identification documents for introduction to the client on-site

Follow visit etiquette

To be competent, the user/individual on the job must be able to:

- PC6. introduce oneself and purpose for arrival to the client
- PC7. ensure not to soil or litter the facility at any time
- PC8. seek prior permission while accessing the premises
- **PC9.** request the client to make necessary adjustments to the space for carrying out required activities as per standard
- PC10. inform the client about the procedure and sequence of activities to be carried out
- PC11. provide information on next steps and respond to related queries
- PC12. complete billing procedures and other documentation as required
- PC13. dispose any waste as per waste disposal guidelines
- PC14. address any delays, accidents or errors to ensure client/patient satisfaction
- PC15. obtain feedback from the client as per organizational procedures
- PC16. ensure all the belongings are being collected before leaving the site

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. organizational procedures for off-site visits









- KU2. layout of the area where visits are likely to be scheduled
- KU3. service timelines of the organization
- **KU4.** documentation requirements for carrying out the service request as per company procedures
- KU5. features, need and usage of Laboratory Management Information System (LMIS)
- KU6. importance of being on time
- KU7. telephone etiquette
- KU8. importance and element of preparation before a site-visit
- KU9. sources of information about routes and local area layout
- KU10. privacy needs of clients and related etiquette
- **KU11.** importance of carrying identification documents and introducing oneself to the client on arrival
- KU12. points to be taken care of while visiting clients residential facilities
- KU13. common access procedures in office buildings
- KU14. correct waste disposal procedures
- **KU15.** importance of seeking necessary permissions before accessing and using client facilities, resources and areas
- KU16. importance of setting correct expectations for follow-up action with the client
- KU17. steps to ensure that client facilities are not soiled or littered, and its importance
- **KU18.** importance of communicating needs and expectation from the client to ensure good quality service at the site
- KU19. procedure to follow if client is not available at site on visiting
- KU20. procedure to follow in case of delay in reaching client site
- KU21. procedure to follow in case there is an accident or mis-happening on clients premises
- **KU22.** the prevalent market charges for providing sample collection and diagnosis services
- KU23. correct procedure for preparing the bill including the breakup of GST
- KU24. various methods of collecting payment from the client

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** write in least one local/official language used in the local community
- **GS2.** record availability of supplies
- GS3. provide written requests for additional supplies when required
- GS4. read and correctly interpret records and registers for medical supplies
- GS5. read instructions and pamphlets provided as part of training for ordering or maintaining
- GS6. communicate effectively to request additional supplies
- GS7. decide on the level of anticipated demand
- GS8. decide when to procure additional supplies
- GS9. decide quantities of medical supplies to request
- GS10. how to plan availability of medical supplies







- **GS11.** cater to the need of patients/ individuals for specific medical supplies
- GS12. handle nonavailability of medical supplies or diagnostic kits when required









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare for site visits	20	20	12	20
PC1. follow telephone etiquette while talking to client/patient	-	-	-	-
PC2. confirm purpose, time and site information for making the site visit	-	-	-	-
PC3. ensure that adequate required material and equipment are carried as per organizational procedures for required on-site activities	-	-	-	-
PC4. plan route for site visit and determine travel time for arriving on time at the site	-	-	-	-
PC5. carry requisite identification documents for introduction to the client on-site	-	-	-	-
Follow visit etiquette	45	20	15	25
PC6. introduce oneself and purpose for arrival to the client	-	-	-	-
PC7. ensure not to soil or litter the facility at any time	-	-	_	-
PC8. seek prior permission while accessing the premises	-	-	_	-
PC9. request the client to make necessary adjustments to the space for carrying out required activities as per standard	-	-	-	-
PC10. inform the client about the procedure and sequence of activities to be carried out	-	-	-	-
PC11. provide information on next steps and respond to related queries	-	-	-	-
PC12. complete billing procedures and other documentation as required	-	-	-	-
PC13. dispose any waste as per waste disposal guidelines	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. address any delays, accidents or errors to ensure client/patient satisfaction	-	-	-	-
PC15. obtain feedback from the client as per organizational procedures	-	-	-	-
PC16. ensure all the belongings are being collected before leaving the site	-	-	-	-
NOS Total	65	40	27	45









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N9619
NOS Name	Follow etiquette for site visit
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Diagnostic
NSQF Level	4
Credits	2.5
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024







HSS/N5608: Calibration and maintenance of basic equipment

Description

This unit provides knowledge & understanding about calibration and maintenance of basic medical equipment. This NOS has been derived from the module, calibration and maintenance of basic equipment of the Short Term Training Curriculum: Medical Equipment Technology Assistant prepared by MOHFW.

Scope

The scope covers the following :

- Electronic circuit
- Safety procedural guidelines
- Installation, Maintenance and Servicing of Medical Equipment

Elements and Performance Criteria

Electronic circuit

To be competent, the user/individual on the job must be able to:

- PC1. mini project and troubleshooting of the circuit
- PC2. measuring physical quantities accurately
- PC3. check graphs/ waveforms for accuracy and correctness
- **PC4.** read and interpret the graph
- PC5. interpreting the results from observations and calculations

Safety procedural guidelines

To be competent, the user/individual on the job must be able to:

- PC6. awareness of the safety aspects of medical instruments
- PC7. to adopt proper procedure while performing the experiment

Installation, Maintenance and Servicing of Medical Equipment

To be competent, the user/individual on the job must be able to:

- PC8. demonstrate on call assistance by giving assistance to hospital staff regarding the fault
- PC9. applications of various instruments
- **PC10.** proper handling of instruments
- PC11. know installation procedure
- PC12. information search through internet

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. it includes lecture series in continuation of solid-state linear circuit analysis and design
- KU2. design details of cascade resistance and direct coupled amplifiers
- KU3. integrated differential and operational amplifiers









- **KU4.** power amplifiers and oscillators
- KU5. introduction to feedback and distortion
- **KU6.** laboratory sessions to practice in fabricating, troubleshooting and testing solid-state linear circuits using the oscilloscope, generators and the distortion analyzer
- KU7. precautions while handling the radioactive rays
- KU8. precautions while handling the high voltage circuits
- KU9. securing the equipment and surroundings while repairing the equipment son the spot
- KU10. shock and vibrations
- KU11. protection from electro-magnetic interference
- KU12. maintaining the safety of the patient in the vicinity
- KU13. introduction & fundamental of trouble shooting
- KU14. installation procedure for equipment
- KU15. performance test & calibration of medical equipment
- KU16. trouble shooting & fault-finding procedure of medical equipment
- KU17. safety instrumentation
- KU18. provide on call and on-site assistance
- **KU19.** maintenance and coding of various types of the logbook for the machines in various departments of the hospital

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** maintain code of conduct, professional accountability and responsibility
- **GS2.** observe ethical practices
- **GS3.** maintain confidentiality and seek consent when appropriate
- **GS4.** gather information from observation, experience, and reasoning
- GS5. maintain appropriate body language
- **GS6.** undertake formal & informal writing for inter- and intra-department communication including documentation and report writing
- **GS7.** read and interpret internal communications correctly
- GS8. structure brief and logical messages
- GS9. speak clearly and slowly in a gentle tone
- **GS10.** maintain effective communication with patients, family, peers and colleagues using medical terminology
- **GS11.** handle queries and objections
- **GS12.** show telephone and email etiquettes
- GS13. plan and organize work appropriately to meet requirements
- GS14. use time management skills
- **GS15.** prioritise and manage work
- GS16. use language familiar to the listener
- GS17. give facts and avoid opinions unless asked for









- **GS18.** set goals and timelines with clearly defined key performance indicators and communicate them effectively to all relevant persons
- GS19. keep stakeholders informed about progress
- GS20. build customer relationships and use customer-centric approach
- **GS21.** address work-related issues and problems
- GS22. perceive the impact and implications of decisions
- GS23. analyze information and use logic to address work-related issues and problems
- **GS24.** be adaptive to rapidly changing situations, e.g.: respond appropriately to critical situations, retain composure in stressful situations, apply existing skills to new situations







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Electronic circuit	19	20	10	10
PC1. mini project and troubleshooting of the circuit	-	-	-	-
PC2. measuring physical quantities accurately	-	-	-	-
PC3. check graphs/ waveforms for accuracy and correctness	-	-	-	-
PC4. read and interpret the graph	-	-	-	-
PC5. interpreting the results from observations and calculations	-	-	-	-
Safety procedural guidelines	22	10	15	10
PC6. awareness of the safety aspects of medical instruments	-	-	-	-
PC7. to adopt proper procedure while performing the experiment	-	-	-	-
Installation, Maintenance and Servicing of Medical Equipment	40	30	16	30
PC8. demonstrate on call assistance by giving assistance to hospital staff regarding the fault	-	-	-	-
PC9. applications of various instruments	-	-	-	-
PC10. proper handling of instruments	-	_	-	-
PC11. know installation procedure	-	-	-	-
PC12. information search through internet	-	_	-	-
NOS Total	81	60	41	50









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N5608
NOS Name	Calibration and maintenance of basic equipment
Sector	Healthcare
Sub-Sector	Allied Health & Paramedics
Occupation	Non-Direct Care
NSQF Level	4
Credits	3
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024









HSS/N5607: Understanding the working of basic equipment

Description

This unit provides knowledge & understanding about functioning of basic medical equipment. This NOS has been derived from the module, Understanding the working of basic equipment of the Short Term Training Curriculum: Medical Equipment Technology Assistant prepared by MOHFW.

Scope

The scope covers the following :

- Electronic circuit
- Electronic component and application
- Biomedical instrumentation and measurement
- Familiarization and working with Ultrasound machine, ECG and x-ray equipments

Elements and Performance Criteria

Electronic circuit

To be competent, the user/individual on the job must be able to:

- PC1. working knowledge and hands on experience with designing of circuits
- PC2. mini project and troubleshooting of the circuit
- PC3. draw and describe the basic circuits of rectifier, filter, regulator and amplifiers
- PC4. able to draw circuits
- PC5. understand working of regulated DC power supply
- PC6. ability to test the components using multimeter

Electronic component and application

To be competent, the user/individual on the job must be able to:

- **PC7.** working knowledge of spectrum
- PC8. identify types of cables and connectors
- PC9. to study design rules for fabrication of PCB and identify types of PCB
- PC10. read the data sheets of diode and transistors
- PC11. test diode and transistors

Biomedical instrumentation and measurement

To be competent, the user/individual on the job must be able to:

- PC12. identification and soldering of surface mounted devices
- PC13. follow standard test procedures

Familiarization and working with Ultrasound machine, ECG and x-ray equipments

To be competent, the user/individual on the job must be able to:

- PC14. have understanding related to medical exposure of x-rays
- **PC15.** familiarizing and working with components eg: USG machines, ECG machines, X-ray equipment etc.









Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. how to test various medical devices for proper operation
- KU2. the healthcare technology management
- KU3. computerized equipment control and record keeping
- **KU4.** safety issues will be covered in relation to both patient safety and the safety of biomedical equipment technology assistants (BMEAs)
- **KU5.** basic theory of operation, function, clinical application and operation testing of a range of medical devices
- KU6. linear circuit analysis and design
- KU7. theory and operation of diodes and bipolar and field-effect transistors with circuit analysis
- **KU8.** laboratory includes the design and evaluation of bipolar and FET linear circuits using the oscilloscope and curve tracer
- KU9. introduction of integrated circuits
- **KU10.** inductors and cable connectors- ferrimagnetic, B-H curve, Hard & soft Magnetic Materials, Concepts of Hysteresis, permeability, coercivity, reluctivity, Losses of magnetic material, Faradays laws of Electromagnetic Induction, Self &mutual induced EMF Inductor Specifications- Definitions and expressions of self-inductance, mutual inductance, coefficient of coupling, operation at low & high frequency, Q factor, Inductive Reactance;Construction and application of Air core, iron core, ferrite core inductor, and frequency range Inductors-A.F. R.F., I.F., toroidal Inductor, Construction, working, application of Slug tuned Inductor
- **KU11.** color coding of inductor using color band system
- KU12. connectors- general specifications of connectors- contact resistance, breakdown voltage, insulation resistance, constructional diagram, applications of BNC, D series, Audio, Video, printer, edge, FRC, RJ 45 connectors; Constructional diagram and applications of Phone Plug & Jacks
- KU13. basics of mechanical foundry equipments
- **KU14.** working of motor, drilling
- KU15. basic concept of suction apparatus
- KU16. review of combinational & sequential logic circuits
- KU17. data converters
- KU18. semiconductor memories
- KU19. microprocessor
- **KU20.** medical exposure of x-rays
- KU21. medical computer usage and applications in imaging field
- KU22. basic of active and passive components
- KU23. types of components with its working

Generic Skills (GS)

User/individual on the job needs to know how to:









- GS1. maintain code of conduct, professional accountability and responsibility
- **GS2.** observe ethical practices
- GS3. maintain confidentiality and seek consent when appropriate
- GS4. gather information from observation, experience, and reasoning
- **GS5.** maintain appropriate body language
- **GS6.** undertake formal & informal writing for inter- and intra-department communication including documentation and report writing
- GS7. read and interpret internal communications correctly
- GS8. structure brief and logical messages
- GS9. speak clearly and slowly in a gentle tone
- **GS10.** maintain effective communication with patients, family, peers and colleagues using medical terminology
- GS11. handle queries and objections
- GS12. show telephone and email etiquettes
- GS13. plan and organize work appropriately to meet requirements
- **GS14.** use time management skills
- **GS15.** prioritise and manage work
- GS16. use language familiar to the listener
- GS17. give facts and avoid opinions unless asked for
- **GS18.** set goals and timelines with clearly defined key performance indicators and communicate them effectively to all relevant persons
- GS19. keep stakeholders informed about progress
- GS20. build customer relationships and use customer-centric approach
- GS21. address work-related issues and problems
- GS22. perceive the impact and implications of decisions
- GS23. analyze information and use logic to address work-related issues and problems
- **GS24.** be adaptive to rapidly changing situations, e.g.: respond appropriately to critical situations, retain composure in stressful situations, apply existing skills to new situations







Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Electronic circuit	17	20	10	10
PC1. working knowledge and hands on experience with designing of circuits	-	-	-	-
PC2. mini project and troubleshooting of the circuit	-	-	-	-
PC3. draw and describe the basic circuits of rectifier, filter, regulator and amplifiers	-	-	-	-
PC4. able to draw circuits	_	-	_	_
PC5. understand working of regulated DC power supply	-	-	-	-
PC6. ability to test the components using multimeter	-	-	-	-
Electronic component and application	30	20	10	10
PC7. working knowledge of spectrum	-	-	-	-
PC8. identify types of cables and connectors	-	-	-	-
PC9. to study design rules for fabrication of PCB and identify types of PCB	-	-	-	-
PC10. read the data sheets of diode and transistors	-	-	-	-
PC11. test diode and transistors	-	-	-	-
Biomedical instrumentation and measurement	33	20	15	20
PC12. identification and soldering of surface mounted devices	-	-	-	-
PC13. follow standard test procedures	-	-	-	-
Familiarization and working with Ultrasound machine, ECG and x-ray equipments	40	36	25	30
PC14. have understanding related to medical exposure of x-rays	-	_	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. familiarizing and working with components eg: USG machines, ECG machines, X-ray equipment etc.	-	-	-	-
NOS Total	120	96	60	70









National Occupational Standards (NOS) Parameters

NOS Code	HSS/N5607
NOS Name	Understanding the working of basic equipment
Sector	Healthcare
Sub-Sector	Allied Healthcare & Paramedics
Occupation	Non-Direct Care
NSQF Level	4
Credits	3
Version	2.0
Last Reviewed Date	31/01/2024
Next Review Date	31/01/2029
NSQC Clearance Date	31/01/2024

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Either each element/Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory, viva and Skills Practical for each element/PC.

2. The assessment for the theory part will be based on knowledge bank of questions approved by the SSC.

3. Individual assessment agencies will create unique question papers for theory part for each candidate/batch at each examination/training center (as per assessment criteria below).

4. Individual assessment agencies will create unique evaluations for skill practical & viva for every student at each examination/ training center based on these criteria.

5. In case of successfully passing as per passing percentage of the job role, the trainee is certified for the Qualification Pack.

6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 70









(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
HSS/N5615.Assist in the use of basic equipment	102	91	49	70	312	10
HSS/N9622.Follow sanitization and infection control guidelines	17	13	-	-	30	5
HSS/N9624.Maintain a safe and secure working environment	10	10	-	10	30	5
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
Total	149	144	49	80	422	25

Elective: 1 Emergency Care

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
HSS/N3016.Provide first aid as per the emergency	97	91	41	50	279	15
HSS/N2332.Respond to emergency calls & size up the scene at the site	47	25	20	24	116	20
HSS/N2336.Carry out activities related to patient triage	17	20	10	10	57	20
HSS/N2337.Manage patient transport and handover to the identified provider institute	40	20	30	36	126	20
Total	201	156	101	120	578	75







Elective: 2 Sample Collection

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
HSS/N0513.Perform sample collection activities for Blood, Sputum, Urine, Stool, Nasal and Throat swab	136	116	74	75	401	50
HSS/N9619.Follow etiquette for site visit	65	40	27	45	177	25
Total	201	156	101	120	578	75

Elective: 3 Medical Equipment Care

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
HSS/N5608.Calibration and maintenance of basic equipment	81	60	41	50	232	30
HSS/N5607.Understanding the working of basic equipment	120	96	60	70	346	45
Total	201	156	101	120	578	75







Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training







Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.	
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.	
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.	
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.	
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.	
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.	
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.	
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.	
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'	
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.	
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.	
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.	









Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.