



**ACCRA
TECHNICAL
UNIVERSITY**

**STANDARD OPERATING PROCEDURE
MANUAL ATU CLINIC POLICY**

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SUMMARY DETAILS TABLE

Version	Version 1.0
Short Description	The Accra Technical University Clinic Standard Operating Procedures provides clear and detailed descriptions of the step by step routine actions of the medical personnel at the clinic in providing healthcare services to the University community and the general public.
Relevant to	All medical personnel at the Accra Technical University Clinic.
Issuing Authority (Approved by)	Accra Technical University Governing Council
Responsible Officer	ATU Director of Medical Services
Responsible Office	Accra Technical University Clinic
Related Technical University Document	Accra Technical University Statutes, Scheme of Service for Technical Universities
Related Legislation	Technical Universities Act, 2016 (Act 922) as (Amendment) Act, 2018 - Act 974
Key words	Patient, Confidentiality

SECTION ONE

1.0 INTRODUCTION

Standard Operating Procedures (SOPs) are developed for health-care facilities based on the Health Care Standards within the health service as approved by health care providers and experts. The SOPs spell out specific procedures to be followed by the healthcare facilities at various levels. SOPs reflect the differences in opportunities, capacity and vulnerability of the healthcare staff at different levels of the healthcare system.

The purpose of the Standard Operating Procedures is to provide a clear and detailed description of the step by step routine actions of the service providers providing services in the facilities.

Many clinics, including those operating under academic institutions, are currently providing quality clinical services. This is a new development in the practice of health care in Ghana. Therefore, this SOP manual has been developed to standardise and formalise the provision of quality clinical services at the Accra Technical University (ATU) Clinic in the health service delivery. SOPs on how to provide clinical services for OPD, Emergency etc. and to document and report the services provided are addressed in this manual.

A Standard Operating Procedure is a written procedure prescribed for repetitive use as a practice, in accordance with agreed upon specifications aimed at obtaining a desired outcome.

These are specific set of practices that are required to be initiated and followed when specific circumstances arise. For example, emergency room physicians have SOPs for patients who are brought in an unconscious state; nurses in an operating theater

have SOPs for the forceps and swabs that they hand over to the operating surgeons; and laboratory technicians have SOPs for handling, testing, and subsequently discarding body fluids obtained from patients.

SOPs are more specific than guidelines and are defined in greater detail. They provide a comprehensive set of rigid criteria outlining the management steps for a single clinical condition or aspects of organisation.

Guidelines are rigorously developed using evidence-based medicine criteria and consist of two distinct components: the evidence summary and the detailed instructions for the application of that evidence to patient care. For the common health care provider, guidelines require local adaptation to suit local circumstances and to achieve a feeling of ownership, both of which are important factors in guideline uptake and use. SOPs therefore, help bridge the gap between evidence-based medicine, clinical practice guidelines, and the local realities at the point-of-care.

SOPs are necessary to incorporate aspects of treatment which are not highlighted in guidelines or which are parts of different guidelines. This will ensure that attention is paid to areas as diverse as problem-solving, communication, social support, family burden, and caregiver stress. SOPs are necessary to ensure that easily implemented strategies that benefit mental health are not neglected; examples of behavioral targets are diet, exercise, sleep, stress management, and the pursuit of leisure and pleasure activities. SOPs are necessary to monitor medication compliance, a variable that can make or break the success of a psychopharmacological treatment plan.

The use of SOPs will have the added advantages of utilising an optimised process for care, implementation of best evi-

dence-based medicine, cost-effectiveness, improved continuing medical education, and improved induction of new clinic staff, integrated quality control, transparency and enhanced protection from malpractice. When all these SOPs are in place, the quality of patient care at the University clinic will substantially improve.

1.1 Scope of the Manual

This SOPs manual describes the specific steps providing clinical services to our patients. It contains SOPs for the provision of clinical services to the patient at the University clinic with the necessary documentation and reporting systems as well as referring protocols to other tertiary facilities.

1.2 Purpose of the Manual

This manual describes specific procedures in clinical care practice. It should be used as a hands-on reference for service providers, thereby helping to standardise the practice at the clinic, with the ultimate goal of optimising patient care. The manual may also be used as a reference for University management, health system managers, policymakers, health care providers, academicians, researchers, staff and students.

1.3 General Objectives of the Manual

The general objective of these clinical SOPs is to standardise the provision of quality clinical services, thereby optimising patient outcomes by ensuring the rational use of medicines and treatment procedures at the University clinic.

1.4 Specific Objectives:

- Ensure that standardised quality clinical services are provided at the University clinic and at all times.
- Clarify roles and responsibilities of the service providers for clinical care.
- Provide a detailed description of how to perform clinical activities.
- Serve as a source of guidance for new service providers.
- Improve the standards for clinical services on a continual basis.
- Provide evidence of commitment to improvements in the quality of patient care at the University clinic.

SECTION TWO

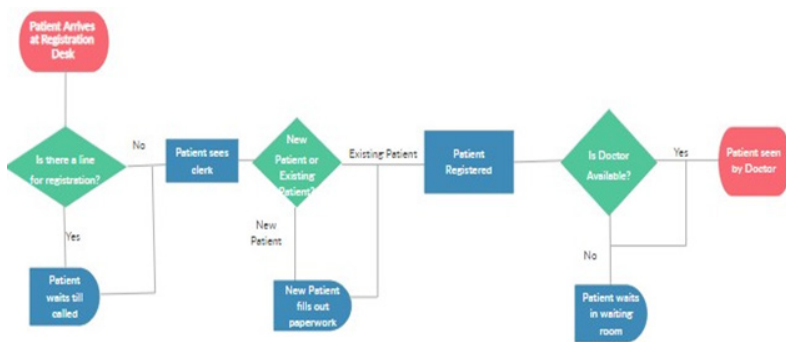
2.0 SOPs FOR OPD SERVICES

Outpatient Departments (OPD) provide medicare services to the ambulatory patients. Acute and seriously ill patients must not be referred to the OPD. Majority of the patients that present to the University clinic are triaged as OPD cases. It is of maximum importance to serve the people with highest possible quality services to fulfill their need and reduce their sufferings.

Efficient OPD services can greatly reduce the burden on emergency and inpatient services. Outpatient services are rendered through the Male/ Female / Children / Dental and Family planning outpatient departments. As majority of the people come into contact with the OPD services of the University clinic, it is a very important section of the Clinic and must be given the necessary attention.

Clients from within and outside of the University come to the clinic with high expectations. In many situations however, it has been observed that people's expectations supersede the real situation, and this gives rise to many problems, and often confrontation with the service providers. For instance, when nurses at the OPD triage a patient and realise the patient needs urgent attention and hence is allowed to jump the queue, other clients in the queue may get upset until the service nurses explain the situation to them. The Standard Operating Procedures, therefore, provide norms and standards for the OPD, and will be helpful for both the clients and service providers to be realistic. It will also help the supervisors to measure their service standards at the clinic.

2.1 Flow Chart of OPD Care Processes at the Clinic



2.2 Working Procedures at OPD of the University Clinic

2.2.1 Registration

1. There should be a central desk at the OPD where patients will be provided OPD slips after preliminary registration.
2. This desk may also serve as the booth for information and health education.
3. One nurse/relevant staff with skills in human interactions may be deployed there.
4. After taking brief history of patient's illness, he/she will direct them to the respective OPDs. Final registration of patients will be done in the concerned OPD.

2.2.2 Working Rules

1. The patients treated in the OPD are usually ambulatory. Acutely ill patients must not be referred to the outpatient department. They must be triaged and sent to the emergency wards for resuscitation.
2. In OPD, a short clinical examination is done and documented in the OPD folder. It must include a clearly written provisional or clinical diagnosis as well as the advice and treatment given to the patient.
3. A list of investigations may also be written on a request form for the patients. The patients are given correctly and completely filled investigation forms.
4. It must be explained to the patients where laboratory or radiology department is located for all the OPD investigations (blood, urine and stool etc.), and the time when samples are collected, and also how the reports are distributed at the OPD.
5. As is the usual procedure, a patient will be required to wait to be reviewed with the results of the investigations the same day or at the next OPD appointment.
6. In case of an emergency arising in the OPD, the nurse in-charge should have access to the necessary first aid, drugs and investigations. After the first aid given, it is advisable to move the patient to the emergency department immediately.
7. To make things easy for the patients, it is advisable to fix a definite date mentioning time and place for the next appointment which should be written down on the slip. It must be noted that quality of care provided at the OPD should be comparable to in-patient care, and it should be the aim of the University clinic to deliver significant medical care to the community through the OPD.

8. The Medical Director shall:

- a) Display an up-to-date organogram.
- b) Display other information charts, viz. schedules, general and visitors' policy, activity report service data for guidance and transparency.
- c) Display a schedule for routine daily and weekly activities at fixed intervals.
- d) Monitor and supervise staff performance, cleanliness, equipment maintenance and resources at the unit as per checklists.
- e) Send daily bed statement along with serious patients' list.
- f) Maintain staff morale, punctuality, interpersonal relationship, quest for sound professional knowledge and practice and their good behavior to patients and people.
- g) Maintain records properly.
- h) Apply mechanism to receive feedback on users' feelings and complaints. Hold regular co-ordination meeting.

2.2.2 Referrals from OPD

1. The exact reason for which the patient is being referred must be written down in the folder and the referral form by medical practitioner.
2. The patient should be directed to the appropriate unit of the referral facility.
3. While referring the patient to any other specialty, it must be ensured that the results of the investigations done and the list of investigations requested are clearly stated. This will save repetition of the investigations, time, laboratories' time and also save further discomfort to the patient.

4. Detention and admission of patients from OPD to the wards for further management will be done from the OPD and the patient sent to the respective ward.

3.0 SOPS FOR IN-PATIENT SERVICES

1. From the Emergency and Out Patient Departments patients are admitted into the In-Patient Department (IPD) for further management by keeping the patient under close monitoring.
2. Inpatient clients are either admitted to the male or female wards. The doctors, nurses and the supporting staff in the IPD are accountable to the Medical Director for their responsibilities.
3. Usually the more sick, acute and seriously ill patients are admitted into the IPD for immediate and supervised treatment protocols. They may also need to undergo various diagnostic and/or operative procedures and multiple inter related activities are performed to serve an admitted patient. Therefore, it is very much important to coordinate and standardise these various components of IPD.
4. During admission, patients and their relatives highly depend on the doctor and other clinic staff for the well-being and comfort of the patient and they are psychologically more sensitive and vulnerable to various emotional matters. Beside clinical management of the patient, it is also important to look after various behavioral aspects of the patient and their relatives for their satisfaction and confidence. All staff should be concerned about the care of patients and their attendants by considering their psychological status. They should be skilled in managing emotional and critical situations.
5. Standard operating procedures help to improve the IPD services as well as satisfy the patient's expectation and make them more rational about the real situation of the hospital. They are well informed about the available services and limitations which lead to more harmonious relations between service providers and their clients.
6. High profile people shall be provided with special ward or VIP ward for security reasons.

3.1 SOPs for Admission/Detention

The Doctor admitting the patient should:

1. Check for availability of bed in the ward before admitting any patient.
2. Explain to the patient the reason for his/her admission.
3. Include the patient's surname wherever necessary.
4. Maintain the correct permanent and current address of the patient.
5. Assess patient's condition for immediate care plan.
6. Check patient's folder to ensure that the orders are carried out completely.
7. Get informed consent.
8. In times of emergencies, waste no time in such procedures rather the patient should be attended to and managed immediately.
9. Orient patients and their attendants about ward, toilet and visiting time and meal time.
10. Introduce the patient to other patients.
11. Check and record vital signs.
12. Read the Patient's case sheet thoroughly.
13. Review and monitor the patient until discharge.
14. Carry out all doctor's order.
15. Inform the patient and party not to keep any valuables at the University clinic.
16. Place relevant forms in the respective places.

3.2 Consent Procedure

1. Informed written consent regarding various treatment procedures should be obtained from the patient/party by the treating physician.
2. The doctor should explain the details of the procedures to the patient.
3. For children below the age of 18 years, informed consent should be obtained from their parents or guardians.
4. If the patient's condition is serious, such as shock etc., high risk consent must be taken.
5. If there is no one to give consent or the patient is unconscious/ unable to give consent, the doctor and the nurse should take a collective decision in the best interest of the patient after informing the clinic administration.

4.0 SOPS FOR HOUSEKEEPING AND WASTE DISPOSAL

Housekeeping, also known as cleaning, aims to sustain a sterile environment in all areas of the clinic by implementing high standards of cleanliness. Good housekeeping practices, such as terminal cleaning of high-risk areas and routine cleaning of high-touch surfaces, can prevent the spread of hospital-acquired infections and ensure the safety of both hospital personnel and patients.

1. Good housekeeping is an art of utmost importance of the clinic services. No standard service can be provided without good housekeeping. Good housekeeping can improve public relation and psychological effect on patients, visitors and service providers.
2. All Housekeeping personnel should know the characteristics and qualities of cleaning agents, their selection and proper use.
3. The primary activity of Housekeeping includes the cleaning, dusting, mopping and related domestic duties involved in maintaining a high standard of cleanliness at the university clinic. General sanitation, mosquitoes, insects and other rodent control are among the most important duties of housekeeping. Routine work schedule should be coordinated with other departments in order to avoid a minimum disruption of other services. A system that involves water supply, ventilation sewerage and waste disposal etc. are of major concerns of good housekeeping.
4. Cleaning Duties for Wards:
 - a) Before entering, wash and sanitise hands, and put on disposable gloves. [Or special uniform]

- b) Leave cleaning carts in the hall, and set up a safety sign outside the door.
- c) Knock while slowly entering and respecting patient and visitor privacy.
- d) Quickly straighten up the room, and empty and reline trash cans.
- e) Clean and disinfect high-touch areas in the ward including medical equipment.
- f) Working from top to bottom, dust air vents, lights, television sets and window sills.
- g) If present, disinfect and sterilise the bedside cabinet.
- h) Wipe down countertops, spot-wipe walls, and check furniture condition.
- i) Wipe down doors and disinfect door handles.
- j) Sweep floors, and wet mop as needed.

5. Ward Bathroom Cleaning Procedures

- a) Empty and disinfect trash cans as needed, and replace liners.
- b) Disinfect touch-points including light switches, door knobs and handrails.
- c) Clean and disinfect showers, tubs, sinks, faucets and fixtures.
- d) Wipe down and disinfect mirrors and countertops.
- e) Clean and disinfect the toilet bowl, seat, tank and flush handle.
- f) Check and refill toilet paper, soap dispensers and paper towels. Wipe down walls, doors and fixtures.
- g) Sweep and mop floors as needed.

6. Terminal Room Cleaning Tasks

- a) Confirm that the patient has been discharged and the room is vacant.
- b) Perform hand hygiene, wear gloves, and place safety sign outside the door.
- c) Disinfect bed framing, panels, headboard, footboard, rails and springs.
- d) Disinfect mattress top, bottom and sides, and replace the mattress cover.
- e) Replace pillows, and make the bed with fresh sheets and pillow cases.
- f) Vacuum and polish furniture, turn cushions, and note any stains or damage.
- g) Clean and disinfect medical equipment including wheelchairs, IV poles and blood pressure cuffs.
- h) Check and refill soap and paper towel dispensers, and replace privacy curtains as needed.
- i) Thoroughly clean and disinfect the patient bathroom.
- j) Sweep, wet mop and sanitise all floors.

7. Daily Housekeeping for Other Clinic Areas

In addition to ward cleaning, there are other building areas that require daily attention. Regular duties should include general housekeeping and touch-point sanitising as well as these room-specific tasks:

a) Examination Rooms

Clean up and disinfect any surfaces contaminated by blood or bodily fluids. Immediately wash hands and put on fresh gloves after this task. Replace sharps containers when three-quarters full. Replace exam table coverings.

b) Cleaning exam table

c) Entrance and Waiting Areas

Make sure floors stay free of debris and tripping hazards. Immediately clean up spills on floors and furniture. Keep an eye out for personal belongings left behind by patients and visitors. Take found items to a designated station.

8. Housekeeping staff include but not limited to; Orderlies, Cleaners, Sanitary Laborers, Laundry Attendant, Seamstresses etc.

9. Bins for general purposes must also be provided

4.1 Plan for Disposal of Medical Waste

SHARPS		
Type of waste	Method of collection	Method of disposal
Razor blades	Sharps box	Incineration
Scalpels	Sharps box	Incineration
Lancets	Sharps box	Incineration
Syringes with needles	Sharps box	Incineration
Intravenous Cannula	Sharps box	Incineration

NON-SHARPS		
Type of waste	Method of collection	Method of disposal
Disposable syringes and giving sets and gloves	Yellow biohazard bags in dustbin	Incineration
Cotton and contaminated with purulent exudate or specimen gauze blood Lab	Red Biohazard bags in dustbin	Incineration

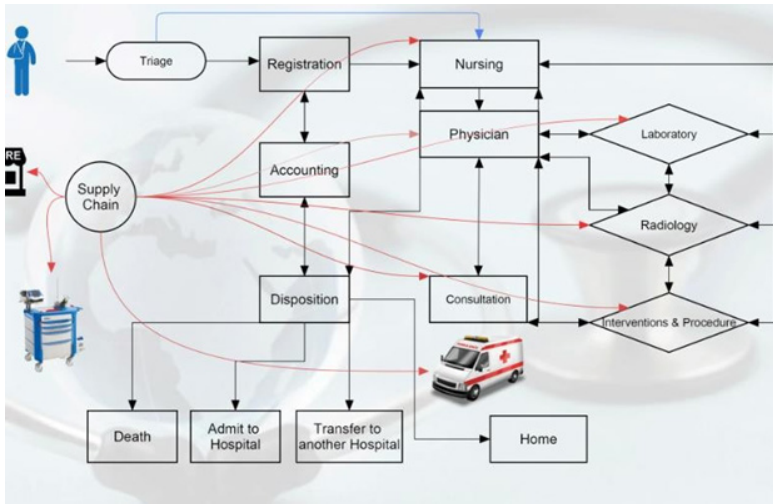
NON-SHARPS		
Type of waste	Method of collection	Method of disposal
Blood and other body fluids	Collected in a container with 1:10 bleach for 8 hours	Sewer system
Pharmaceutical waste medicine tubes, vials etc e.g.	Brown biohazard bags in dustbin	Incineration
Expired Drugs	Report to FDA and collected in Brown biohazard bags	Supervised incineration by FDA

5.0 SOPS FOR EMERGENCY CARE SERVICES

The Emergency Department of hospitals is often the point of major public interest and is the most vulnerable to criticism. The reputation of the University clinic rests to a very large extent on two important factors, i.e. the emergency and OPD. The sudden and unexpected nature of the emergency creates anxiety which must be appreciated and borne in mind in the organisation and management of services.

1. The Emergency Department is primarily meant for the immediate medical attention and resuscitation of seriously ill patients. They should have priority over, less seriously ill patients.
2. All patients attending the emergency are to be registered after a quick preliminary assessment of the severity and urgency of their ailment by the Medical Officer on duty.
3. Clerical work involving registration, etc. should never take priority over the urgent attention to the acutely ill patient.
4. All particulars as per the standard format should be recorded in the emergency register. The emergency card should be clearly filled up for name, age, sex, date, time, emergency registration number and clinical diagnosis clearly.
5. A summary of all the relevant clinical findings along with the medical aid given, consultations and the progress of the patient is to be noted down on the emergency register (register should contain clear description of treatment details) by the attending doctor(s) before he/she is admitted or discharged or referred to secondary or tertiary hospital. The original emergency card is handed over to the patient.

5.1 Flow Chart of Emergency Procedure at the University Clinic



5.2 Working Procedure of Emergency Services

1. Patients requiring ambulatory care: Patients needing only ambulatory care should be given necessary first aid treatment and sent home with appropriate advice written on the emergency card. If they are referred to any OPD, the days, timing and location must be properly explained to patients and written down on emergency card.
2. Patients requiring short term observation: Patients requiring close observation to determine the further line of management are to be detained in IPD.
3. Patients requiring hospitalisation from emergency: Only the seriously ill patients and the patient who cannot wait for the regular OPD clinic should be admitted in the clinic.
4. Transfer of patients to other hospitals: It is possible that due to

non-availability of beds or because of the nature of the medical problem requiring specialist care, the patient may be transferred to the concerned hospital. In all such cases, it must be ensured that proper first aid has been given and the reason of transfer is explained to the patient and relatives. Efficient ambulance service is essential for the quick transfer of patient.

5. Emergency staff and administration: The staff posted to the Emergency Department will run a shift system. At the beginning of every shift, the doctor and other staff must check and ensure that the equipment is functioning. He should also ensure that emergency drugs are in adequate supply.

6. General administration of emergency room: the medical officer on duty will be responsible for the clinical management of the patient in the emergency room. The general administration and control of other staff, cleanliness, equipment maintenance, etc. will be the sole responsibility of the Medical Director. He will be responsible for the overall management of the emergency room.

7. General conduct and behavior of the emergency staff - When a student, staff or their relative is rushed to the emergency, he/she is usually very anxious. The staff is therefore required to reassure them. They must be very tolerant and should extend due courtesy and sympathy to them.

5.3 Handover and Takeover

1. Detailed handover and takeover of the unit/ward should be done by the staff on duty. The patient should be handed over at the bedside.

2. Doctor's order should be carried out before handing over to the incoming staff.

3. The team leader of the outgoing team should lead the hand-over.
4. Outgoing staff should communicate information accurately, succinctly and professionally.
5. The outgoing team leader should introduce the incoming team members to the patient.
6. All incoming staff should attend taking over responsibility.
7. The incoming staff should check all drugs and ensure that articles and emergency equipment is functional in every shift.
8. Update the hand over report in every shift.
9. Check that all the bedside charts are complete prior to hand-over.
10. Allow the patient to seek clarification, and ask question and confirm information.
11. Confidentiality should be maintained at all time. Sensitive information should be shared among professionals only.
12. During handover, incoming staff should undertake a safety check of the patient's environment.
13. Ensure patient care is continued without any lapses during handing/taking process.
14. The staff on duty is/are solely accountable and answerable for any events/activities that may occur.
15. Key items to consider are:
 - The patient call bell is within the reach.
 - Suction, oxygen, or other equipment are in working condition and easily accessible.
 - Dressings, drain, intravenous fluids, and infusion pumps are secure and correct.

5.4 Names of Equipment, Instruments and Medicines for Emergency

Patient table Autoclave

Stethoscope and BP instrument Naso-gastric tube Thermometer

Patient trolley and stretcher Glucometer Screen and stand

Tongue depressor Inj. Antispasmodic Auroscope

Injection Mg. Sulphate (For Eclampsia) Measuring Tape

Weighing machine Injection Hydrocortisone Height scale

Injection Diazepam Pen Torch light

Injection Antihistamine Filled up Oxygen cylinder with Flow meter
Injection Pethidine IV infusion stand and

Injection Atropine Suturing materials

Injection Aminophylline Intravenous Cannulas Injection Frusemide
Tourniquet

Disposable syringe and needles Injection Dexamethasone Gloves

Injection Lignocaine (2%)

Sterile gauze, bandage, micropore, Plaster, splint

Inj. Esomeprazole Sterilizer Injection Amoxiclav Emergency trolley

(with minor surgical sets)

Antiseptic liquid Inj. Antiemetic Lignocaine jelly (for

catheterisation) Suction machine Nebuliser AED Machine

IV fluids DNS, NS, RL, 10% Dextrose, 50% Dextrose Glucometer with test strips

5.5 Referral of Emergency Cases to Tertiary Facilities

1. The exact reason for which the patient is being referred must be written down in the folder and the referral letter by the medical practitioner.
2. The patient should be transported by the University ambulance with an accompanying nurse to the appropriate unit of the referral facility.
3. While referring the patient to any other specialty, make sure that the result of the investigations done and the list of investigations requested are clearly stated. This will save repetition of the investigations, time, laboratories' time and also save further discomfort to the patient.

6.0 SOPS ON LICENSING OF THE UNIVERSITY CLINIC AND HEALTH PROFESSIONALS

The University clinic must be registered and licensed by the Health Facilities Regulatory Authority (HeFRA) with yearly retention. The license shall also be renewed every three (3) years.

6.1 Practitioners / Qualifications / Licensing authorities

1. Medical Doctor: Practitioner must possess a permanent license and in good standing with the Ghana Medical and Dental Council.
2. Nurse: must possess a permanent license and in good with Nursing and Midwifery Council of Ghana
3. Pharmacist: must possess a permanent license and in good standing with the Pharmacy Council of Ghana
4. Dispensary Technician: must possess a permanent license and in good standing with the Pharmacy Council of Ghana
5. Medical laboratory Scientist: must possess a permanent license and in good standing with the Allied Health Professionals Council
6. Laboratory Technician: must possess a permanent license and in good standing with the Allied Health Professionals Council
7. Radiographers: must possess a permanent license and in good standing with the Allied Health Professionals Council
8. Clinical Psychologist: must possess a permanent license and in good standing with the Allied Health Professionals Council

6.2 Continuing Education

1. Prepare advocacy plan
2. Identify training needs relevant to the practice and beneficiaries.
3. Propose budget lines for identified training needs.
4. Organise regular in-house seminars, workshops and clinical meetings.
5. Encourage attendance at internal seminars, workshops and clinical meetings.
6. Compel all workers to improve their IT skills and apply some in their practice.
7. Compel all to attend workshops and seminars for Continuing Professional Development Programme for recertification.
8. Encourage self-development in various areas of human endeavor.

7.0 SOPS FOR PHARMACY/DISPENSARY SERVICES

7.1 Drug Lists

1. Prepare an advocacy plan for the SOP
2. Write a proposal to Management for setting up of drug and therapeutic committee in line with requirements prescribed by the National Drug Policy.
3. Identify different categories of drugs required by the health facility based on the National Essential Drug List (EDL) / National Standard Treatment Guideline (NSTGs).
4. Draw up list using generic and international non-proprietary name (INN) of the drug.
5. Obtain approval for the management of the facility
6. Circulate approved list to stakeholders within the facility.
7. Ensure strict compliance to the use of the EDL.

7.2 Procurement of Medicines / Consumables

The pharmacist will work with a designated officer from the procurement directorate for the procurement of medicines.

1. Confirm the availability of funds
2. Match needs with available funds
3. Identify and verify the suppliers
4. Qualify suppliers
5. Choose method of procurement
6. Prepare an order form
7. Contact suppliers to quote the returns and complete the form
8. State the date of submission of the tender document

9. Organise public bid openings and record proceedings
10. Conduct evaluations
11. Submit recommendations to tender committee for approval of awards
12. Forward copies of award document to the store and finance departments
13. Facilitate the signing of contract agreements
14. Monitor supplier's performance and sanction defaulters
15. Receive and store drugs
16. Facilitate prompt payment to suppliers
17. Commence preparation for next procurement cycle
18. Provide the names and strength of each drug in the following order: Name (generic), strength and form, e.g. Paracetamol 500mg tablets, Paracetamol 125mg/5ml oral liquid, Ampicillin 500mg injection, Glucose 5% injection
19. Provide the package size required e.g. 10's, 500's, sachet, vial.
20. Provide a column for the quantity required e.g. each, 10, 200, 1000, 5000
21. Provide a column for the for name of manufacturer
22. Provide a column for the FDA number of the product
23. Provide a column for the expiry date of drug
24. Provide a column for the price of each item and a column for the total price
25. Provide a space for the name of the company, giving relevant details such as address, telephone number, e-mail address, name of the contact person.

7.2 Receiving Drug Items into a Pharmacy Bulk Store

1. Identify and prepare store space
2. Ensure the presence of the stock verifier and auditor before receiving items
3. Verify award documents
4. Match the documents with that from the supplier
5. Conduct physical check of every item supplied in line with the specification
6. Receive items
7. Note the number of items supplied
8. Verify FDA certificate of analyses for each of the products supplied
9. If the quality of the item is suspicious, remove and quarantine
10. Submit samples for quality assurance test
11. Release and accept into the store if quality assurance standards are met
12. Sign all necessary supply documents
13. Document all items received
14. Prepare appropriate documents and forward for prompt payment
15. Arrange all items appropriately according to the storage system in use
16. Items requiring cold storage should be put in cold store or in the refrigerator immediately.
17. Ensure the store is locked and the key is returned to the appropriate place for safe keeping

18. The store should be insured in case of fire out break or theft

7.3 Drug Storage

1. Ensure the pharmaceutical store is centrally located
2. Ensure the pharmaceutical store meets PC guidelines
3. Ensure that the tile floor finishing, pallets and shelves are provided
4. Ensure that the store in the storage area is made of concrete reinforcement and/or tiled/terrazzo finishing.
5. Ensure the that the pharmaceutical store is solely used for storage of pharmaceuticals
6. Ensure that pellets and shelves, steel ladder, steel cabinets and other relevant furniture's and fittings are provided
7. Ensure that the pharmaceutical store has a good and functional cooling system at all times in line with the recommended storage conditions. Thermometer should be in place and record temperature in chart regularly
8. Ensure the pharmaceutical store has a good lightening system
9. That at least an alternate power supply is provided
10. Ensure regular servicing of cooling systems
11. Ensure the store is adequately secure through the use of burglary proof
12. Ensure the photosensitive drugs are protected from light by provision of blinds or paintings of windows using dark colors.
13. Ensure that availability of standard stores' stationary such as bin cards, ledgers, store receipt vouchers, stores issue voucher, daily issue books, antibiotic record book, poison disposal book, etc.

14. Ensure the record received stock into bin or tally card using red pen.
15. Ensure the record issue stock into bi or tally card using blue pen
16. Issue stock using FIFO/FEFO system (first in first out/ first expired first out)
17. Enter the stock into appropriate ledgers
18. Update store records regularly
19. Ensure that fire extinguishers are installed
20. Storage of items should be in dosage forms and arranged according to their pharmaceutical uses or in alphabetical order
21. Shelves labeling should be coded for ease of entry into a computerised system

7.4 Storage of Vaccines

1. Ensure direct control for vaccines' stores by pharmacists
2. Ensure that the vaccine store complies with all conditions en-listed under general drug storage
3. Ensure strict adherence with unbroken chain system
4. Ensure proper documentation of receipt and issues
5. Conduct regular quality assurance/revalidation by pharmacist in charge
6. Ensure that expired vaccines are completely separated from the usable vaccines
7. Initiate prompt action for destruction of expired vaccines.

7.5 Temperature Control

1. Ensure availability of temperature control
2. Monitor and record temperatures at regular intervals taking note of the following:
 - Standard temperatures (temperature chart)
 - Room temperature 15-30 ° C
 - Cool place below 15 °C
 - Cold place below 8 °C
 - Refrigerator 2-8 °C
 - Freezer -20 °C
3. Report any deviations to management stating the implications
4. Document actions taken

7.6 Issuing and Delivering Drugs to Dispensary/ Satellite Pharmacies/Wards and Other Units

1. Receive read and validate the requisition (taking note of source, date, signature of requisition)
2. Confirm availability of drugs in the store by reviewing the balances of items in the bin cards
3. Approve and issue accordingly
4. Ensure complete documentation of all transactions and delivery if necessary.

7.7 Dispensing

1. Receive, read and validate the prescription
2. Introduce yourself to the patient by saying "I am a pharmacist
3. Identify the prescribers' intention for the patient

4. Confirm the ownership of the prescription in order to avoid dispensing to proxy
5. Find out if the medicine and/or other required items are available in the pharmacy
6. Cost the medicines prescribed
7. Inform patient of the cost implication of their medication (conduct with the physician for reviews if the need arises).
8. Direct the patient to make necessary payments and to present the appropriate receipt confirming payment of medicines/items dispensed.
9. Select the correct medicines /items in the pharmacy and read the label on the container (and/or package) before, during and after dispensing.
10. Write the label on each medicine, giving precise direction for use.
11. Put the medicine in the dispensing vial and place the label on the vial
12. Check the dispensed medicine and confirm that the medicine is what was prescribed
13. Hand the dispensed medicine to the patient or care giver/patient's relation.
14. Counsel the patient giving details on how the medicine should be used
15. Give the patient a chance to ask questions and give the patient appropriate answers.
16. Say "thank you" to the patient before he leaves. This is to be done with a smile.

17. Keep all patient medication records:

Telephone number:

Name of patient:.....to be taken every.....hour before /with or after meals

Name, strength and form of drug

Quantity dispensed:

Expiry date:

Name of prescriber:

Signature and name of Pharmacist.:

7.8 Unit Dose Dispensing System (UDDS)

1. Design the produce the patients medication profile (PMP)
2. Receive, read and validate prescription
3. Find out the prescriber's intention for the patient
4. Find out whether the medicines (and/or other required items are available in the pharmacy)
5. Open the patient medication profile.
6. Cost the medicines
7. Inform patient of the cost implication of their medication (conduct with the physician for reviews if the need arises).
8. Direct the patient to make necessary payments and to present the appropriate receipt confirming payment of medicines/items dispensed.
9. Select the correct medicines /items in the pharmacy and read the label on the container (and/or package) before, during and after dispensing.
10. Prepare the appropriate label which could contain the name,

strength and quantity of the medicine being dispensed. All necessary directions should comply with legal requirements (where applicable).

11. Include the expiry date for any product with limited shelf-life (where applicable).
12. Select the appropriate container and closure for dispensing medicines (where applicable). Plastic, amber dispensing vials for tablets and capsules are preferred
13. Affix the written instructions (labels) on the container.
14. Ensure that all dispensed medicines are put in patient's respective cassettes and arranged in a trolley
15. Deliver the trolley to the ward and give any necessary information to the nurses.
16. Initiate therapeutic drug monitoring (TDM) where necessary.
17. Document patients' medication complaint(s) and discuss with the prescriber.
18. Reference must be made to the doctor's prescription for every administration.
19. Pharmacist must be present at the ward to monitor the unit dose dispensing system (UDDS), improve in-patient dispensing and make the necessary therapeutic interventions.

Note: the technical aspects of dispensing (such as counting tablets, pouring liquid and labeling containers) can properly be conducted by trained support staff under the supervision of a pharmacist. There is no alternative to the direct involvement of the pharmacist in the assessment of prescriptions and ensure that all necessary information is given to the patient or care-giver (i.e. patients' relative) to achieve maximum therapeutic benefits.

7.9 Patient Counselling

Patient counseling should be carried out in a room or space dedicated for such purpose. Such a room should be adequately equipped:

1. Welcome the patient with a warm smile
2. Ensure the patient is comfortably seated before facing you
3. Introduce yourself to the patient by saying ' I am a pharmacist.....I am here to talk to you about your medication".
4. Receive the prescription from the patient or the patients' relative (care giver)
5. Ensure the patient's identity matches that written on absentee patient. Counsel the patient's representative in the absence of the patient. (This should not be encouraged).
6. Confirm if the patient has been counseled by the doctor (prescriber) or any other staff member of the clinic. Note what the patient has been told.
7. Confirm if it is the first time the patient is receiving the medication on prescription.
8. Show the patient what the prescribed drug looks like.
9. Tell the patient the name(s) of the drug(s) prescribed and explain in a simple language, how the drug works.
10. Inform the patient of the dosage requirement, route of administration, duration of drug therapy.
11. Provide the patient with any information on the onset of action.
12. Explain to the patient the intended use of the medicine, expected action drug interaction, special directions and precautions, administration and use by the patient.

13. Explain to the patient of common side effects and contraindications that may be encountered including actions to be taken.
14. Dispense the medication and place the medicines in appropriately labeled containers
15. Explain to the patient the appropriate storage conditions and advice that all medicines be kept out of the reach of children.
16. Explain how the medication is taken e.g. swallow one capsule with water every 8hrs (do not chew the capsule).
17. Explain to the patient the need for compliance.
18. Hand over the medicine to the patient with a warm smile.
19. Confirm if the patient understood the instructions.
20. Advise the patient to return any unused medicine to the pharmacist for destruction.
21. Advise the patient not to share their medication with another person
22. Explain prescription refill information. Note that narcotics cannot be refilled except with a fresh prescription.
23. Explain to the patient what to do in case of a missed dose. Encourage the patient to take the next dose and reschedule the timing accordingly
24. Ask the patient if he has any questions concerning the medication or any other question.
25. Say to the patient "thank you for coming". Contact me any time should the need arise.
26. In case of a patient with chronic condition say "we shall see you during your next visit".

7.10 Counselling Physically Challenged Patients

Physically challenged patients are those with hearing impairments, elderly, blind and deaf patients.

1. Identify patient's problems and express services.
2. If the patient has hearing impairment, speaks slowly, pause from time to time to ascertain that the patient understands your instructions.
3. If the patient is elderly, spend as much time as possible to counsel the patient, demonstrating all actions as necessary.
4. Ensure that the blind, deaf and dumb patients are accompanied by an adult.
5. Counsel the adult on their behalf.
6. If patient is deaf and unaccompanied, use a sign language to demonstrate the method of taking the medicine.
If unable to use the sign language, invite someone who is conversant with the method.
7. For patients with other forms of handicap, devise the best possible way to counsel the patient.

7.11 Disposal of Expired Drugs

1. Maintain records for all expired drugs.
2. Determine the total cost of expired drugs
3. Notify the Head of Department on the presence of expired drugs.
4. Request for appropriate action to be taken towards the timely disposal of expired drugs.

8.0 SOP ON FIRST AID

First Aid is emergency care provided for injury or sudden illness before emergency medical treatment is available.

The primary purpose of first aid is to:

1. Care for life-threatening situations
2. Protect the victim from further injury and complications
3. Arrange transportation for the victim to a medical facility
4. Make the victim as comfortable as possible to conserve strength
5. Provide reassurance to the victim
6. Reduce pain

8.1 Principles of First Aid

The rule of thumb for First Aid is "RAPABCH". The Acronym means:

1. **R** is for **Responsiveness** which means that we have to check the following:
 - a) Is the victim conscious?
 - b) Touch their shoulder, ask if they are alright.
 - c) Ask if they need help. If they say no, then proceed no further.
 - d) If yes, or no response, then proceed to A
2. **A** is for **Activate** Emergency Management Services (EMS)
 - a) Your name and contact number
 - b) The emergency
 - c) The location of the emergency condition of the victim
 - d) Check the victim for responsiveness.

3. **P** is for **Position**

Only re-position the victim if the victim is in further danger in their present location, and/or there does not seem to be spinal injury and additional care requires moving them. Explain when an injured person should and should not be moved. If there are suspected spinal injuries, do not move the victim (except when the victim is in a life threatening situation).

4. "ABCH"

a) **A** is for **airway**

Check to see if the airway is blocked by: Using your finger to sweep the mouth to remove any foreign object. If this fails, then perform the Heimlich maneuver or abdominal thrusts.

b) **B** is for **breathing**

Check to see if the airway is blocked by: Using your finger to sweep the mouth to remove any foreign object. If this fails, then perform the Heimlich maneuver or abdominal thrusts. Look, listen and feel by watching the chest and placing your cheek a few inches above the mouth of the victim to sense any movement of air.

c) **C** is for **circulation**

If there is no pulse, then this person needs CPR. The best place to check for a pulse is the carotid artery along the side of the neck along the windpipe. If you are not trained in CPR, then find someone who is.

d) **H** is for **hemorrhage**

If the victim is bleeding, then provide the necessary care.

8.2 Contents of First Aid Box

The following items must be maintained in the first aid box at all times:

- a) Container/Box: To keep all first aid items in one common container.
- b) Gauze Pads: To cover wounds and prevent infection.
- c) Roll Bandage: To stabilise strains and sprains and cover wounds.
- d) Triangular Bandage: To cover wounds and prevent infection.
- e) Bandages: To stop minor bleeding and prevent infection.
- f) Adhesive Tape: To secure bandages to wounds.
- g) Antibacterial Ointment: To prevent infection on small cuts.
- h) Calamine Lotion: To prevent itching.
- i) Soap: To clean minor wounds and cuts and to prevent infection.
- j) Latex Gloves: To protect the rescuer from infection and blood pathogens.
- k) Bandage Scissors: To cut gauze and bandages.
- l) Tweezers: To pull splinters.
- m) Moleskin: To protect blisters and prevent infection.
- n) Antiseptic lotion / Antibiotic: To prevent infections.
- o) Analgesic: Pain killer
- p) Anti-inflammatory: anti-pyretic/ painkiller

8.3 Heavy Bleeding

Q. What should one do if the patient is bleeding heavily?

- a) Put pressure on the wound with a clean cloth to stop or slow down the flow of the blood.
- b) Call local emergency numbers or ask somebody to do so.
- c) Keep pressure on the wound until help arrives.
- d) If there is an impaled object, do not remove it from the injury.

Q. The person looks pale and feels cold and dizzy. What does this mean?

It means there isn't enough blood flowing through the body. It can be life threatening because it can very quickly lead to other conditions, such as lack of oxygen in the body's tissues, heart attack or organ damage. This physical response to an injury or illness is called shock. If you suspect someone is going into shock, lie him down and lift his feet higher than the rest of his body, such that the legs are higher than the heart in this position, which helps increase blood flow to their brain and heart.

Q. Should wound be washed?

For minor cuts and grazes, one can wash the wound to remove any dirt. Don't wash a wound that is bleeding heavily. If a wound that is bleeding heavily is put under a tap, then all clotting agents will wash away and will bleed more.

Do's for heavy bleeding

- a) Reassure victim that help is on the way
- b) Call ambulance immediately
- c) Check victim's status regularly
- d) Use direct pressure to stop bleeding

- e) Check to see if victim's airways are clear
- f) If no pulse or respiration, start CPR
- g) To prevent transmission of disease, use latex gloves
- h) Raise head if bleeding occurs around the upper body areas
- i) Raise feet if bleeding occurs around lower body areas

Don'ts for heavy bleeding

- a) Don't move the patient if not required
- b) Always suspect "spinal injury" (and don't move the victim)
- c) Don't set fractures and breaks (simply immobilise the victim)
- d) Use "direct" pressure to stop bleeding
- e) Don't remove items imbedded in the eye
- f) Don't use burn ointments
- g) Call emergency as soon as possible

8.4 Head Injury

Q. How does a cold compress work?

A cold compress reduces the swelling and lessens the pain of the injury.

Q. Can I give them painkillers for their headache?

No. Painkillers are not advised because they can mask the signs and symptoms of a serious head injury.

Q. What is concussion?

If a person suffers a blow to the head, the brain can be shaken inside the skull. This is called concussion. It tends to result in a short loss of consciousness (a few seconds to a few minutes). Most people make a full recovery from a concussion, but occa-

sionally it may become more serious. If you think someone has concussion, call medical emergency.

Q. What are the symptoms of concussion?

Symptoms of concussion include:

- Dizziness
- Headache
- Confusion
- Feeling sick
- Blurred vision
- Having no memory of what happened

8.5 Burns

Q. Should I use ice to cool the burn?

No, use water only. Ice may further damage the skin.

Q. Should I put a plaster over a burn to make sure it doesn't get infected?

One should not use any adhesive bandages as it will stick to the skin and may cause further damage. Instead the burns should be covered with cling film or a clean plastic bag which will help prevent infection.

Q. If clothes are stuck to the burn, should I try to remove them?

No. Remove any clothing or jewelry near the burned area, but do not try to remove anything that is stuck to the burn. This could cause more damage.

Do's for burns

- a) Call an ambulance for any serious burns. Burns to children or the elderly, electrical or chemical burns as well as burns to the face or genital area, should be attended to immediately.
- b) Apply CPR if the person is not breathing normally.
- c) Try to remove clothes and jewelry (from the area that has been burned) only if it is not sticking to the burned area.
- d) Hold the burned area under gently running water, for about 10 minutes to half an hour.
- e) To prevent corneal damage (in the case of chemical burns to the eyes), immediately irrigate the eyes with water or a saline solution.
- f) For second degree burns on the limbs elevate the limbs higher than the heart.
- g) To reduce shock as well as loss of body heat, place clean, dry, non-fluffy cloths lightly over the burn.
- h) Cover the person with a cool, wet, lint-free cloth, while waiting for an ambulance or when transporting the person to hospital.

Don't for Burns

- a) Do not apply lotions, butter, grease or oil to burned area.
- b) Do not use ice, as it may cause frostbite.

8.6 Unconsciousness

Q. What should a person do if patient is unconscious?

If a patient is unconscious, his head should be tilted backwards. This is done to avoid tongue to fall backwards and block the airway. Tilting the head backwards and pulling the tongue forward will help to clear the airways.

Q. If I think the person has a back or neck injury, should I still turn them on their side?

If one suspects a back or neck injury, it is still advisable to move them onto their side.

The priority is to keep them breathing. Try to keep their spine in a straight line when turning them. If possible, get someone to help to turn them.

Q. What should I do if someone is feeling faint?

If someone is feeling faint, advise them to lie down on their back and raise their legs to improve blood flow to the brain. Fainting is caused by a temporary reduction in the flow of blood to the brain and can result in a brief loss of consciousness. A person who has fainted should quickly regain consciousness. If they do not, treat them as an unconscious person.

8.7 Heart Attack

Do's:

- a) Patient should be made to sit down, rest, and try to keep calm.
- b) Loosen any tight clothing.
- c) Ask if the patient takes any chest pain medication for a known heart condition, such as nitroglycerin, and help him take it.
- d) If the pain does not go away with rest or within 3 minutes of taking nitroglycerin, call for emergency medical help.
- e) If the person is unconscious and unresponsive, call for emergency and start CPR.

Don'ts:

- a) Do not leave the patient alone.

- b) Do not allow the person to deny the symptoms.
- c) Do not wait to see if the symptoms go away.
- d) Do not give the person anything by mouth unless a heart medication (such as nitroglycerin) has been prescribed. CPR(Cardiopulmonary Resuscitation)includes:
 - Chest compressions that keeps patient's blood circulating.
 - Rescue breathing that provides oxygen to patient's lungs.

Chest compressions:

- a) Place the heel of one hand on the lower half of the person's breastbone.
- b) Place the other hand on top of the first hand and interlock your fingers.
- c) Press down firmly and smoothly (compressing to 1/3 of chest depth) 30 times.
- d) Administer 2 breaths as described below in mouth-to-mouth,
- e) The ratio of 30 chest compressions followed by 2 breaths is the same, whether CPR is being performed alone or with the assistance of a second person.
- f) Aim for a compression rate of 100 per minute. Effective chest compressions will be tiring. It is important to get help from others if possible, to allow changeover for rest and to keep the compressions effective.

Mouth-to-mouth Respiration:

- a) If the patient is not breathing normally, make sure he is lying on his back on a firm surface
- b) Open the airway by tilting the head back and lifting his chin.
- c) Close his nostrils with your finger and thumb.

- d) Put your mouth over the patient's mouth and blow into his mouth.
- e) Give 2 full breaths to the patient (this is called 'rescue breathing'). Make sure there is no air leak and the chest is rising and falling. If his chest does not rise and fall, check that you're pinching his nostrils tightly and sealing your mouth to his. If still no breathing, check airway again for any obstruction.
- f) Continue CPR, repeating the cycle of 30 compressions then 2 breaths until professional help arrives.

Q. When should we stop CPR?

Generally CPR is stopped, when:

- a) The patient recovers and starts breathing spontaneously
- b) When medical help arrives
- c) When the person giving CPR is exhausted

8.8 Nose Bleeding

Symptoms of nose bleeding

- Bleeding from either or both nostrils
- Sometimes bleeding from ears/ mouth too.

Q. What are the causes of nose bleeds?

- a) Dryness
- b) Blowing nose with force
- c) Use of medications, like aspirin
- d) Nose picking
- e) Pushing objects into nose
- f) Injuries / blow to the nose

- g) Infections of the nose
- h) Atherosclerosis
- i) Blood-clotting disorders

Q. How to manage nose bleeding?

- a) One should not panic and should make the patient sit in up-right position with his head slightly forward.
- b) With thumb and index finger, one should apply pressure on soft part of nostrils below the nose bridge.
- c) Continue applying pressure until the bleeding stops.
- d) Ask the patient to breathe through the mouth while nostrils are pinched
- e) Loosen the tight clothing around the neck

8.9 Exposure to Chemicals

In case of exposure to Strong acids or bases (alkali) or any other Chemical Irritants

Symptoms

- a) Irritation / burning
- b) Redness of skin
- c) Pain / numbness
- d) Blisters
- e) Coughing
- f) Breathlessness
- g) Vision loss, if eye is affected
- h) Head ache

Symptoms in Severe Cases

- a) Dizziness
- b) Severe cough
- c) Seizures
- d) Low blood pressure
- e) Irregular heartbeats
- f) Cardiac arrest

Treatment

- a) Remove patient from accident Site
- b) Wash injury with tepid water liberally
- c) Identify chemical for effective therapy
- d) Seek medical treatment
- e) If required give Pain medications
- f) Consult with specialist

9.0 SOP ON CARE OF THE DEAD BODY

Care of Dead Body

1. Death should be declared by the doctors only.
2. Nursing staff should remove the IV tubings, cannula, catheter, NG tube etc. from the body.
3. The body should be removed within 1-2 hours, if not the body should be moved to the mortuary. No hospital linens should be taken with the dead body.
4. Stretchers can be taken for transportation provided that it must be returned at the earliest to the respective units (keep the contact number of the deceased party).
5. Unclaimed bodies should be taken to the mortuary and the clinic administration should be duly informed.
6. Last offices should be performed by the attending nurse.
7. In the event of a patient who is brought in dead, the patient should be confirmed clinically dead by the doctor on duty and managed as a coroner's case.

Death Certificate Procedure for Death at the Clinic

1. The death certificate should be issued by the treating doctor / doctor declaring death.
2. Remember to fill in all the details on the death certificate.
3. Ensure that the office copy is legible and clear. The second copy should be sent to the record section and the third copy should be retained in the ward.

10.0 INFECTION CONTROL and WASTE MANAGEMENT

All health professionals should follow the infection control and waste management guidelines.

10.1 Objective

1. Institute a waste management plan for the clinic to comply with the law.
2. Protection of environment by minimising polluting materials like Mercury, PVC etc.
3. Identify a responsible waste manager and institute a waste management team.
4. Identify spaces required to support the waste plan e.g. space planning for storage, define disposal pathway etc.
5. Implement good infection control measures.

10.2 Key Requirements of Waste Disposal Management

1. Segregate waste at source.
2. Use designated colour containers.
3. Transport the waste in designated vehicles by authorised personnel.
4. Treat infectious waste according to prescribed standards.

10.3 Transportation and Scheduling

While transporting waste the following guidelines need to be followed:

1. They should be in the respective colour coded bags
2. Transport waste to the disposal site twice a day.
3. Waste can be transported on specially allocated trolleys and collect floor wise to the storage/ disposal area.
4. Care must be taken to ensure that the bags are not torn and spill the waste from the bag during transportation.
5. All waste spills should follow the infection control guidelines and injury or incidents should be reported to the Infection Control Officer.
6. All bags should be secured/tied at the neck prior to transportation.
7. Any sharp found in the bags during transportation should be reported and follow the Sharps Management Policy.

11.0 SOP ON BLOOD TRANSFUSION

1. Blood transfusions to be carried out at the orders of the treating physician.
2. While transfusing blood to the patients, strict blood transfusion protocol must be followed.
3. If there is transfusion reaction, adverse reaction form must be filled up and inform the blood bank.
4. Check the blood group, date blood was cross matched, batch number, expiry date of the blood before transfusion.

11.1 In Case of Transfusion Reaction

1. Stop blood transfusion immediately but do not discard the blood
2. Run 500mls of Normal saline fast
3. Give Intravenous Hydrocortisone 200mg stat
4. Give Intramuscular Phenerghan 25mg stat
5. Call the nearest Doctor on duty
6. Return blood to the blood bank

12.0 SOPs FOR LABORATORY

1. Apply strict aseptic techniques throughout the procedure.
2. Wash hands before and after the collection of samples.
3. Collect the specimen at the appropriate phase of disease.
4. Make certain that the specimen is representative of the infectious process (e.g. sputum is the specimen for pneumonia and not saliva) and is adequate in quantity for the desired tests to be performed.
5. Collect or place the specimen aseptically in a sterile and/or appropriate container.
6. Ensure that the outside of the specimen container is clean and uncontaminated.
7. Close the container tightly so that its contents do not leak during transportation.
8. Label and date the container appropriately and complete the requisition form.
9. Arrange for immediate transportation of the specimen to the laboratory.

12.1 Criteria for Rejection of Specimens

Criteria should be developed by a laboratory on the basis of which the processing of a specimen may not be done by the laboratory. The following are some examples:

- Missing or inadequate identification.
- Insufficient quantity.
- Specimen collected in an inappropriate container.
- Contamination suspected.
- Inappropriate transport or storage.

- Unknown time delay.
- Haemolysed blood sample.

12.2 Collection of Specimens

The clinical state of the patient will not necessarily be reflected by the result of laboratory investigation despite correct laboratory performance unless the specimen is in optimal condition required for the analysis. Some of the important specimens and their proper collection and transportation methods are described here so as to ensure quality.

12.2.1 Blood

Whole blood is required for bacteriological examination. Serum separated from blood is used for serological techniques. Skin antisepsis is extremely important at the time of collection of the sample. Tincture of iodine (1-2%), povidone iodine (10%) and chlorhexidine (0.5% in 70% alcohol) are ideal agents. However, some individuals may be hypersensitive to iodine present in some of these. While collecting blood for culture, the following points must be remembered:

- Collect blood during the early stages of disease since the number of bacteria in blood is higher in the acute and early stages of disease.
- Collect blood during paroxysm of fever since the number of bacteria is higher at high temperatures in patients with fever.
- In the absence of antibiotic administration, 99% culture positivity can be seen with three blood cultures.
- Small children usually have higher number of bacteria in their blood as compared to adults and hence less quantity of blood needs to be collected from them.

12.2.2 Cerebrospinal Fluid (CSF)

Examination of CSF is an essential step in the diagnosis of any patient with evidence of meningeal irritation or affected cerebrum. Almost 3-10 ml of CSF is collected and part of it is used for biochemical, immunological and microscopic examination and remaining for bacteriological or fungal examination. The following important precautions need to be taken for CSF collection and transportation:

- Collect CSF before antimicrobial therapy is started.
- Collect CSF in a screw – capped sterile container and not in an injection vial with cotton plug.
- Do not delay transport and laboratory investigations.
- Transport in a transport medium if delay in processing is unavoidable.
- CSF is a precious specimen, handle it carefully and economically. It may not be possible to get a repeat specimen.
- Perform physical inspection immediately after collection and indicate findings on laboratory requisition form.
- Store at 37°C, if delay in processing is inevitable.

The characteristics of the appearance of CSF are outlined below:

Appearance	Interpretations of CSF
Clear and colourless	Normal
Clear with Tyndall effect (sparkling appearance against incident light)	High protein content
Clear yellowish	Old haemolysis
Clear red	Fresh haemolysis
Turbid blood-stained	Haemorrhage

Turbid white	High cell or protein content
Turbid clot (after overnight storage)	Fibrin clots

12.2.3 Sputum

Sputum is processed in the laboratory for aetiological investigation of bacterial and fungal infections of the lower respiratory tract. It is of utmost importance in the diagnosis of pulmonary tuberculosis.

The guidelines on Standard Operating Procedures for Microbiology are:

1. Select a good wide-mouthed sputum container, which is preferably disposable, made of clear thin plastic, unbreakable and leak proof material.
2. Give the patient a sputum container with the laboratory serial number written on it. Show the patient how to open and close the container and explain the importance of not rubbing off the number written on the side of the container.
3. Instruct the patient to inhale deeply 2-3 times, cough up deeply from the chest and spit in the sputum container by bringing it closer to the mouth.
4. Make sure the sputum sample is of good quality. A good sputum sample is thick, purulent and sufficient in amount (2-3 ml).
5. Give the patient an additional container with laboratory serial number written on it for an early morning specimen. Explain to the patient to rinse his/her mouth with plain water before bringing up the sputum.

12.2.4 Urine

Under normal circumstances urine is sterile. The lower part of the urethra and the genitalia are normally colonised by bacteria, many of which may also cause urinary tract infection. Since urine is a good growth medium for all sorts of bacteria, proper and aseptic collection assumes greater importance for this specimen.

For microbiological examination urine must be collected as a “clean catch-mid-stream” specimen. Urine specimens should be transported to the laboratory within one hour for bacteriological examination, because of the continuous growth of bacteria in vitro thus altering the actual concentration of organisms.

12.2.5 Stool

Faecal specimens for the aetiological diagnosis of acute infectious diarrhea should be collected in the early stage of illness and prior to treatment with antimicrobials. A stool specimen rather than a rectal swab is preferred:

1. The faeces specimen should not be contaminated with urine.
2. Do not collect the specimen from bed pan.
3. Collect the specimen during the early phase of the disease and as far as possible before the administration of antimicrobial agents.
4. 1 to 2 gm quantity is sufficient.
5. If possible, submit more than one specimen on different days.
6. The fresh stool specimen must be received within 1-2 hours of passage.

Guidelines on Standard Operating Procedures for Microbiology

1. Store at 2-8°C.
2. Modified Cary and Blair medium is recommended as a good transport medium. It is a very stable medium and can be stored for use in screw – capped containers. It is a semi-solid transport medium. At least two swabs should be inoculated. Most pathogens will survive for up to 48 hours at room temperature. Specimens are unacceptable if the medium is held for more than one week or if there is detectable drying of the specimen.
3. Alternative transport media or alkaline peptone water. Fluid should be prepared in 30 ml (1 oz) screw capped bottles (MacCartney bottles). It preserves vibrios for more than six weeks and has also proved to be a very convenient medium for transportation as it can be kept at room temperature after collection of the specimen.

12.2.6 Throat Swab

1. Depress the tongue with a tongue blade.
2. Swab the inflamed area of the throat, pharynx or tonsils with a sterile swab taking care to collect the pus or piece of membrane.
3. Transport in sterile transport tube.

12.2.7 Bone Marrow

Bone marrow is collected by a doctor who is well trained in this procedure:

1. Decontaminate the skin overlying the site from where specimen is to be collected with 70% alcohol followed by 2% tincture of iodine.

2. Aspirate 1 ml or more of bone marrow by sterile percutaneous aspiration.
3. Collect in a sterile screw-cap tube.
4. Send to laboratory immediately.

12.2.8 Rectal Swab

1. Insert swab at least 2.5 cm beyond the anal sphincter so that it enters the rectum.
2. Rotate it once before withdrawing.
3. Transport in Cary and Blair or other transport medium.

13.0 SOP ON HEALTH EDUCATION

The University shall, in collaboration with management, organise regular health education programs for the staff and students of the University to:

1. Assist lecturers with reference material, health educational resources and materials
2. Assist agencies to coordinate community-based health education programs.
3. Provide students with periodic in-class health education programs.
4. Provide lecturers and students with in-service education programs (e.g. drug and alcohol, nutrition, personal safety).
5. Provide family/groups/community with education programs (e.g. drug and alcohol, adolescent development, personal safety programs).
6. Represent the needs of health education for the whole University community

14.0 SOP ON MENTAL HEALTH

The university clinic shall be a part of a comprehensive approach to caring for staff and students with mental health issues. Emotional and psychiatric health is necessary for optimal academic performance. A better understanding of the relationship between frequent visits to the clinic or somatic complaints as a sign of underlying problems, which may be organic or psycho emotional in origin, requires the unique skill set of health professionals.

14.1 Mental Health Care Plan **1. Health care services must be**

provided for staff and students who are diagnosed with mental health conditions. Health professionals at the University clinic play an important role in interpreting a student's health status, in explaining the impairment, and in interpreting medical and other health information in relation to the expected standards for eligibility.

2. Development of individualised health care plans for such patients especially students in collaboration with the Guidance and Counseling Unit of the Office of the Dean of Students Affairs. The patient's faculty and department must be involved to develop an academic plan to support such students
3. Encourage and support medication compliance, therapy, related treatments and follow-up care.
4. Collaboration with school staff, students, families and community health care professionals in the assessment, identification, intervention, referral, and follow-up of students with identified or emerging mental health needs.
5. Promote family-centered care by facilitating between the school, parents and students with school and community resources for mental health services.

15.0 SOP ON FAMILY ENGAGEMENT

The health professionals at the University clinic should promote family, University and community partnerships to support and improve learning, development and health of children and adolescents.

1. Follow University guiding principles of patient- and family-centered care.
2. Actively partner with patients and families, institutional leaders, health care providers and staff to implement the core principles of strong patient- and family-centered care:
3. Dignity and Respect: Patient and family knowledge, values, beliefs and cultural backgrounds are incorporated into the planning and delivery of care. Their perspectives and choices are considered and honored in all phases of care.
4. Information Sharing: Patients and families receive timely and accurate information in order to effectively participate in their care. Health care providers communicate and share complete and unbiased information with patients and families in ways that are affirming and useful.
5. Participation: Patients and families are encouraged and supported to participate as integral members of their health care team.
6. Collaboration: Patients and families are included on an institution-wide basis. Health care leaders collaborate with patients and families in policy and program development, implementation and evaluation; in health care facility design; in professional education; and in the delivery of care.
7. Advocate for the University clinic to include family engagement as part of their vision and mission statement.

APPENDICES

Appendix 1

Accra Technical University Clinic Statement of Confidentiality Agreement

Ia healthcare professional or worker at the Accra Technical University Clinic understand that all health and medical information, whether verbal or written, are confidential.

I will treat all health information with the greatest respect and will not discuss or disclose any information about a patient's health, medical or psychosocial status.

Health Professional or worker:

Name:

Signature:..... Date:

Medical Director:

Name:

Signature:..... Date:

Appendix 2: Accra Technical University Clinic Incident Report Form

University District:..... University:

**To be filled in at the time of the incident in collaboration with
the person caring for the injured**

Date:..... Time:

..... Student/Employee name:.....

..... Grade: Lecturer/Supervi-

sor:..... Address:

..... Loca-
tion of incident: Activi-
ty student/employee was engaged in (be specific):

Staff on Duty:

Complete description of incident:

Assessment of injury (body, degree of injury, functional effect)

Initial Treatment of injury:

By Whom:

Disposition:

Was the injured transported to a medical facility? Yes..... No..... By
EMS.....

By whom..... Please name facility:

Was medical staff was present and/or notified? Yes..... No.....

By whom?

Were parents notified? Yes..... No.....Time..... By whom.....

..... Follow up/outcome of the
injury.....

Describe any safety hazards that may have precipitated the incident?.....

Potential hazard reported? Yes..... No..... To whom.....

Date..... Time

Signature of person preparing report:

Signature of Health Professional:

Head of Department's Signature..... Date:.....

Notes:

.....

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