MINISTRY of HEALTH MALAYSIA

Standard Operating Procedures for Medical Assistants in Primary Health Care PART 1

Family Health Development Division
2001

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DATU DR MOHAMAD TAHA BIN ARIF
Director General of Health
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FOREWORD

Primary Care in Malaysia has expanded significantly to meet the ever-changing health needs of the Malaysian public. The implications of this expanded scope of service on the role of Medical Assistants at the primary care level are clear. One of the several appropriate responses to this role is the development of Standard Operating Procedures (SOP). While Clinical Practice Guidelines (CPGs) are available for several clinical conditions, they are mostly used by clinical doctors. In almost all instances, these CPGs need to be translated into Standard Operating Procedures to be used by Medical Assistants who manage a wide range of clinical conditions at primary care level. Some of these cases may need to be referred to the medical officer or specialist for further management.

The role and contribution of Medical Assistants to the health of Malaysians is very significant. While many of them work in a hospital environment, many more serve the rural areas in health clinics. These Medical Assistants in rural areas often work around the clock and they do not often get opportunities to leave their stations. Updating of skills are given at local level, but these efforts cannot hope to equip them with optimal competence, especially with the change in disease pattern. Hence Standard Operating Procedures can be extremely useful to them.

I am pleased that under the guidance of the Director of the Family Health Development Division, Ministry of Health, a group of professionals consisting of clinical specialists including Family Medicine Specialists and several senior Medical Assistants have developed this set of Standard Operating Procedures. I am confident that these Standard Operating Procedures will enhance the role and professionalism of Medical Assistants at primary care level and will contribute towards better management of patients and towards improving the health of the nation.

DATU DR MOHAMAD TAHA BIN ARIF

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Director
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PREFACE

Medical Assistants have been providing primary health care services in the rural health clinics in Malaysia since the 1920s. They have been working under the guidance of Medical & Health Officers and have made a significant contribution to the health of Malaysians. While much of their functions are in the outpatient setting, treating a wide range of ailments, Medical Assistants have also played an important role in health promotion and disease prevention.

Historically, Medical Assistants carry out their functions guided by the knowledge and skills acquired during their training and continuous learning from doctors and peers. Documented Standard Operational Procedures for the management of patients at the primary care level have not been developed for Medical Assistants in health clinics. In view of changing disease pattern, ever-changing medical technology and the expanded and extended roles of Medical Assistants, there is a need to develop Standard Operating Procedures on various medical and surgical conditions to enhance Medical Assistants' role in Primary Health Care Services.

These Standard Operating Procedures for 33 common conditions and diseases encountered in the health clinics have been developed by a group of Medical Assistants with technical guidance and input from Family Medicine Specialists and other clinicians as well as from the Public Health Specialists from the Family Health Development Division of the Ministry of Health. This will mark a new era in patient management at primary health care level besides serving as a useful guide and timely reference for Medical Assistants working in health clinics.

These Standard Operating Procedures will be amended, updated and adapted to new technological advances in the medical field and additions made to the list from time to time.

The Family Health Development Division of the Ministry of Health Malaysia extends its sincere gratitude to all involved for their untiring efforts and valuable contributions towards the successful preparation of these Standard Operating Procedures.

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INTRODUCTION

Whenever an incident of patient mismanagement is highlighted, usually attracting much public attention and outcry, we are often reminded of the importance of Standard Operating Procedures and its compliance. Though Medical Assistants have been providing primary health care services in rural health clinics for several decades, it is only now for the first time a technical document of this nature has been developed in a systematic manner, especially for its use at all primary health care facilities. The preparation and successful outcome of this document initiated a year ago, has been eagerly anticipated and is indeed greatly appreciated by all Medical Assistants in Primary Health Care Services.

We have prepared 33 SOPs based on some of the most common conditions encountered in health clinics, where Medical Assistants often manage cases independently and/or under the supervision of the Family Medicine Specialists or Medical Officers . In the year 2002, we plan to develop another 20 new SOPs as Part 2 of this document. A flow chart which clearly indicates the flow of work is presented before every SOP and some additional notes, including appendices, have been included wherever necessary.

The standard management of the patient beginning from the point of arrival/registration, history taking, examination, assessment, treatment, criteria for referral and health education is addressed to assist in providing holistic care of the patient. All Medical Assistants should attempt to follow the standards that have been set so as to maintain quality patient management at the primary care level. A list of references is also made available.

Medical Assistants wish to extend their gratitude and special thanks to the Director General of Health, Datu Dr Mohamad Taha bin Arif, Director of Family Health Development Division, Dr Narimah Awin and Principal Assistant Director, Dr Hjh Safurah Hj Jaafar for their support, advice and expert guidance in the preparation of this document. We also wish to thank all the Medical Officers for their hard work in the preparation of this document over the past year.

MOHD RADZI BIN ABDULLAH

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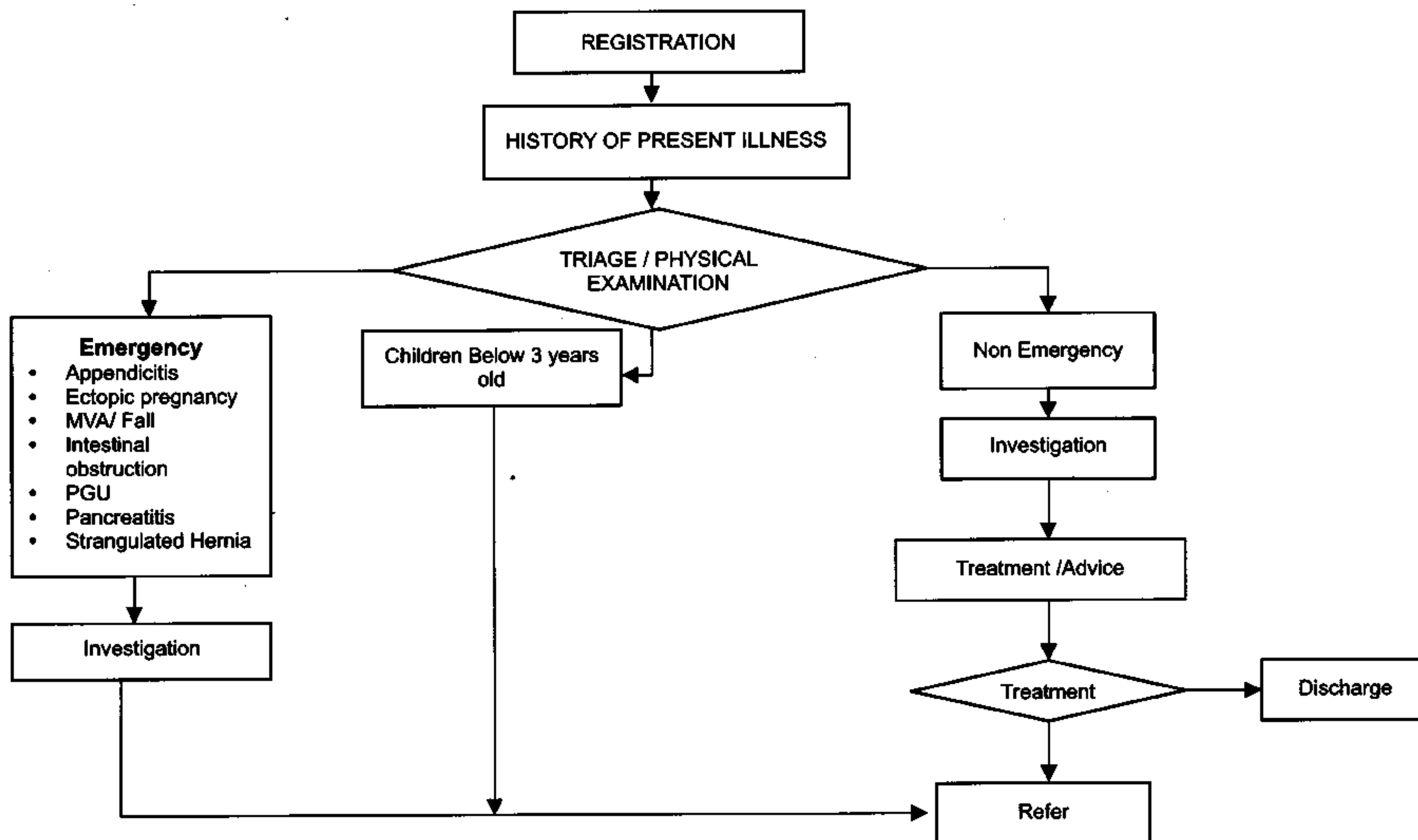
Standard Operating Procedures

1. FLOW CHART - MANAGEMENT OF ABDOMINAL PAIN



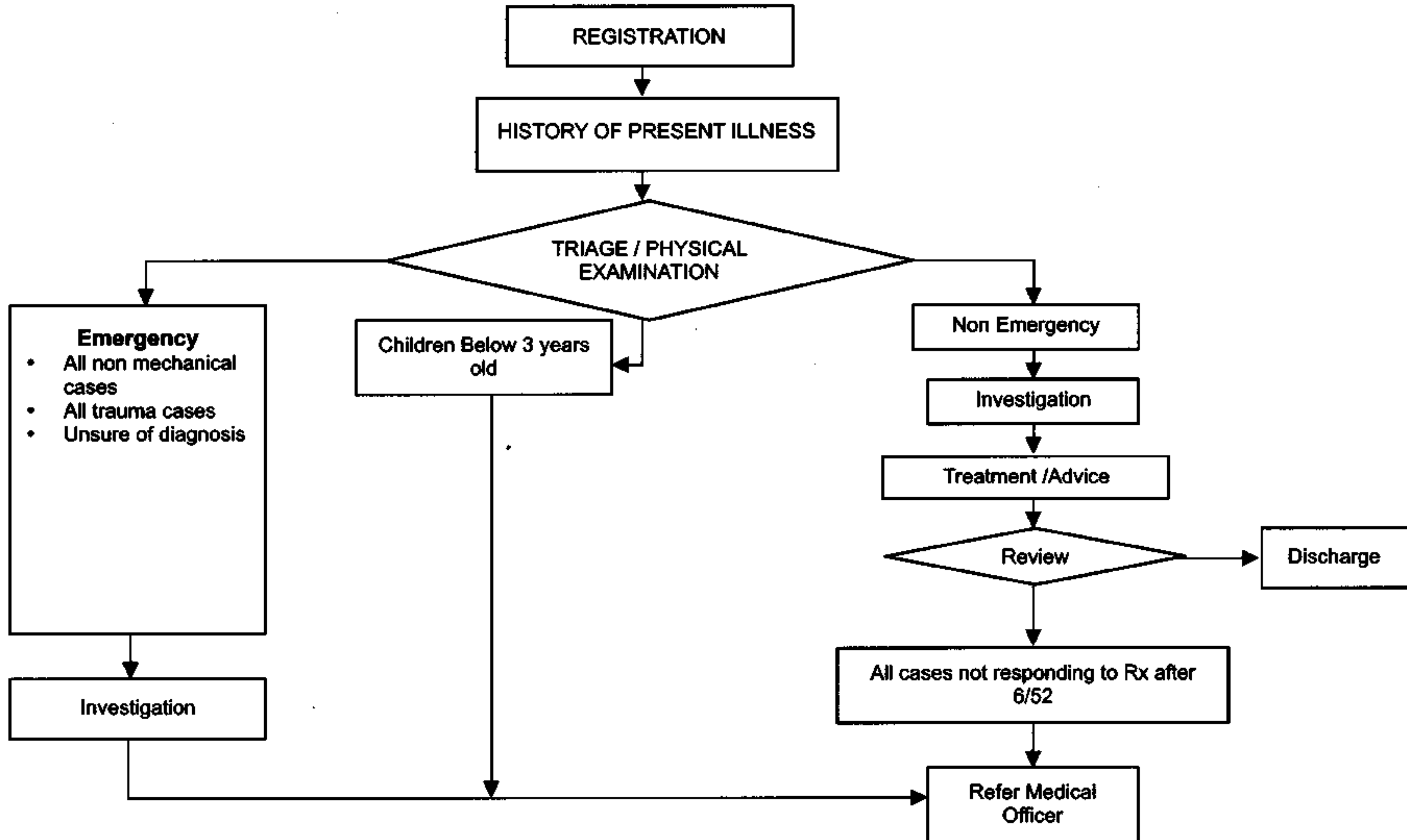
MANAGEMENT OF ABDOMINAL PAIN

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
1.	**Management of Abdominal Pain**	**1. Bio-data** • Age • Sex • Marital status **2. Present History** • Location • Severity (acute/chronic) • Character **3. Associated Symptoms** • Past history of food taken • Fever • Nausea / Vomiting / haematemesis • Shortness of breath • Abdominal distention • Diarrhoea / constipation • Bleeding PR • Hematuria • Jaundice	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition eg. Jaundice, Pallor, Build (Cachexic), in distress • BP, PR, Temp. • Abdominal Examination: - Identify site of pain - Palpate for tenderness, • guarding,rebound • Tenderness • masses. • Knee flex • Renal punch – • Hernial orifices • PR —malaena / fresh bleeding	• All patients seen should be registered, history taken and recorded • All patients seen should be examined physically	R1 R2 R3 R4 R5 R6	**Equipment** - BP Set - Stethoscope - Thermometer **Drugs** - Antacids (MMT, Gelusil) - ORS - Injection Hyoscine Bromide - Injection Maxolon - Zental - Disposable protoscope - Glove / fingerstall

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		4. Past Medical / Surgical History • Admissions • Previous OGDS • Previous Jaundice **5. Alcohol/Drug History** • Esp. NSAIDs **6. Family History** • Children with intusussception **7. Menstrual History** (female)	**4. Investigation** • FBC • Urine FEME / Ketones / Bile salts • Stool — ova/ cyst • Stool for occult blood • KUB / AXR • UPT • ECG • Dextrostix **5. Principles of management** • Symptomatic treatment - For uncomplicated diarrhoea - For simple gastritis - For renal colic	• if fever, pallor or suspect infection • if UTI, renal colic suspected • suspected worm infestation • for bleeding peptic ulcer • if renal / gallstone suspected • if suspect ectopic pregnancy if MI is suspected • if DKA suspected - refer to SOP for diarrhoea - refer to SOP for epigastric pain - refer to SOP for renal colic		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
			6. Criteria for referral • **All emergency cases** • All children < 3 years old • All females with delayed menses / UPT positive • If unsure of diagnosis	• Refer all patients as per criteria		

2. FLOW CHART - MANAGEMENT OF BACKACHE

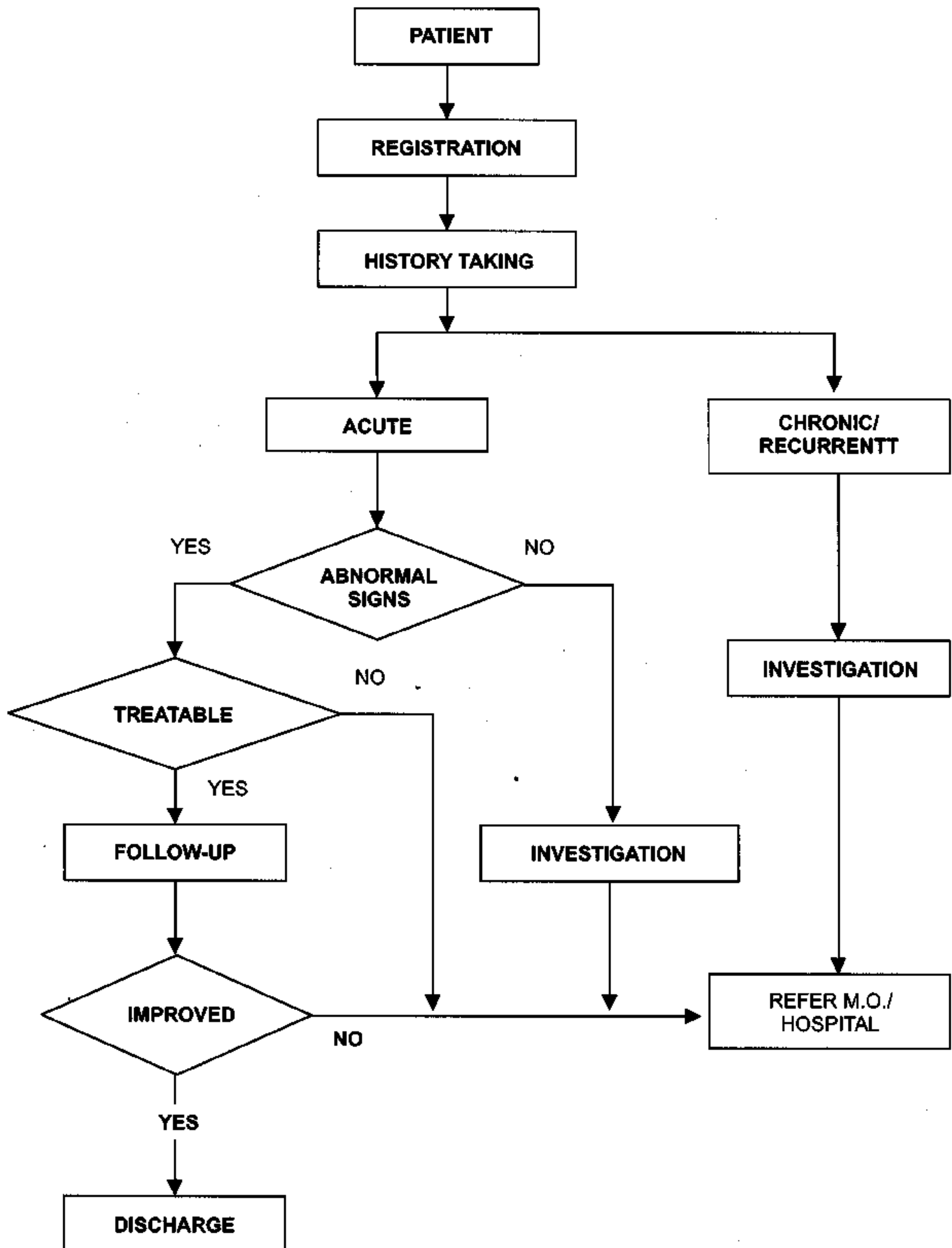


MANAGEMENT OF BACKACHE

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
2.	**Management of Backache**	**1. Bio-data** • Age • Sex • Occupation **2. Present History** • Onset • Site • Severity (acute/chronic) • Character • Radiation / neurological involvement • Occupational **3. Associated Factors** • Trauma • Precipitating incident eg. Strenuous activity (Ergonomic)/ games • Fever	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition • BP, PR, Temp. • Local Examination: • Inspection (deformity) - Palpate for tenderness, - Guarding, swelling. • Range of movement • Systemic review of other joints, lymph nodes and neurological assessment as indicated **4. Investigation** • FBC / ESR } (backache with • Urine FEME } fever) • X Rays - for all cases with neurological involvement - mechanical cause not responding to treatment after 6 weeks - Trauma	▪ All patients seen should be registered and proper history taken ▪ All patients seen should be given a physical examination ▪ If there is fever ▪ All cases with neurological involvement, mechanical cause not responding to treatment after 6 weeks & H/O Trauma	R21 R22 R23	**Equipment** • BP Set • Stethoscope • Thermometer **Drugs** • Paracetamol • Indomethacin • Brufen • Mefenamic acid • Magnesium Triscilicate • Liniments

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		4. Past Medical / Surgical History • Admission / surgery • Arthritis • PTB **5. Family History of** • Arthritis • TB • Drug history (steroids)	**5. Management and Treatment** • All cases (excluding non-mechanical, trauma, neurological involvement) - Analgesic 6. **Health Education** (Care of the back) 7. **Criteria for referral** • All non-mechanical cases e.g. Infection, inflammation, malignancy • All mechanical cases not responding to treatment after 6 weeks • All emergency cases (esp. trauma) • If unsure of diagnosis	▪ Manage and treat all cases as indicated ▪ All patients should be given Health Education ▪ Refer all cases as per criteria		

3. FLOW CHART - MANAGEMENT OF BLEEDING PER RECTUM



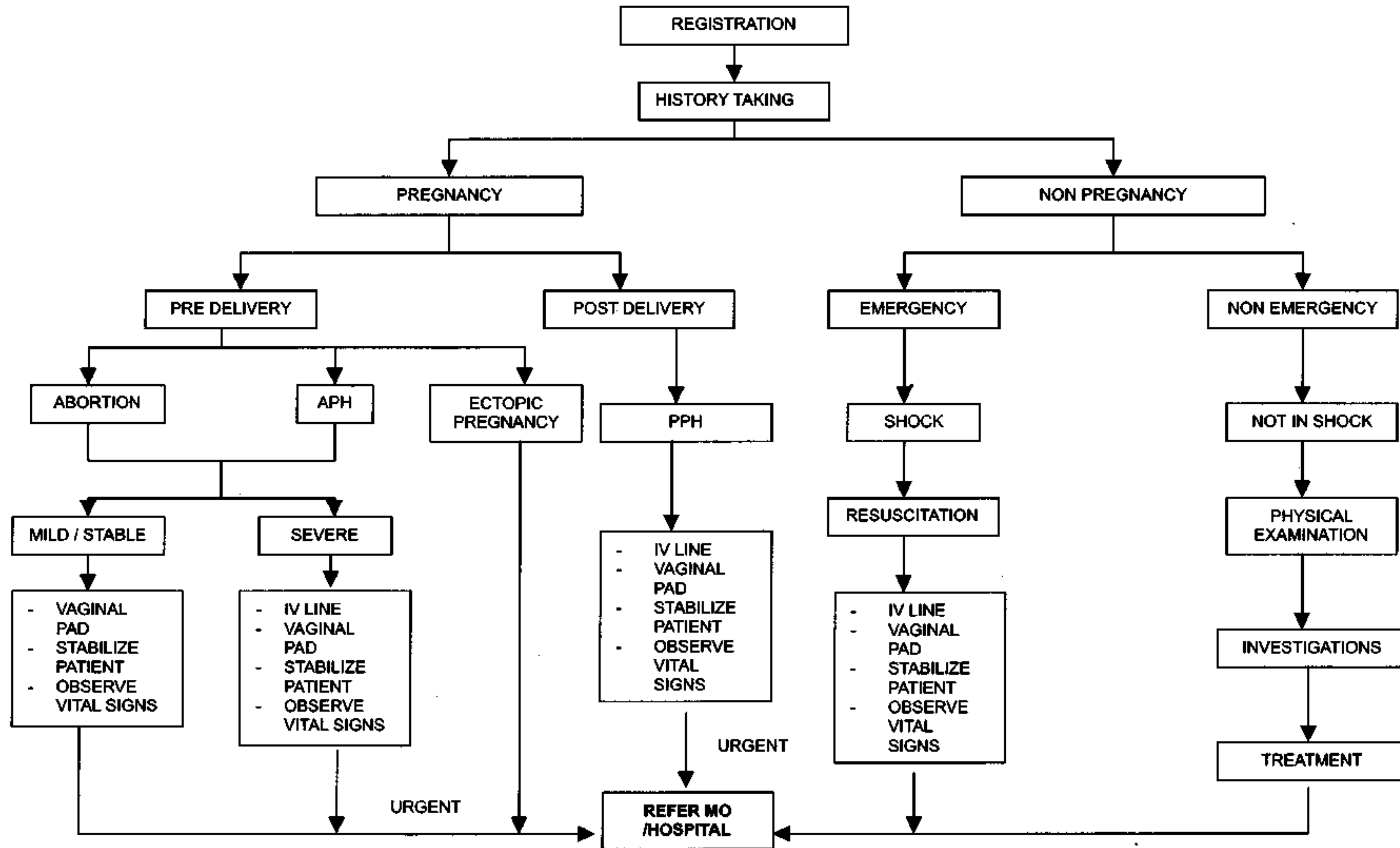
MANAGEMENT OF BLEEDING PER RECTUM

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT/DRUGS
3.	**Management of Bleeding Per Rectum**	**1. Bio data** - Name - I/C No - Sex/Race - Occupation **2. History Taking** - Duration/ amount - Recent / recurrent - Fresh Bleeding - Maleanic Stool - Change in bowel habit - History of worm infestation - H/O recent travels	**1. Registration** **2. Physical Examination** - Vital sign - B/P - Pulse - Temperature - Pallor - Jaundice - Cachexia **2.1 Systemic Review** - Rheumatoid Arthritis - Abdominal mass - Bruises - Lymphadenopathy **2.2 Per Rectum Examination** - Fresh Bleeding - Malaenic Stools - Tenderness	All patients seen should be registered and their history recorded All patients should be examined accordingly **Examine for** Rheumatoid Arthritis, Abdominal mass, Bruises and Lymphadenopathy -Fresh Bleeding, Malaenic Stools & Tenderness	R2 R5 R17 R20 R24 R61	**Equipment** - Stethoscope - BP Set - Thermometer - Glove - PR Tray - Vaseline for PR - IV Drips - Resuscitation equipment

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT/DRUGS
		3. Associated Symptoms ▪ Haematemesis ▪ Bleeding tendencies ▪ Loss of weight ▪ Loss of appetite ▪ Abdominal pain ▪ Fever **4. Past Medical History** ▪ HIV ▪ Diabetes ▪ Blood dyscrasis **5. Past Surgical History** - Banding (Piles) - Trauma - Colonoscopy	**3. Investigations** - FBC - ESR - Stool for Ova/cyst. - Stool for occult blood - Rectal swab for:- Typhoid/Cholera/Dysentery -TB investigation if suspected **4. Principal of Management** ▪ Acute with abnormal sign PR Examination e.g. fissures /haemorrhoid/ prolapse rectum **4.1. Treat symptomatically** ▪ health education ▪ advice ▪ diet	These investigations should be done for all patients Give Symptomatic Treatment & ▪ health education ▪ advice on diet ▪ stabilization ▪ setup iv infusion ▪ refer patient to Medical Officer / Hospital		

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT/DRUGS
		6. Social History - Smoking/alcohol - Recent travel - Drug history **7. Family History** ▪ blood disorder ▪ similar complain among family members ▪ Ca Colon/TB	**4.2. Passing malaenic stool — suspect upper GIT bleeding** ▪ stabilization ▪ setup iv infusion ▪ refer patient to Medical Officer / Hospital **4.3. Chronic with or without abnormal sign** ▪ investigation then refer to MO/ Hospital **5. Criteria for Referral** ▪ Acute with no abnormal sign on per rectal examination ▪ All cases of chronic PR bleeding ▪ Unsure of diagnosis ▪ Sure of diagnosis but unable to treat e.g. large fissure / prolapse haemorrhoid ▪ All children with PR bleeding	▪ do investigation then refer to MO/ Hospital Refer all cases as indicated		

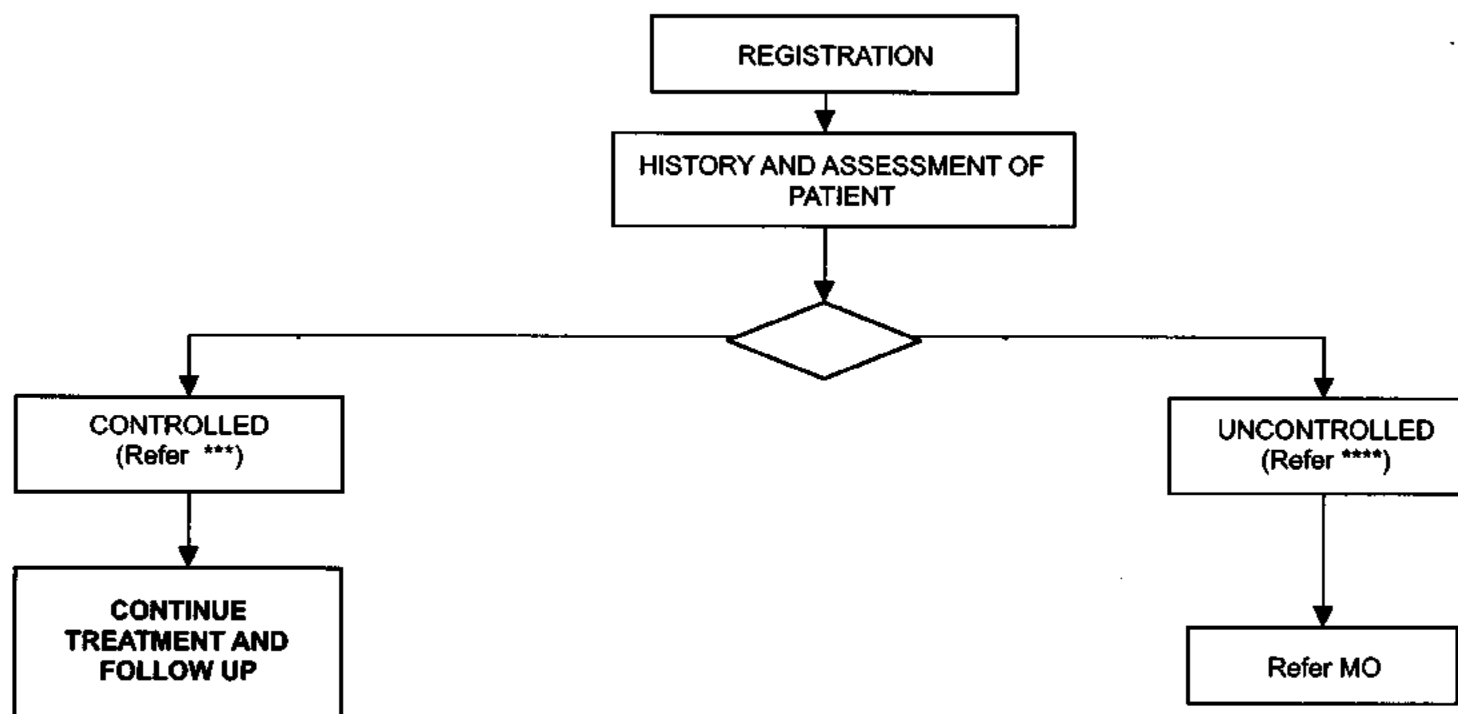
4. FLOW CHART - MANAGEMENT OF BLEEDING PER VAGINA



MANAGEMENT OF BLEEDING PER VAGINA

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
4.	**Management of Bleeding Per Vagina**	**1. Bio-data** • Name • Age • Race • Para • Occupation **2. History** ▪ Pregnant/Non Pregnant ▪ Past & Present Obst. History ▪ Bleeding Duration Quantity POC(Product of Conception) ▪ ? Pain ▪ H/O Trauma ▪ Social History ▪ Medical History ▪ Drug History	**1. Registration** **2. History Taking** **3. Assessment of patient** Take Vital Signs - Temperature - Pulse - Respiration - Blood pressure - CVS Abdominal Palpation - Soft/Guarding 4. Vaginal Padding 5. Sedation - Valium 6. IVD 7. Rest	• All patients seen should be registered and history recorded • All vital signs should be taken and recorded • • For all patients • Only for cases with severe pain • For all cases • All cases should be referred to MO/Hospital for further management	R24 R28 R33 R70	**Equipment** - BP Set - Stethoscope - Thermometer - I/V Infusion set - Resuscitation Set - Inj. Valium

5. FLOW CHART - MANAGEMENT OF BRONCHIAL ASTHMA (FOR CHILDREN)



ADULT

CONTROLLED ASTHMA (*)

- INFREQUENT SYMPTOMS
- NO NOCTURNAL SYMPTOM
- PEFR 80-100% PREDICTED

UNCONTROLLED ASTHMA (**)

- PRESISTANT SYMPTOMS
  # NOCTURNAL COUGH
  # WHEEZING
  #DYSPNOEA
- FREQUENT NOCTURNAL SYMPTOM
- PEFR < 60% PREDICTED
- DAILY OR NEARLY DAILY USE OF BRONCHODILATOR

CHILDREN

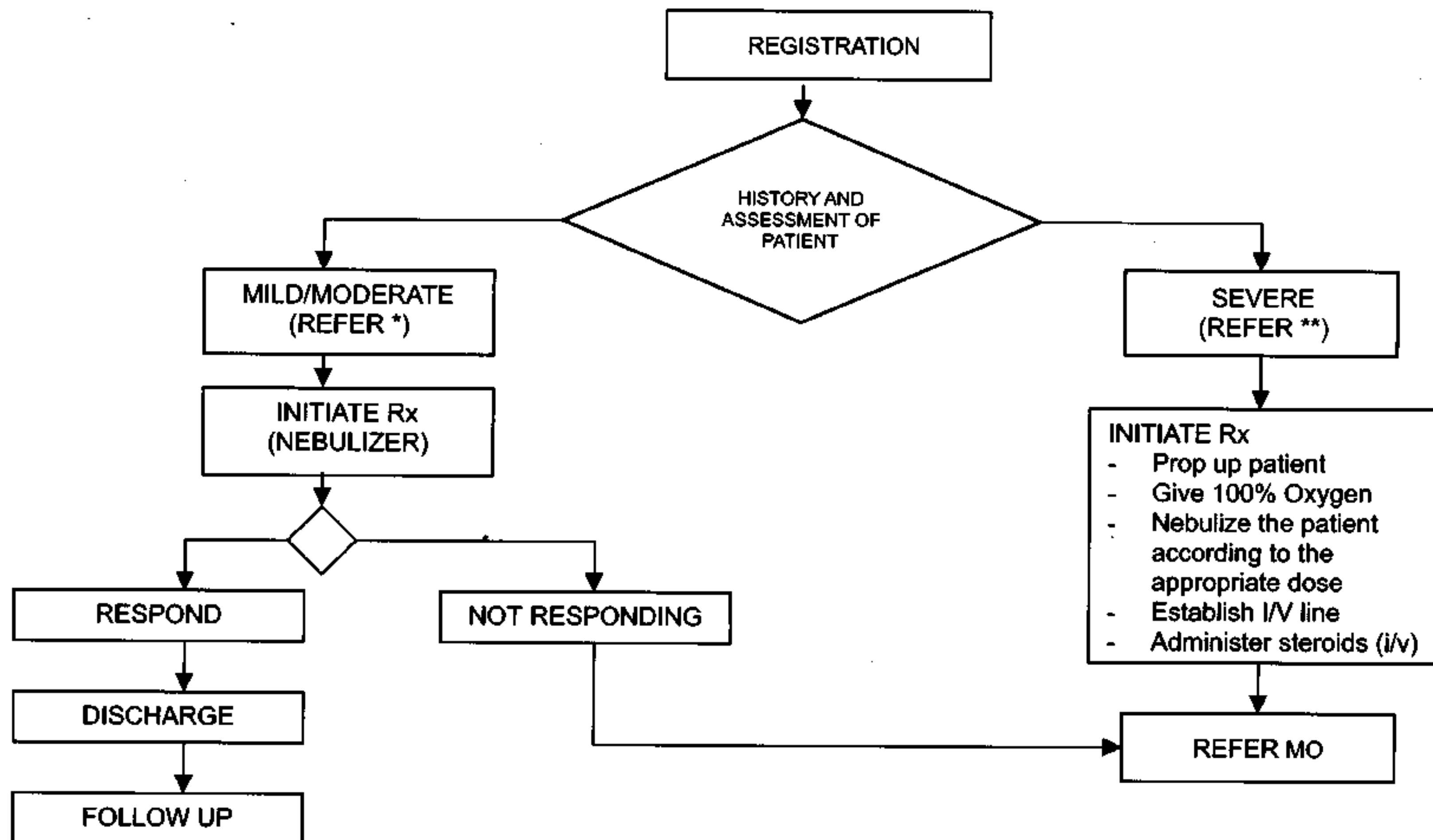
CONTROLLED ASTHMA (***)

- INFREQUENT SYMPTOMS
- NO ABNORMAL SIGN AND NORMAL LUNG FUNCTION BETWEEN EPISODE.

UNCONTROLLED ASTHMA (****)

- SYMPTOMATIC MOST DAYS OR NIGHTS
- DAILY OR NEAR DAILY USE OF BETA 2 AGONIST
- ABNORMAL LUNG FUNCTION

5. FLOW CHART - MANAGEMENT OF BRONCHIAL ASTHMA (FOR ADULT)



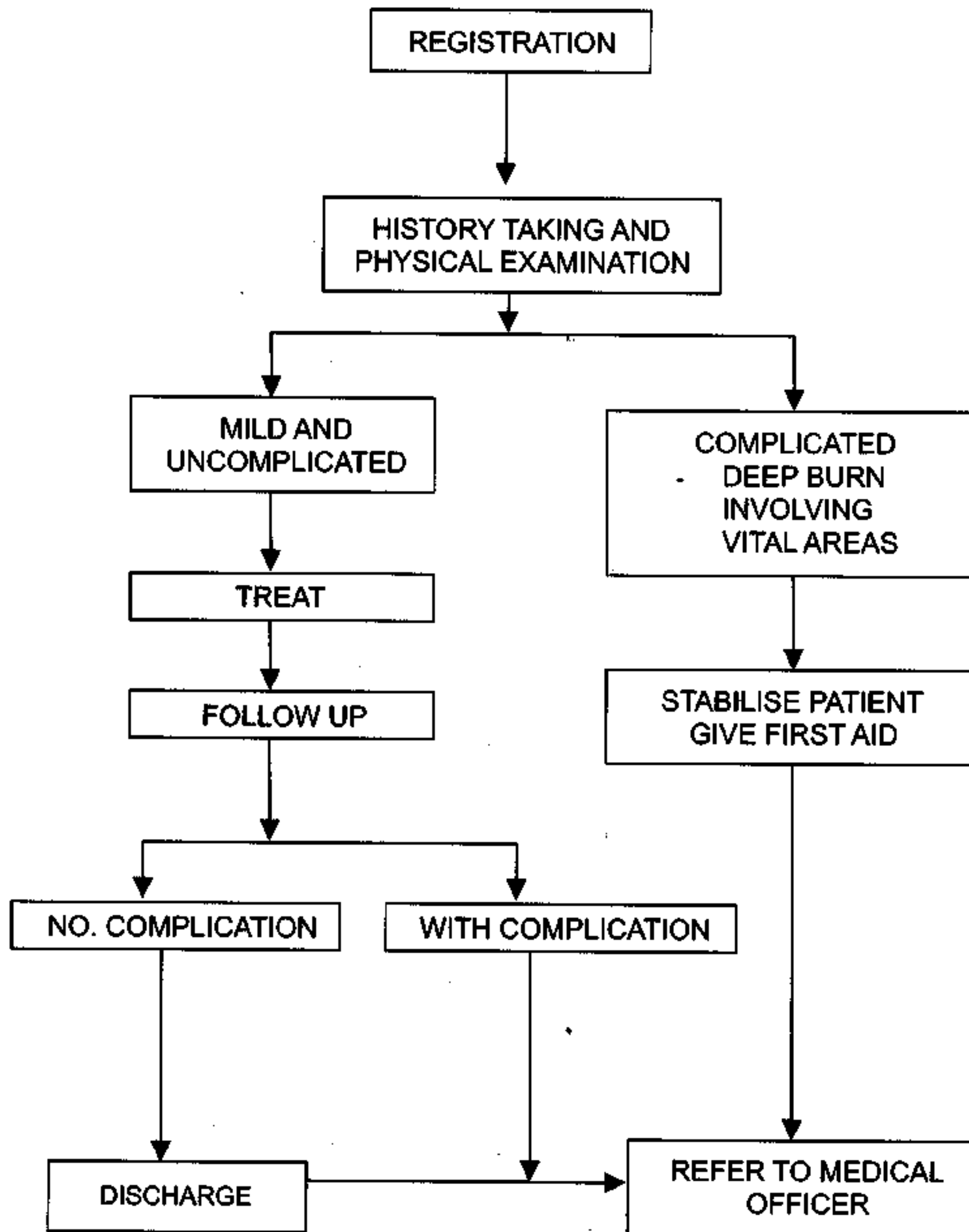
MANAGEMENT OF BRONCIAL ASTHMA

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT/ DRUGS
5.	**Management of Bronchial Asthma**	**1. Bio-data** • Age • Sex • Occupation **2. History** • Onset of symptoms • Breathlessness • Cough • Tightness of chest • Wheezing • Frequency • Nocturnal symptoms • Allergies/ atopy • Use of medications oral/inhaler	**Registration** —Asthma Registry **Assessment of patient** • <u>General condition</u> - Cyanosis - Tachypnoeic - Flaring of alae nasi - Inter/subcostal recession - Suprasternal recession - hydration • <u>Vital signs</u> - B/P / Pulse / Resp. rate / PEFR - Ht, Wt. • <u>Physical Examination</u> - Air entry - Ronchi - Crepts - Silent chest	• All asthma patients should be registered, history taken, physically examined and findings recorded	R7 R8 R9 R10 R11 R12 R13 R14 R15 R16	**Equipment** - Asthma Registry Book - BP Set - Stethoscope - Peak Flow meter/mouth piece (adult and child) - PEFR charts - Nebuliser set - Oxygen set - Drip sets **Drugs** - Emergency drugs - Nebuliser solutions - Injections Hydrocortisone Terbutaline Adrenaline

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT/ DRUGS
		• Smoking? • Exercise induce Occupational / environmental related **3. Past history** – History of admission e.g. medical ward / ICU – History of Co-morbid (HPT, DM, IHD, Fits, etc) Other drugs e.g. NSAIDs, Beta-blockers	**Assess Severity** • <u>Mild & Moderate</u> – Nebulise patient (if indicated) • <u>Severe</u> – Reassurance – Prop up patient – Give 100% Oxygen – Nebulize the patient according to the appropriate dose – Establish I/V line – Administer steroids (i/v) – Refer MO **Criteria for referral to MO** • Children < 3 years old • Children 4 — 7 years if no improvement after nebuliser • Severe Asthma patient • Uncontrolled Asthma patient • If in doubt	• Nebulise patient • Reassurance Prop up pt. Give Oxygen. Nebulize according to appropriate dose. Establish I/V line. Administer steroids (i/v) Refer to MO • All Asthma patients fulfilling the criteria should be referred		- MDI Steroids Bronchodilators

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT/ DRUGS
		4. Family History of Asthma / Atopy	**Health Education** • Educate/counseling on inhaler technique, devices, medication Asthma and its complications Education to family/community • **Self-care** Avoidance of trigger factors and cigarettes smoke Monitor own PEFR Asthmatic diary	• For newly diagnosed patients and also on subsequent visits if possible.		

6. FLOW CHART FOR MANAGEMENT OF BURNS



MANAGEMENT OF BURNS

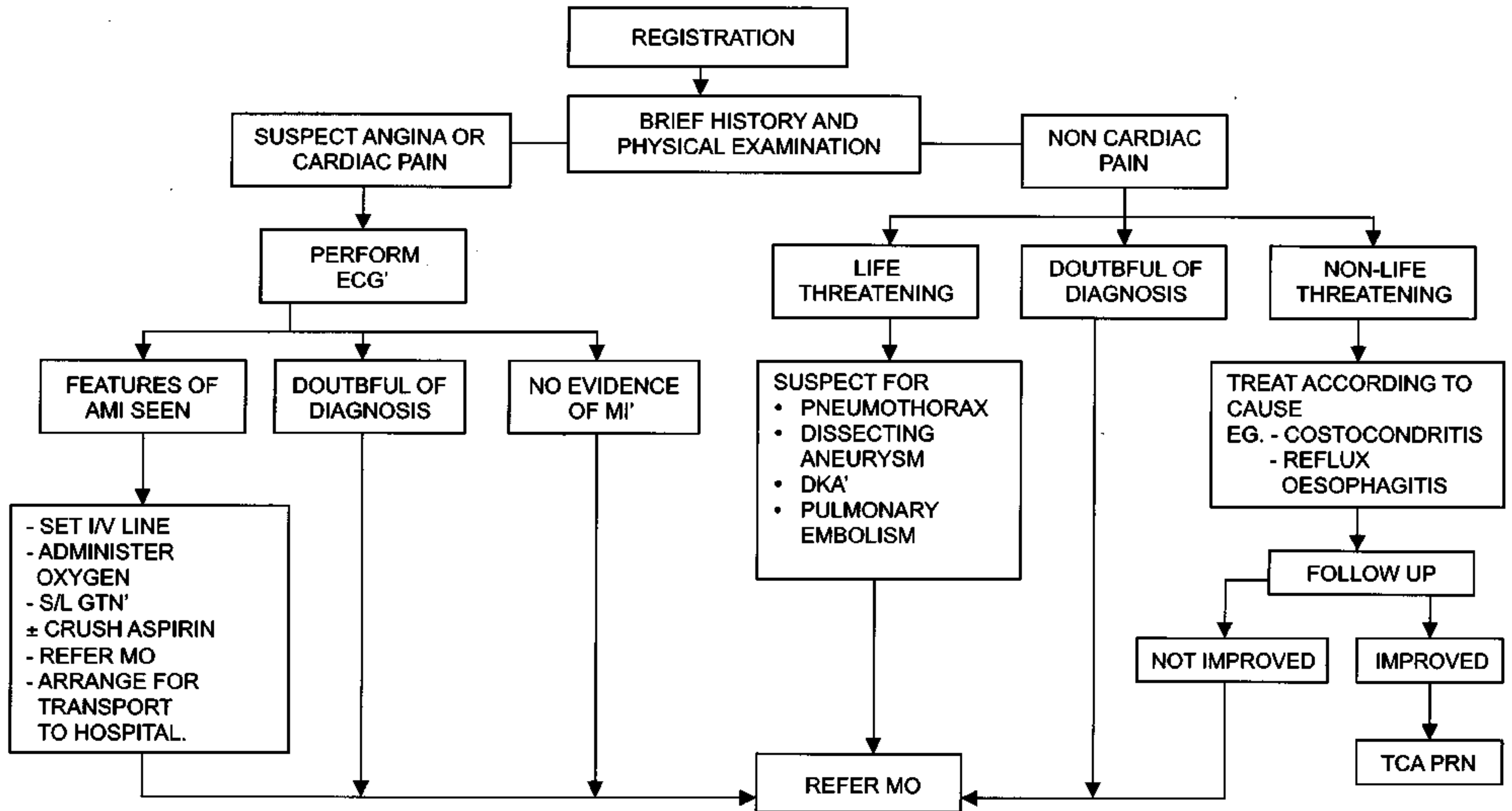
Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
6.	**Management of Burns**	**1. Bio-data** ▪ Name ▪ I/C No ▪ Age ▪ Sex / Race **2. History** ▪ Time ▪ Extend of burns ▪ Cause and nature of burns ▪ Associated symptom ▪ Fever **3. Medical History** ▪ Diabetes Mellitus ▪ Drug History	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition - Blood Pressure - Pulse Rate - Respiration Rate. - Level of consciousness - Is the patient in shock distressed? - Hydration Status? • Assess severity and extend of burn (Refer Rules of 9 on body surface area)	▪ All cases should be registered and history taken All cases should be examined and G/C and severity of burns assessed	R5 R19 R20 R24	**Equipments** - B/p set - Stethoscope - I/V set - Airways - Dextrose saline - Hartmans Sol. - Dressing set - Dressings **Drugs** - Analgesics - CSSD - Op-sites

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			4. Principles of management ▪ Ascertain level of consciousness and treat according to severity • **First Aid** ▪ <u>small burns</u> immerse in tap water for 20 min. ▪ <u>Chemical burns</u> literally irrigate with water ▪ <u>superficial burns</u> <9% total surface area clean burn apply siver sulfadiazine cream 2mm thick • **For Critical Cases** - maintain airway and provide artificial respiration if indicated	• <u>Small burns</u> Immerse in tap water for 20 min. • <u>Chemical burns</u> literally irrigate with water • <u>Superficial burns</u> <9% total surface area - clean burn & apply siver sulfadiazine cream 2mm thick		

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			- Half hourly Observation: - Respiration - Pulse - Blood Pressure - Level of consciousness - Set intravenous drip - Dextrose saline - Give appropriate treatment and care of the affected area	• Maintain airway and provide artificial respiration if indicated - Half hourly observation - Respiration - Pulse - Blood Pressure - Level of consciousness - Set intravenous Dextrose saline Give appropriate treatment and care of the affected area		

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			5. Criteria for referral - Burns with >10% surface area involved especially in children - All deep burns - Burns of difficult or vital areas e.g. Face, Hands, feet, - Genetalia, perineum, major joints. - Burns with potential problems e.g. electrical, chemical and circumferential burns	▪ All cases fulfilling criteria should be referred		
			6. Health Education - Injury prevention - First Aid treatment - Care of the wound	All patients should be given Health Education		

7. FLOW CHART ON MANAGEMENT OF CHEST PAIN



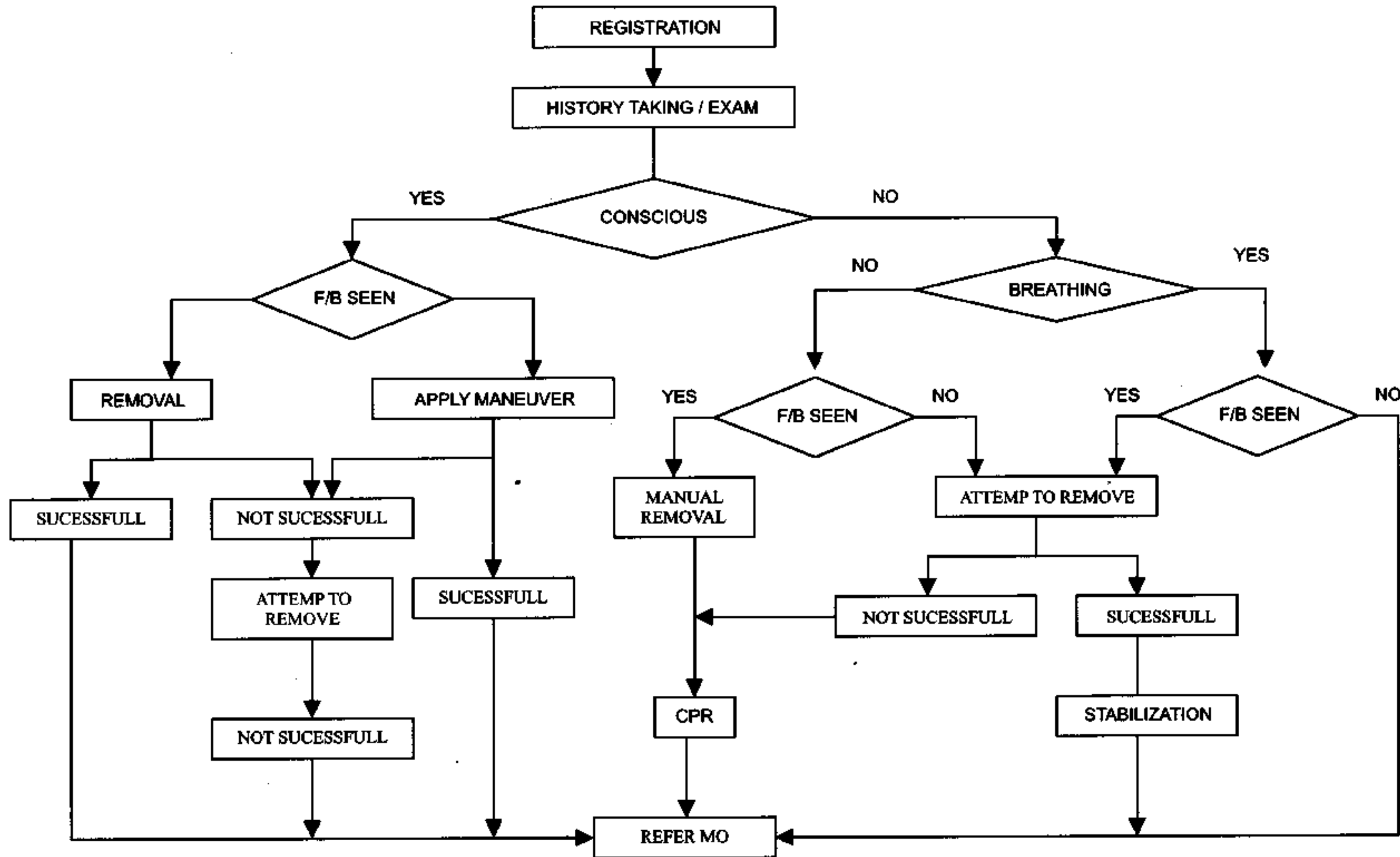
MANAGEMENT OF CHEST PAIN

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
7.	**Management of Chest Pain**	**1. Bio-data** • Age • Gender • Race • Occupation • Marital status **2. History** **2.1 Present Chest Pain** • On set • Severity - acute/chronic • Character • Nature (Localised or Radiating) **2.2 Associated Symptoms** • Shortness of breath • Sweating	**1. Registration** • When patient is stable / by the relative • Put patient to a comfortable position • Reassurance **2. History Taking** • For all cases, detailed history shall be taken when patient is stable or from relative **3. Physical Examination** • General Assessment - Level of Consciousness - Colour (cyanosis) • Check for Vital Sign - Pulse (rate and pattern) - Blood Pressure - Respiration (rate and pattern)	▪ All patients seen should be registered and history taken ▪ All patients seen should be examined immediately following the given standards	R25 R26 R27 R28 R29 R30	**Equipment** - BP Set - Stethoscope - ECG machine - Thermometer - IV sets - Portable defribilator - Disposable protoscope - Suction pump - Endotracheal tube - Laryngoscope - Glucometer - Emergency trolley **Drugs** - Oxygen (PRN) - Antacids (MMT, Gelusil) - ORS

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		▪ Cold & clamy • Syncopal Attack • Vomiting • Hematemesis • Palpitation • Tachycardia **2.3 Past Medical History** • Admission • Heart Disease • Hypertension • Diabetes • Deep Vain Thrombosis • Hyperlipidae-mia **2.4 Past Surgical History** • Peptic Ulcer • Endoscopic Examination • Recent Surgery	• Systemic Examination - Chest — resonance - Heart - Abdomen — tenderness - Lower Limb — look for deep vein thrombosis if suspected **4. Investigations.** - ECG - CXR (if increased resonance chest or suspected Perforated Peptic Ulcer) - RBS - SGPT & SGOT - PR Examination **5. Principles of management** • If suspected of cardiac origin - Reassure patient - Set IV line - Administer oxygen - Sublingual GTN - ± Crush Aspirin - Refer to MO			- Injection Hyoscine Bromide - Injection Maxolon - DDA — inj. Morphine - Tab.GTN

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		2.5. Social History • Smoking • Alcohol • Drugs **2.6 Recent History of Delivery (for females)** **2.7 Family History of** • Hypertension • Diabetes • Hyperlipidae mia • Heart Disease particularly AMI' • Sudden Death	• If non-cardiac of origin and life threatening (suspect the following: - Pneumothorax, Dissecting Aneurism, Diabetic Keto-acidosis, Pulmonary Embolism) - Patient to be stabilised (by securing IV line and administer oxygen) - Refer to MO • If non life threatening (e.g. Costocondritis, Reflux Oesophagitis) - Treat according to cause - Follow up patient and - reassess - Refer to MO if the condition does not improve **6. Criteria for referral** • All suspected angina of cardiac in origin • All suspected life-threatening non-cardiac in origin • All doubtful cases • Non-cardiac and non-life threatening with no improvement on follow up	▪ Refer all cases as indicated		

8. FLOW CHART - MANAGEMENT OF CHOKING

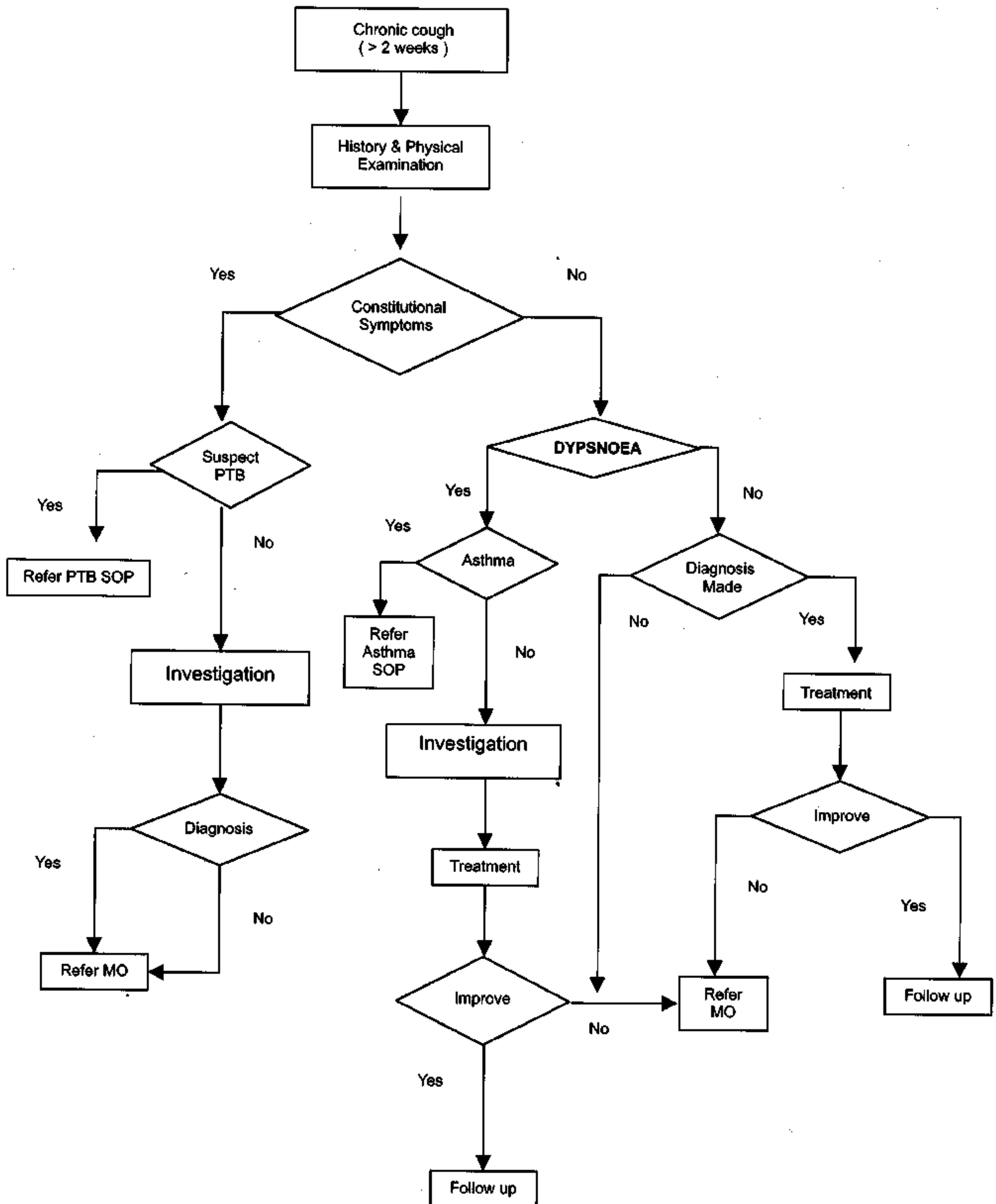


MANAGEMENT OF CHOKING

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
8.	**Management of Choking**	**1. Bio-data** • Name • Age • Race • Marital status • Occupation **2. Present History** ▪ Time of occurrence - How - Material/object suspected **3. Associated Symptoms** • LOC • Cyanosis • Seizure • SOB	**1. Registration** **2. History Taking** **3. Assessment of patient** • General assessment o Level of consciousness o Cyanosis o Breathing pattern • Vital signs o Temperature o Blood pressure (if possible) o Pulse rate o Respiration rate • Physical Examination: o Pupils PERL' o Lungs for air entry • Other systems if indicated	• All patients seen should be registered and history taken • Every patient seen should be examined and assessed immediately	R24 R32 R33	**Equipment** - BP Set - Stethoscope - Thermometer - I/V Infusion set - Ambu bag - Oxygen and related equipment - Dextrostix - Airways - Suction equipment **Drugs** - Dextrose Sln.

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		4. Medical/Surgical history • CVA • Psychiatric illness • HPT • COAD **5. Family history**	**4. Principles of management** • Unconscious patient • Removed foreign body if seen • If not seen attempt maneuver • If not breathing do CPR, at the same time call for help/refer MO • If breathing and the maneuver is successful put patient on left lateral position, give oxygen 5i/min via mask or nasal - Refer MO. • If unsuccessful maneuver reattempt & call for help • If patient conscious, remove foreign body if seen • If not seen, attempt maneuver. • If successful in removing foreign body — refer to MO/ discharge if patient well	• All patients should be managed accordingly		
			5. Criteria for referral • All unconscious patients • All conscious patients but unable to remove foreign body • All children • When in doubt	• All patients to be referred as indicated		

9. FLOW CHART - MANAGEMENT OF CHRONIC COUGH

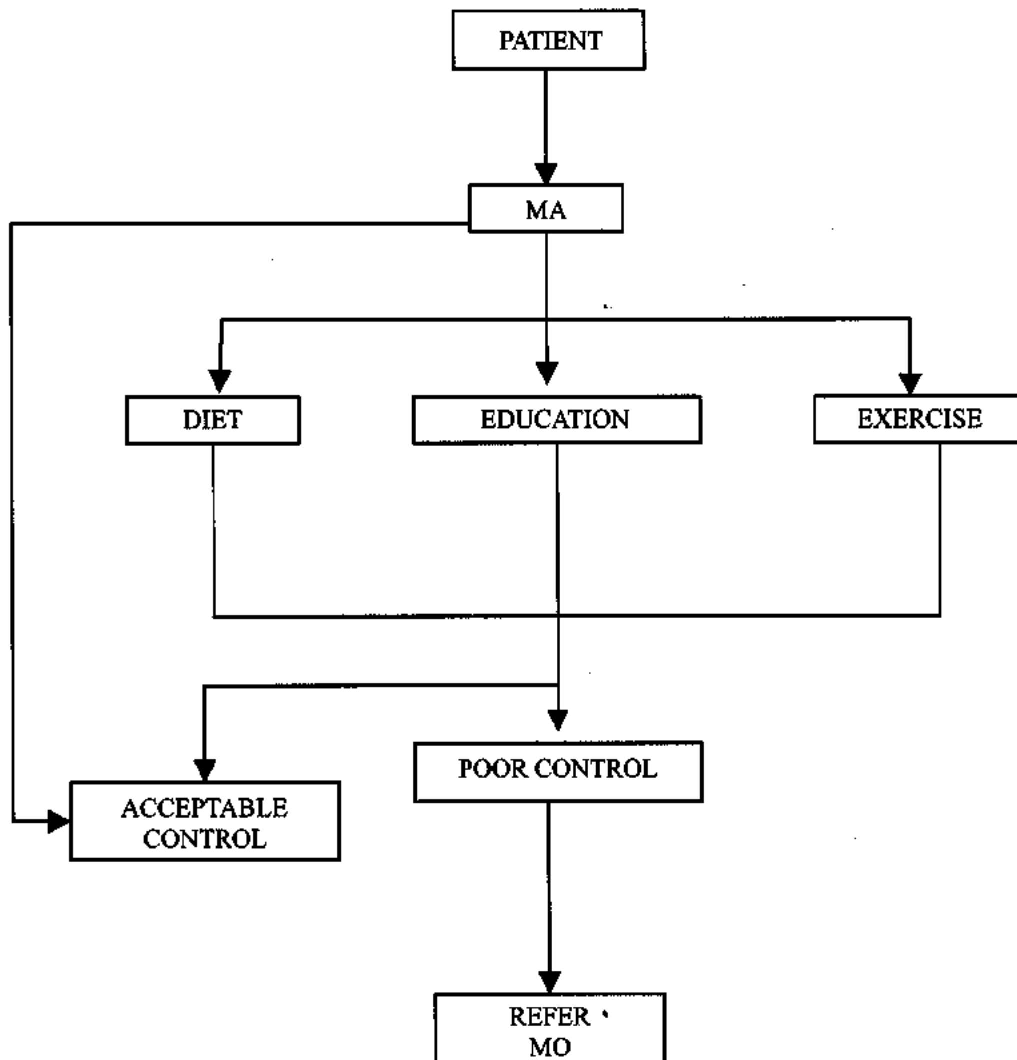


MANAGEMENT OF CHRONIC COUGH

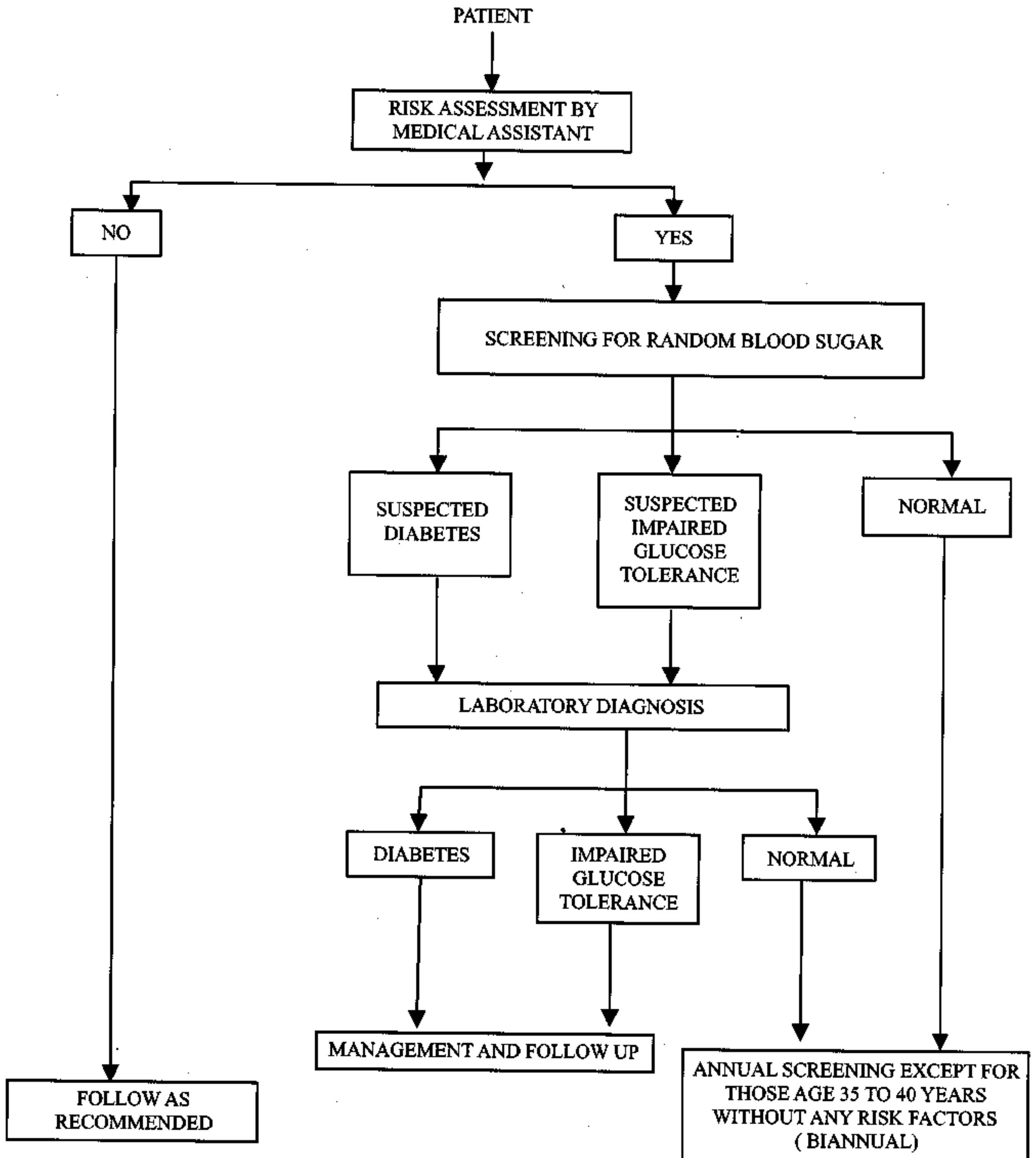
No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
9.	**Management of Chronic Cough**	**1. Bio-data** • Age • Sex • Marital status • Occupation- exposure to asbestosis **2. Present History** • Duration • Severity • Character **3. Associated Symptoms** • Fever • Night sweat • Loss of appetite • Loss of weight • Productive sputum. • Haemoptysis • Wheezing • Shortness of breath	**1) Registration** **2) History Taking** **3) Physical Examination** • General Condition- build, Cachexic • In distress; inter costal/sub costal/supra sternal Recession, using of accessory muscle • Pallor, cyanosis, clubbing, ankle oedema • BP, PR, RR,Temp . • Peak Flow Meter • Lungs-crepitations, ronchi, air entry	All patients with chronic cough should be registered and the history taken Every patient should be examined as indicated	R7 R8 R9 R10 R12 R14 R16 R31	**Equipment** BP Set Stethoscope Thermometer Lab eqpts. Peak Flow Meter Nebuliser **Drugs** Cough Mixtures Antibiotics Analgesics Anti pyretics Bronchodilators via Inhalers/tablets

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		• Reduced effort tolerence • Chest pain • Hoarseness of voice • Any association with posture **4. Past Medical / Surgical History** • Pulmonary TB • Diabetic • Congestive Heart Failure • Asthmatic • Allergy **5. Social history** • Smoking • Drug abuse • Housing condition • Contact with PTB patient **6. Family History** • Asthma • PTB • Cancer Lung	**4. Investigations** • Hb TWDC, ESR • Sputum for AFB • Sputum for C&S • Chest X-Ray • Dextrostix (if Diabetis suspected) **5. Principles of management** • Symptomatic treatment, eg. Antipyretics for fever, cough mixture for symptomatic cough – For PTB (refer to SOP for PTB) – For asthma **6. Criteria for referral** • All children < 3 years • All emergency cases • If unsure of diagnosis • All patients with constitutional symptoms	To do for all patients as indicated • If Diabetis suspected All patients should be managed as indicated • refer to SOP for PTB • refer to SOP for asthma Refer all cases as per criteria		

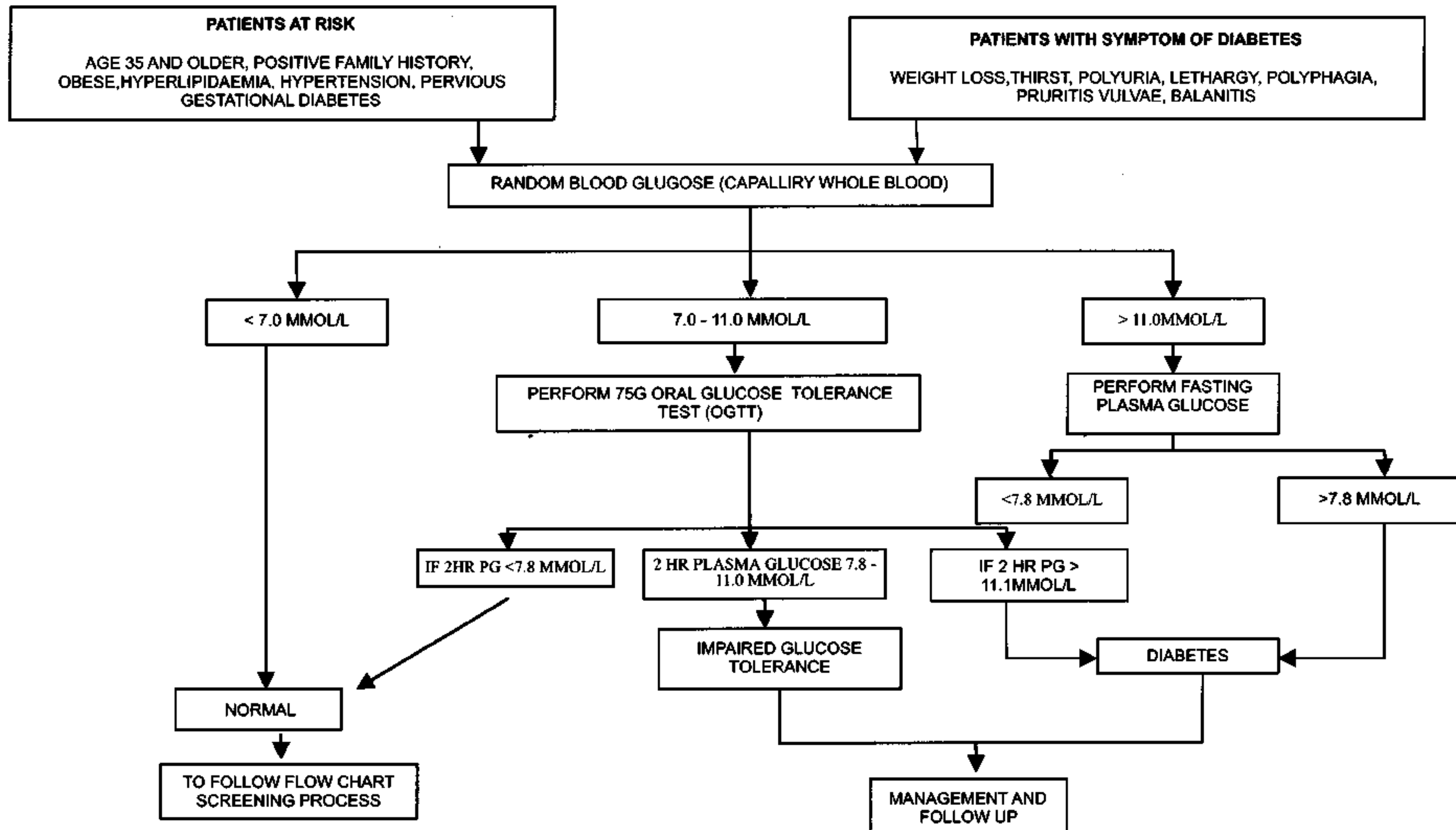
10. FLOW CHART - MANAGEMENT PLAN FOR TYPE 2 DIABETES (NIDDM) AND IGT



SCREENING PROCESS FOR D.M AT PRIMARY CARE LEVEL



PROCEDURE FOR SCREENING AND ASSESSMENT OF D.M AND IGTE BY MEDICAL ASSISTANT



MANAGEMENT OF DIABETES MELLITUS.

NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
10.	**Management of Diabetes Mellitus**		**1. Measure the following parameters:** • body weight • blood pressure • BMI Monitoring **2. Physical Examination:** • eye-visual acuity • cardiovascular-ECG • nervous system • feet Examination **3. Laboratory investigation.** • FBS/RBS/2HPP • urine albumin	▪ On every visit for all patients ▪ Staggered /appt. basis. ▪ visual acuity first visit & 6/12 once. ▪ Staggered /appt. basis. • Urine albumin 1st visit & every visit if +ve 3 monthly if -ve.	R37 R38 R39 R40 R41 R42 R43	• BP set • Glucometer • Glucosticks • Uristicks • Penlet with needle • Weighing Scale with Height • Stethoscope • Calculator • Snellens chart • Diagnostic set • Monofilament • HbA1c Machine • microalbuminuria (eg.DCA 2000) • Computer (software/ hardware for tele medicine/ printer / scanner/ digital camera / video camera

NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
			• HbA1c • Microalbuminuria • FLPSr,Buse/creatinine	• Blood biochemistry once a year. • Microalbuminuria for all cases of urine albumin dipstick –ve. • HbA1c for new cases and every 3/12.		• ECG machine • Medication (OHA- sulphonylureas / biguanides / insulin/ iv glucose / ACE inhibitors)
			4. Case management. **4.1. Diet** **A. Food without restriction.** • All fluids without sugar eg.clear soup/ tea/coffee (without sugar) • Flavouring & condiments. • Vegetables but consume starcy • vegetables moderately eg .peas /corn /carrot /pumkin / potato etc.	Should start dietry management for all DM patients.		

NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
			B. Food to be taken in moderation: • **Complex carbohydrates** eg.high in soluble dietery fibre (vegetables & wholemeal products) • **Protein foods** eg.meat/chicken/eggs/fish/ egumes/cheese (try to include one serving at each meal) • **Fatty food** eg.butter/cream/ cooking fats.(these foods contain little carbohydrate but are high in energy content — too much may lead to increase in body weight). **C. Foods to avoid** ▪ **Refined carbohydrates** eg.(sugary foods) sugar/candy/ condensed milk/honey etc	▪ Diet counseling should be carried out for all DM patients.		

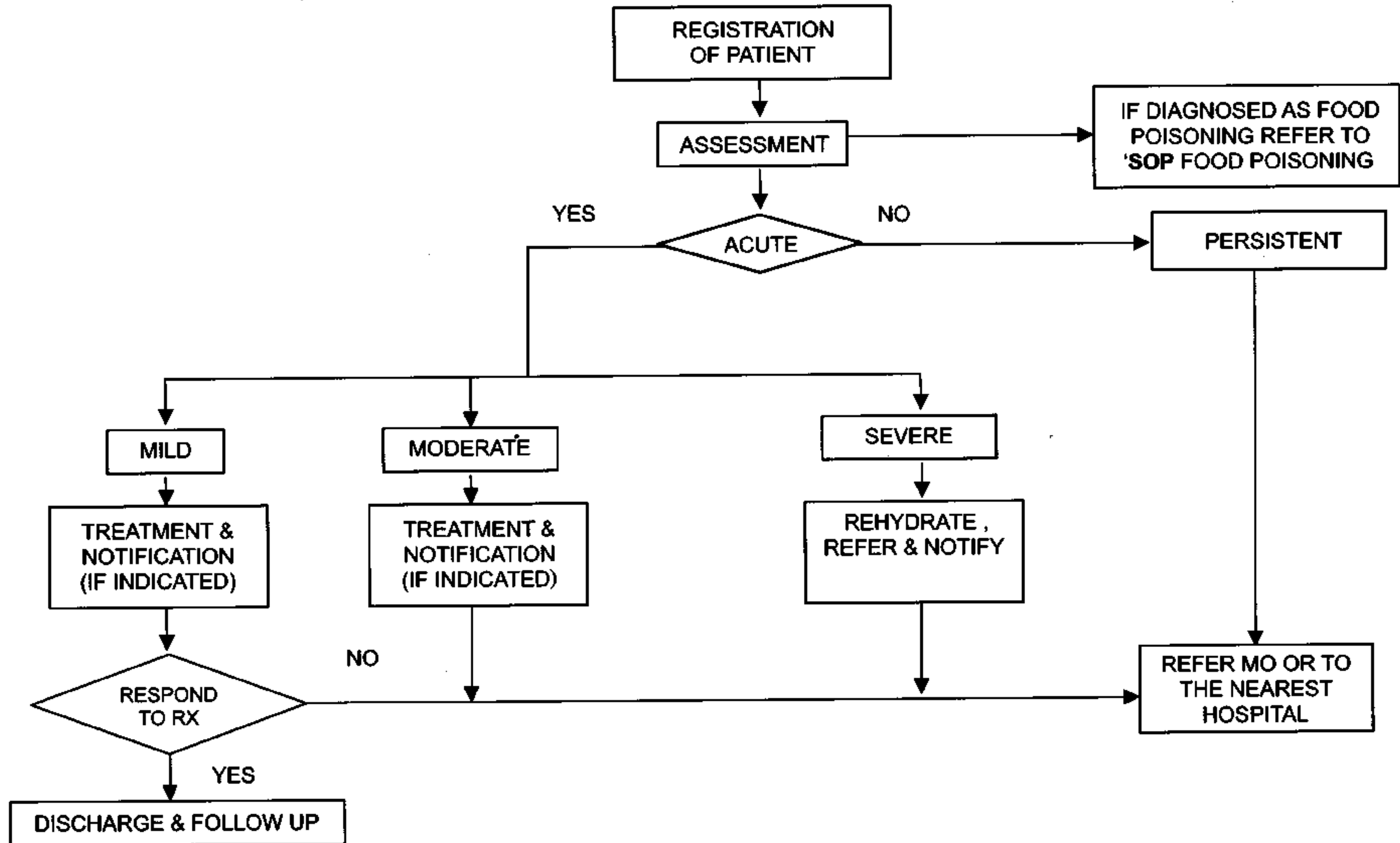
NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
			• **Alcohol** — no nuritional benefits but adds empty calories (may lead to Hypoglycaemia) • **Artificial sweeteners & diabetic products not encouraged** **4.2.Exercise** • Improves & controls blood glucose,lipids level & blood pressure • Helps control body weight • Improves cardiovascular fitness • Increases insulin sensitivity • Feeling of wellness **A. How to exercise.** Warm up 5mins, exercise proper 20mins & cool down 5 mins.	▪ The benefits of exercise should be stressed to all DM patients		

NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
			B. Types of exercises. Aerobic (active exercises) Any other exercise recommended for healthy living. **C. Medical advice before starting exercises,** - individualize - control of blood pressure - blood glucose levels **4.3 Medication** (to be started only after 2-3/12 if non-pharmacological treatment fails). **A.** To prescribe medication initiated by Medical Officer /Specialist. **B**. Advise on effects and side effects of drugs used • biguanides • sulphonylureas • insulin	For at least 30 mins. 3 times a week (preferably everyday) ▪ Advise all DM patients on medication.		

NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
			4.4. Self —care. **A. Monitoring glucose levels** • To protect from hypoglycemia **B. How often to do blood test** 1. Before each meal (4-7mmol/l) 2. Before bedtime (<7mmol/l) 3. How often to monitor. • 1- 2days /week (for those well controlled patients.) • Daily check for poorly controlled patients until desirable targets achieved.	Every patient should be taught self care" • mandatory if on insulin or in pregnancy • desirable if on OHA		

NO.	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/DRUGS
			4.5. BMI. - Body weight monitoring **4.6. Personal hygiene.** - practise good personal hygiene **5. Warning signs** - able to recognize signs & symptoms of hypoglycemia and diabetic keto- acidosis			

11. FLOW CHART - MANAGEMENT OF DIARRHOEA



MANAGEMENT OF DIARRHOEA

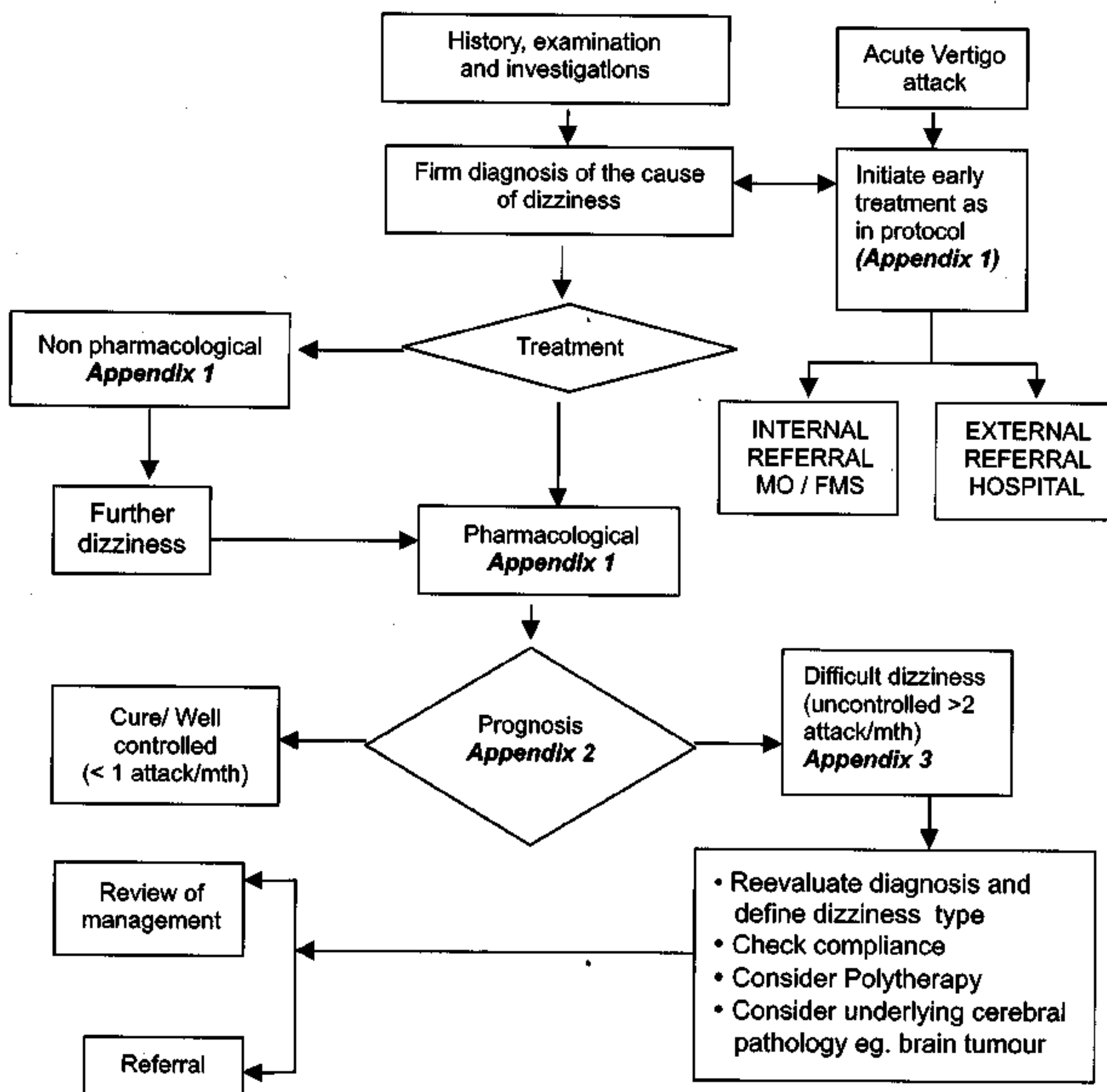
No.	Process	Basic Data	Standard Operating Procedure	Standard	Reference	Equipment / Drugs
11.	**Management of Diarrhoea.**	1. **Biodata.** 2. **History.** a) Date and Onset. b) Duration. c) Consistency of stools - whether watery, mucous blood stained, loose , soft d) - Loss of weight 3. **Associated Symptoms** • Vomiting — duration. • Fever • Haemetemesis • Abdominal pains / cramps • Urine output- good/poor? (scanty / dark coloured)	1. **Registration** 2. **History Taking** 3. **Physical Examination** Assessment of patient. a) **General Condition** ▪ Consciousness ▪ Hydration status - Sunken eyes - Skin turgor - Dry lip/ tongue ▪ Jaundice ▪ Pallor ▪ Temperature. ▪ Blood Pressure and Pulse. ▪ Respiration.	▪ All patients seen should be registered, the history taken & recorded ▪ All patients should be examined physically	R34 R35 R36 1. Internet — • http://content.health.msn.com/content/dmk • http://www.cdc.gov/ncidod/dvrd/gastro.htm	**Equipment:** 1. B / P Set 2. Stethoscope 3. Thermometer 4. Drip stand. 5. Weighing scale 6. Bed Pan 7. Vomit Bowl 8. Rectal Swab Peptone bottles 9. **Lab/Notification Forms.** **Solution:** 1. I / V infusion sets 2. I / V Fluids e.g. 5%Dextrose-Saline, Haemacel, Hartmans. 3. Oral Rehydration Salts

No.	Process	Basic Data	Standard Operating Procedure	Standard	Reference	Equipment / Drugs
		4. Other History : • Diabetes Mellitus • Hypertension • Asthma • Recent intake of other substances? (milk/drugs/ unfamiliar foods) • Previous admissions. • Any other family members having diarrhoea?	**b) Abdominal** - Hard / soft, - liver, spleen - ? palpable - bowel sounds - Per rectum — for blood. **c) Other systems (if indicated)**			
		5. History of Contact: • Healthy carrier • Communicable diseases (PTB/Typhoid/Cholera / Hepatitis • .Recent travels (endemic area) • Family history — TB/HIV/ Typhoid/Hepatitis • Severe anxiety / stress.	**4. Investigation.** • Stool for FEME • Full Blood Count • RBS • Rectal swabs for Vibro Cholera • Stool culture and sensitivity	• For moderate & severe diarrhoea • If fever +, suspected Typhoid/Cholera) • If indicated • If indicated • If indicated		

No.	Process	Basic Data	Standard Operating Procedure	Standard	Reference	Equipment / Drugs
			5. Treatment.			
			▪ **Mild diarrhoea** (<4 times per day) **- Treatment Plan A.**	As per WHO Manual -Programme For Control of Diarrhoeal Disease)		
			• **Moderate diarrhoea** (4 to 10 times /day) **- Treatment Plan B**	As per WHO Manual Manual		
			• **Severe diarrhoea** (>10 times per day with associated dehydration) **-Treatment Plan C.**	As per WHO Manual Manual		
			• **Persistent diarrhoea** (Lasts >2 weeks). **- Treatment Plan C.**	As per WHO Manual Manual		

No.	Process	Basic Data	Standard Operating Procedure	Standard	Reference	Equipment / Drugs
			6. Criteria for referral • Children < 3 years old • Severe diarrhoea • Chronic diarrhoea • In doubt of diagnosis • Suspected of waterborne disease	• Refer according to criteria & CDC Acts		
			7. Notification (Health 71)	• All cases of diarrhoea to be notified as required		
			8. Health Education • Treatment Plan • Warning Sign (No improvement, poor intake, etc) • Food Hygiene	• All patients should be given Health Education		

12. FLOW CHART - MANAGEMENT OF DIZZINESS



*Note **:*

Decision to start treatment should take into account the number of attacks, any precipitating factor, possible cause and severity of dizziness.

Long term treatment may not be indicated if only 2 episodes of dizziness have occurred with a substantial interval (3-6 months), if dizziness are or if the patient does not wish to receive long term drug therapy

MANAGEMENT OF DIZZINESS

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
12.	**Management of Dizziness**	**1. Bio-data** • Name, Age,Sex • NRIC • Address • Marital Status • Occupation **2. History** a) Presenting complaints (is it vertigo or Pseudo Vertigo?) b) Symptom pattern: - Paroxysmal or contunuos - Effect of position and change of posture c) Time of starting and duration aggravating & relieving factors	**1. Registration & History Taking** **2. Comfort of patient** - Put patient to a comfortable position **3. Physical Examination** • Conscious state • General search for anaemia, polycynthemia & alcoholic • Vital signs & temperature • Ear examination for evidence of middle & inner ear pathology • Auroscopic exam: wax?, drum? • Hearing test • Weber and Rinnes test • Eye examination for visual acquity • Test for nystagmus	All cases should be registered and the history taken All clients with acute attack of dizziness All clients presenting with dizziness. The special examinations should be done with supervision of the FMS/MO	R44 R45	**Equipment** - BP Set - Stethoscope - Thermometer - Diagnostic set - ECG machine - Torchlight - Syringe - Cold and warm water - Snellens chart - Tuning fork - Tendon hammer - Auto caustic emission machine - Teleconsultancy equipments **Radiological facilities** - CXR and Cervical X-ray

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		d) Frequency of previous attack (episodes per week/ month) e) Precipitating factors - Febrile, cold, head injury and head movement f) Associated factor Any aural symptoms? - Tinnitus, ear d/c , ear Ache & hearing loss Any visual symptoms? Any neurological symptoms ? - Autonomic reflex such as sweating, pale, nausea & vomiting g) Past and current drugs used (name/tab./capsules & colour) - Alcohol - Marijuana - Hypotensive drugs - Psychotro[pics drugs etc -	• Cardiovascular system Evidence of artherosclerosis • BP: ?postural Cardiac Arrythmias - Cranial nerves 2nd, 3rd, 4th,6th and 7th corneal response for 5th auditory nerve 8th - Cerebellum or its connections Gait/Coordination Reflexes Roombergs test Finger, nose test? Past pointing • Evidence of meningism & the neck for cervical spine mobility • Motor & sensory examination • External injurie **4. Special test for dizziness** a) Ask the patient to perform any maneuver that provokes symptom	All clients presenting with dizziness. The special examinations should be done with supervision of the FMS/MO		**Treatment & Medication** Refer appendix 1

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		h) Past admission of dizziness I) Concurrent illness & treatment j) Social background (including education level and caregivers) k) pregnancy l) Psychiatric screening: 4 item screen. - Somatic symptoms: Pain anywhere? Energy level? Sleep? Appetite? - Anhedonia." What do you like to do for fun ? When did you do it last? - Stress:" Have there been any recent changes at work & home? - Mood:" Feeling down lately, or blue?" Nervous or not?	b) Carry out Hallpike maneuver (head positional testing) to induce vomiting and nystagmus c) Taking blood pressure measurement in three positions d) Perform forced hyperventilation (20 to 25 breaths/minute for 2 minutes) e) Carry out palpation of carotid arteries/carotid sinus (with care)	All clients presenting with dizziness. The special examinations should be done with supervision of the FMS/MO		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
			5. Investigations (if available)			
			• Blood tests. • Hb, Blood Sugar, renal profile and arterial blood gas if available • ECG	For all cases of dizziness		
			• Oto Acaustic Emision • Calorie test • Previous CT-scan brain • Previous MRI brain	For specifc case as requested by the FMS		
			6. Images information required			
			• CXR (?bronchial carcinoma) • Cervical spine X ray	All cases of dizziness		
			• CT scan • MRI (the choice to locate acoustic neroma & other tumour)	For specifc case as requested by the FMS		
			7. Management of dizziness as described in work flow and Appendix 1			

APPENDIX 1:

MANAGEMENT OF DIZZINESS

1a) Referral/ hospitalization

Indications:

a) Identification of any positive neurologic signs and symptoms or the suspicious of an underlying cardiac disorder
b) Acute labyrinthitis accompanied by a fever requires urgent referral and treatment as well
c) When diagnosis remains uncertain or is thought to be clear yet there is suboptimal or no response to standard treatment

1b) General scheme of treatment

SCHEME OF TREATMENT		
Paroxysmal vertigo	Fewer than 2 attacks per month	Paroxysmal therapy
	More than 2 attacks per month	Maintenance therapy
Chronic Vertigo	Serious	Maintenance therapy
	Slight	No therapy
Single attack		No therapy
Positional vertigo		Exercise therapy Adaptation exercise

Paroxysmal Therapy (for acute attack):
A vertigo attack is difficult to control. To reduce the severity of the vegetative symptoms Low dose of Motilium (60mg tds) or Diazepam (10-20mg daily) either alone or in combination with Stemetil (5mg tds

Maintenance Therapy:

	Betaserc	Cinnarizine	Flunarizine	Piracetam	Sulpiride
Dose in mg	48-96	50-225	5(10)	1200-2400	50-150
Latent period in hours	4	4	8	0.5	1
Effective period in hours	8	12	24	8	8
Side effects	Upper GIT upsets	Drowsiness, insomnia listlessness, weight gain	As for cinnarizine, also: depression, extra-pyramidal symptoms	Hyperactivity, depression, weight gain, upper GIT upsets	Galactorrhoea, dysmenorrhoea
Warnings	Bronchial asthma	Prostatic hypertrophy, glaucoma, epilepsy, CVS pathology	As for cinnarizine, also: depression	Renal insufficiency	Renal insufficiency prostatic hypertrophy, parkinsonism, epilepsy, cardiovascular pathology

Adaptation Exercise

Cawthornes Head Exercise

The following exercise are to be performed 15 minutes twice a day, increasing to 30 minutes.

Eye exercises

Look up, then down — at first slowly, then quickly (20 times)
Look from one side to the other — at first slowly, then quickly (20 times)
Focus on a finger at arms length, moving the finger one foot closer and back again (20 times)

Head exercises

Bend head forward then backward with eyes open — slowly, later quickly (20 times)
Turn head from one side to other side — slowly, then quickly (20 times)
As dizziness decreases, these exercises are performed with eyes closed.

Sitting

While sitting, shrug shoulders (20 times)
Turn shoulder right, then left (20 times)
Bend forward and pick up objects from the ground and sit up (20 times)

Standing

Change from sitting to standing and back again with eyes open (20 times). Repeat with eyes closed.
Throw a small rubber ball from hand to hand above eye level (10 times)
Throw a ball from hand to hand under one knee

Moving about

Walk across room with eyes open, then close (10 times)
Walk up and down a slope with eyes open, then closed (10 times)
Walk up and down steps with eye open, then close (10 times)
Become involved in any game requiring stooping or turning

APPENDIX 2:

PROGNOSIS

"Rule of Thirds"

a. One-third of dizziness will resolve in 2 weeks on its own
b. One-third will gradually get better over the next 12 months
c. One-third will have persistent dizziness at one-year follow up

Predictors of persistent dizziness at one-year follow up

a. Psychiatric cause or vestibular cause (except BPV or labyrinthitis)
b. Daily dizziness
c. Walking aggravates dizziness.
d. Patient was not initially worried about a serious underlying illness.

NOTES

APPENDIX 3:

DIFFICULT DIZZINESS *When the Cause is Not Obvious*

A. Physical causes first. (rule out organic cause; but work-up can be focused)

B. Follow-up often preferable to initial work-up. [2 week wait: 30% recover]

C. Concerns and Expectations ("worries" and "wants")

1. ***Concerns.*** Ask patient:
"What worries you most about this symptom?", or
"What do you think might be causing the symptom?"

If the patient demurs (e.g., "I don't know. You're the doctor!") you can respond, "Well, most people do have some worries or thoughts about what might be wrong with them."

2. ***Expectations.*** Try to discover what patient's desires/needs are:
"Was there anything you had thought might be helpful?" (also, past therapy
   - Explanation (specific cause of symptom)
   - Reassurance (not specific cause, but that prognosis not serious)
   - Medication (or occasionally other therapy, such as surgery)
   - Tests (e.g., back X-ray; head CT; etc.)
 ■ Referral (e.g., subspecialty consultation)

D. Psychosocial probing.

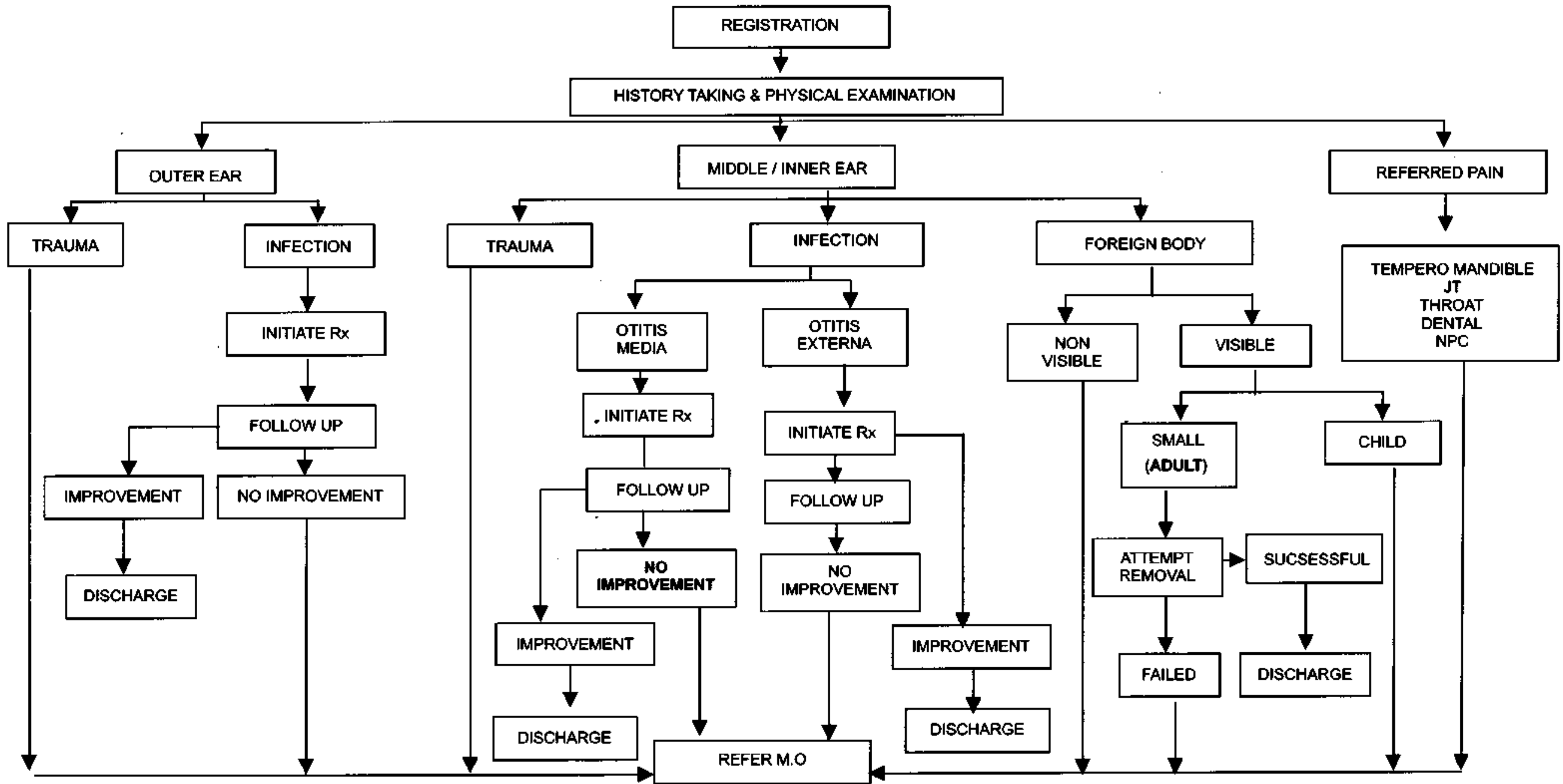
1) **Screening**: Instrument like PRIME-MD or 4-item "SLAM" screening questions
Symptoms: Especially pains; fatigue; insomnia; multiple or unexplained sx
Life Stress: "Have there been any recent changes at work? At home?
Anhedonia: "What do you like to do for fun? Last time you did it?"
Mood: "Feeling down (depressed) lately?" Nervous/worried/anxious?"

2) **Go slow.** Often defer probing emotional causes until 2nd or 3rd visit.

3) **Explain the mind-body connection**:

a) Biological basis of psychological conditions (depression; panic;...)
b) Emotional aggravation of physical disorders (angina; irritable bowel; migraine headaches; ...)
c) To angry query: "Are you saying this is all in may head?!", reply "No, the symptom is in your body, and physical sensations can be caused or aggravated by both physical and emotional factors".

13. FLOW CHART - MANAGEMENT OF EAR PAIN

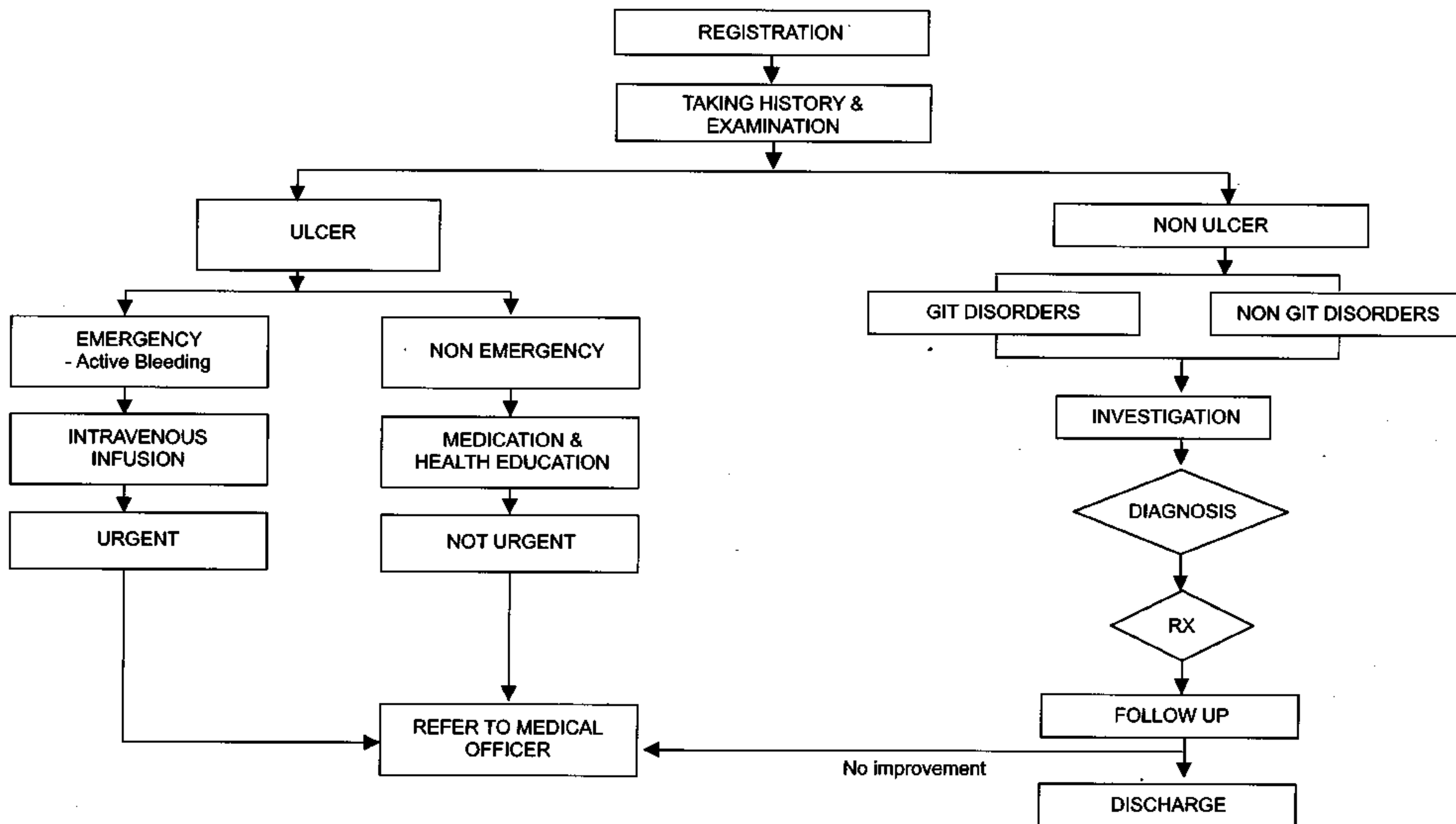


MANAGEMENT OF EAR PAIN

BIL.	PROSES	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
13.	**Management Of Ear Pain**	**1. History of pain** **2. Onset** • acute • chronic **3. Fever** **4. Discharge** **5. Injury** **6. Hearing loss**	**1. Registration** **2. History taking** **3. Physical Examination** • gen. Condition • vital sign — TEMP, B/P, P/R **4. Local / ear examination** • Tympanic membrane • External auditory canal • Pus discharge • Impacted wax	• All cases should be registered and history taken • All cases should be given Physical Examination — physical and local ear examination	R2 R47	**Equipments** - Thermometer - Torchlight - diagnostic set - BP set - Stethoscope **Drugs** • analgesic • ear drops • antibiotic - Ear syringe - Tuning fork - Crocodile Forcep

BIL.	PROSES	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			Investigation — Pus for culture and sensitivity (ear swab)	For all patients with ear discharge		
			5. Treatment • pain — analgesic • infection — antibiotic • aural toilet • attempt removal of small f/b in adult	• All cases to be treated as indicated		
			6. Health education **7. Referral** • Trauma cases • Infective case not responding to treatment • F/b not visible • Unsuccessful removal of f/b • Child with f/b Referred pain	• Refer all cases as per referral criteria		

14. FLOW CHART - MANAGEMENT OF EPIGASTRIC PAIN



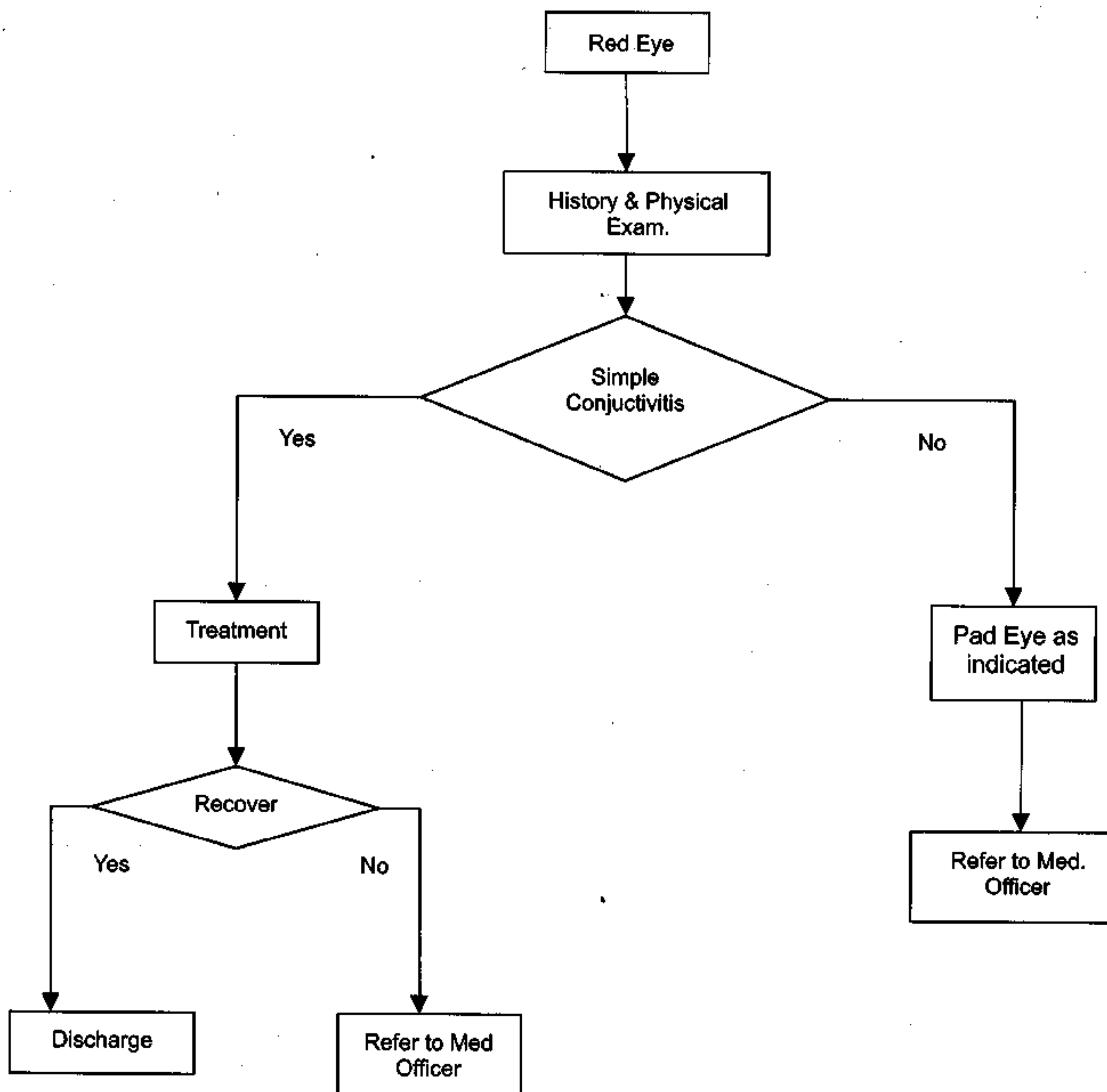
MANAGEMENT OF EPIGASTRIC PAIN

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
14.	**Management of Epigastric Pain**	**1. Bio-data** o Age o Sex o Occupation **2. Present History** - Onset - Severity - Character - Localized/ radiating - Relationship with food **3. Associated Symptoms** - Fever - Nausea / Vomiting / haematemesis - Shortness of breath /chest pain / sweating	**1. Registration** **2. History Taking** **3. Physical Examination** - General Condition eg. Jaundice, Pallor, sweating, Cachexic, in distress - BP, PR, Temp. Resp. Rate - Abdominal Examination: - Identify site of pain - Palpate for tenderness, guarding, rebound tenderness, masses. - PR —malaena stools - Systemic review : CVS	▪ All patients seen should be registered and the history taken • Every case should be examined accordingly	R45 R4 R5	**Equipments** 1. BP Set 2. Stethoscope 3. Thermometer 4. ECG machine **Drugs** 1. Antacids (MMT, Gelusil) 2. ORS 3. Injection/Tab. Hyoscine bromide 4. Tab. GTN. 5. Tab. Aspirin 6. Emergency drugs (Appendix)

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		- Abdominal distention / - epigastric pain - Diarrhoea / constipation - PR Bleed / malaenic stool - Jaundice **4. Past Medical / Surgical History** o Admission o Previous OGDS o Previous Jaundice o DM / HPT / IHD / MI **5. Smoking / Dietary / Alcohol / Drug History** o Esp. NSAIDs	**4. Investigation** • FBC • Urine FEME / Ketones / Bile salts • Stool — ova/ cyst/ occult blood • CXR • ECG • Dextrostix **5. Principles of management** • Symptomatic treatment - Antacids (eg. MMT) for uncomplicated gastritis - Inj. Hyoscine - Tab. GTN and Aspirin - Observe and review patient for 1/2 to 1 hour • If not responding to treatment, stabilize patient and refer to Medical Officer	• if infection suspected • for gas under diaphragm or ? PGU • If ? Myocardial Infarct • if DKA is suspected - if not relived by antacids after 1/2 hour - if suspected MI after doing ECG • Stabilise and refer as indicated		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		6. Family History **- DM / HPT / IHD / MI**	**6. Criteria for referral** - Haematemesis / malaenic stools - Patients in shock - Severe pain - ECG changes - Unsure of diagnosis **7. Health Education** Regarding: - Precipitating factors (eg. Smoking, diet, drug and drinking habit.)	• All cases should be referred as per criteria • Health Education should be given to all cases during their visits, if possible.		

15. FLOW CHART - MANAGEMENT OF RED EYES

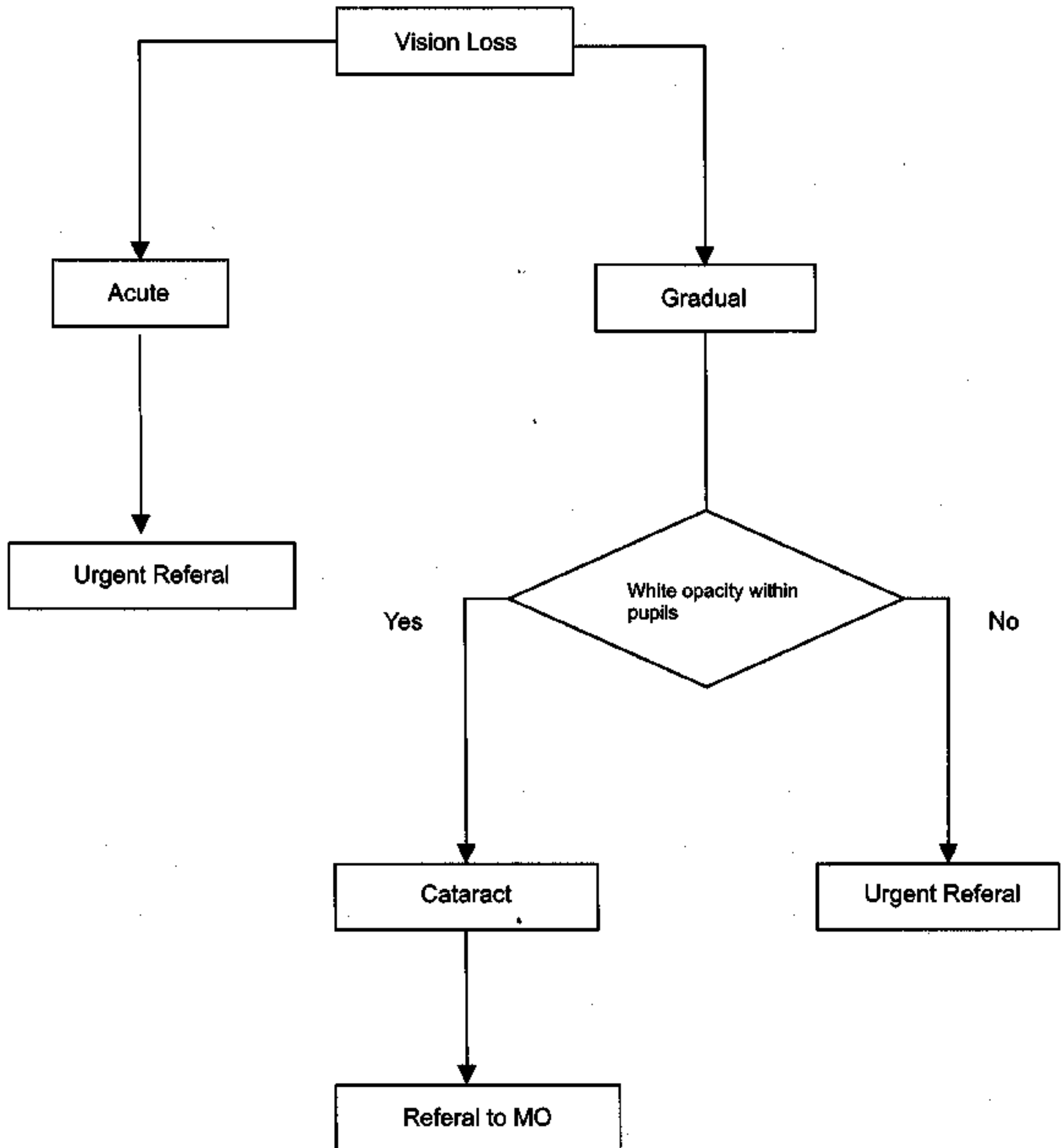


MANAGEMENT OF RED EYES

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
15.	**Management of Red Eyes**	**1. Bio-data** • Age • Sex • Occupation **2. Present History** • Duration-acute/chronic • Severity • Pain-character of pain;grittiness, discomfort • Contact with red eye patient • Contact with allergens **3. Associated Symptoms** o Fever o Vision impaired o Eye discharge-watery/purulent o Photophobia o H/o trauma	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition • BP, PR,Temp . • Local eye examination- . Conjunctiva redness • Discharges-watery/purulent • Corneal ulcer/laceration using fluorescent stain • Pupils-for size & reactivity • Visual Acuity • Intra ocular pressure — palpation/tonometer	• All patients seen should be registered and the history taken • All patients should be examined as stated	R32 R42	**Equipment** Torchlight Diagnostic Set Thermometer Fluorescent Staining Strip Eye Pad Snellens Chart Eye Irrigation Set **Drugs** Antibiotics-guttae/occ CMC Analgesics Anti pyretics

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		4. Past Medical / Surgical History o Diabetes o Allergy o Sinusitis o Seborrhea **5. Social history** • Smoking • Drug abuse **6. Family History** • glaucoma	**4. Principles of management** • Symptomatic treatment, eg. Antipyretics for fever, analgesics for pain. • Chloramphenicol Occ/Guttae for simple conjunctivitis. **5. Criteria for referral** • All children < 3 years • All emergency cases • If unsure of diagnosis • All patients with red eye which are not conjunctivitis. • All complicated conjunctivitis • All complicated foreign bodies • All trauma	• All patients should be given basic,simple treatment as indicated • All patients should be referred as per criteria		

16. FLOW CHART - MANAGEMENT OF LOSS OF SIGHT IN QUIET EYES.

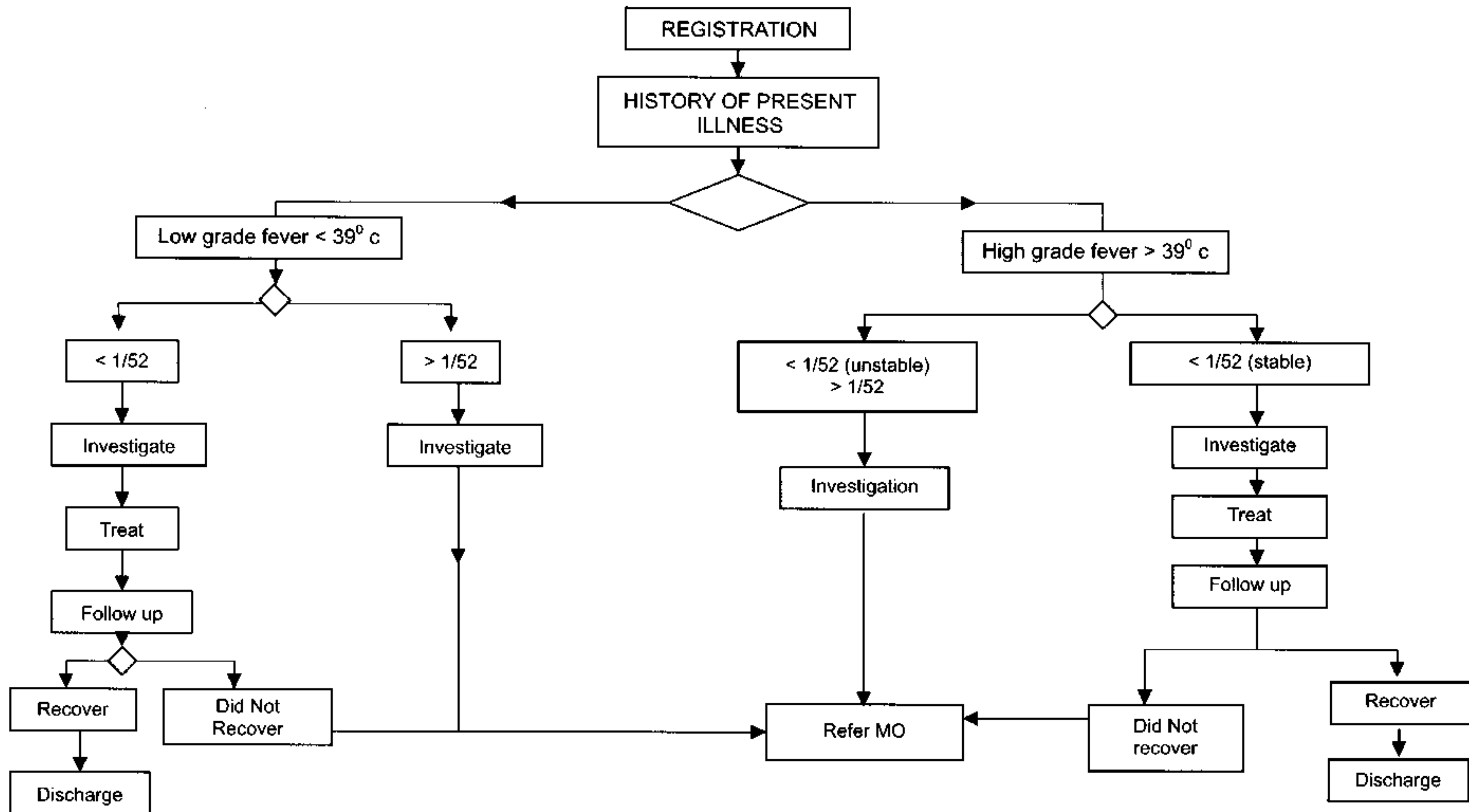


MANAGEMENT OF LOSS OF SIGHT IN QUIET EYES

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
16.	**Management Of Loss Of Sight In Quiet Eyes**	**1. Bio-data** • Age • Sex • Occupation • Race **2. Present History** o Duration o Sudden loss/ gradual loss o Painful/ discomfort o Redness **3. Associated Symptoms** • Headache • Nausea, vomiting • Eye discharge-watery/purulent • Photophobia • H/o night blindness • Loss of peripheral vision	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition • BP, PR, Temperature. • Local eye examination-Conjunctiva redness Measuring of intra ocular pressure using tonometer or by palpation (hard & tender eyeball) • Discharges-watery/purulent • Pupils-for size & reactivity-look for size — regular, irregular, dilated / small • Visual Acuity reactivity :- reactive / not to light. • Torch light - a white opacity within the pupil • Opthalmoscope — red reflex.	All patients seen should be registered and the history taken • All patients should be examined as indicated	R32 R42	**Equipment** Torchlight BP Set Diagnostic Set Tonometer Thermometer Eye Pad Snellens Chart **Drugs** Anti Hypertensives Analgesics Anti pyretics

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		• "floaters" • H/o trauma • Using high powered spectacles • Frequent changing of spectacles **4. Past Medical / Surgical History** • Diabetes • Hypertension **5. Social history** • Smoking • Drug abuse **6. Family History** • Glaucoma • Retinitis pigmentosa	**4. Investigation** • Dextrostix **5. Principles of management** • Symptomatic treatment, eg.Analgesics for pain, Antipyretics for fever • Antihypertensive for malignant hypertension- (refer SOP for hypertension) **5. Criteria for referral** • All children < 3 years • All emergency cases • If unsure of diagnosis	• If Diabetes is suspected • All patients are to managed as indicated • All cases fullfiling criteria should be referred		

17. FLOW CHART - MANAGEMENT OF FEVER



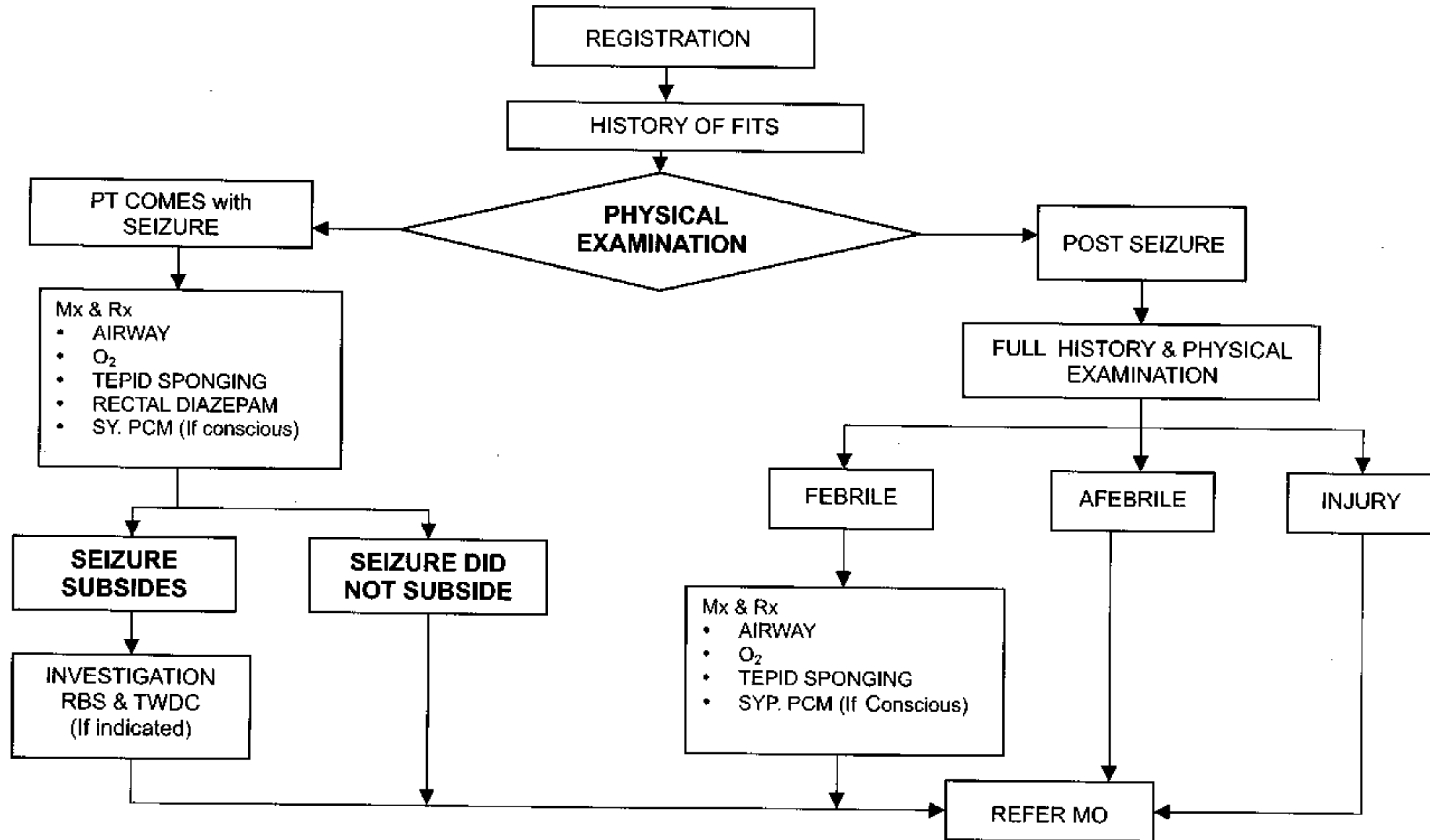
MANAGEMENT OF FEVER

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
17.	**Management of Fever**	**1. Bio-data** • **Name** • Age • Sex • Occupation **2. Present History** • Onset • Duration • Character **3. Associated Symptoms** • Night sweats • Chills & rigors • Rashes • Myalgia / arthralgia • Headache, drowsiness & vomiting • Cough, rhinitis, sore throat, ear ache / discharge	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition; eg. Hydration, jaundice, pallor, sweating, clubbing, cyanosis, rashes • BP, PR, Temp. Resp. Rate • Hess Test • Level of consciousness • Neck stiffness • Ear abnormalities • Dental hygiene/ throat • Lungs: crepts / rhonchi • CVS: murmurs • Abdomen: - Palpate for tenderness, guarding, rebound tenderness , masses.	• All patients seen should be registered and history taken • Examine all patients seen (examine relevant systems according to patient's history)	R2 R49 R50	**Equipments** • BP Set • Stethoscope • Thermometer • Basin & towel **Drugs** • Tab PCM • Rectal PCM • Rectal Diazepam • ORS • Intravenous Line Set (IV set) • Hartmans Solution, Normal Saline, Dextrose saline • Oxygen and tubing with masks

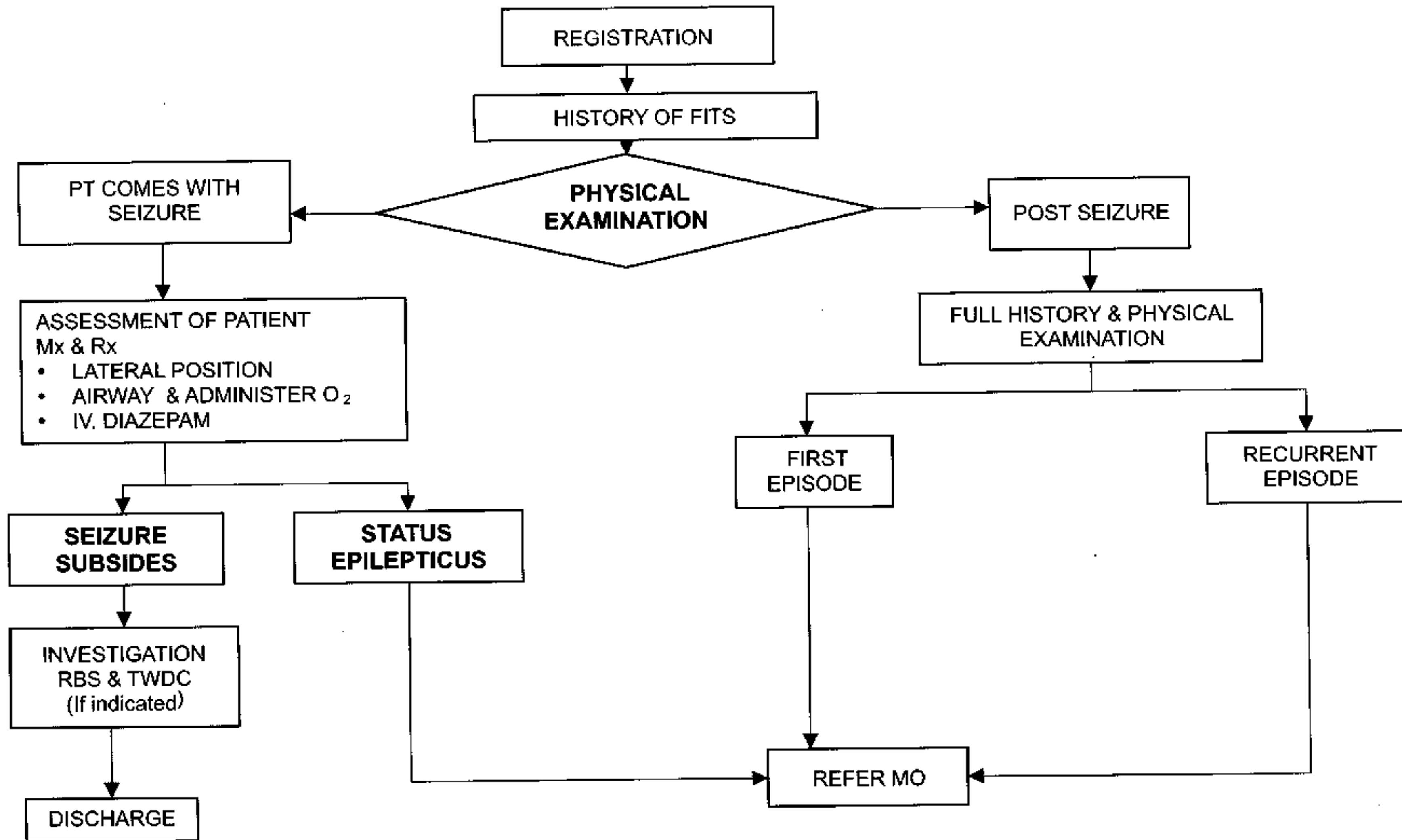
No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		• Jaundice, diarrhoea / constipation • Dysuria, tea-colored urine • Urethral / vaginal discharge • Abscesses • Joint swelling **4. Past Medical History** • Past h/o PTB, malaria, typhoid etc. • Other significant History **5. Other relevant history** • Recent travel to infectious prone areas	• Check for Lymphadenopathy **4. Investigations** • FBC / ESR / BFMP (thick & thin) • Urine FEME / Ketones / Bile salts • Stool — FEME • Sputum for AFB • Rectal swab for cholera • CXR • Discharge for CNS **5. Principles of Management** • Symptomatic treatment - Tepid sponge / rectal PCM & rectal diazepam for children presenting with fits - Tab. Paracetamol 1 gm tds/ qid / day for 3-5/7 for adult	• For fever cases as indicated • The basic symptomatic treatment should be carried for all cases of fever		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		• Family h/o similar illness • H/O drug abuse (IVDU) • Sexual History	• Review patient after 3-5 days • If not responding to treatment, stabilize and refer to Medical Officer			
			6. Criteria for referral • Children below 3 years old • Simple fever not responding to normal treatment after 5 days • All complicated fevers • Unsure of diagnosis	• All cases are to be referred as per criteria		
			7. Health Education - regarding self management of simple fevers and fits prophylaxis in children	• All patients should be given health education on self care.		

18. FLOW CHART - MANAGEMENT OF FITS (FOR CHILDREN)



FLOW CHART FOR MANAGEMENT OF FITS (FOR ADULT)

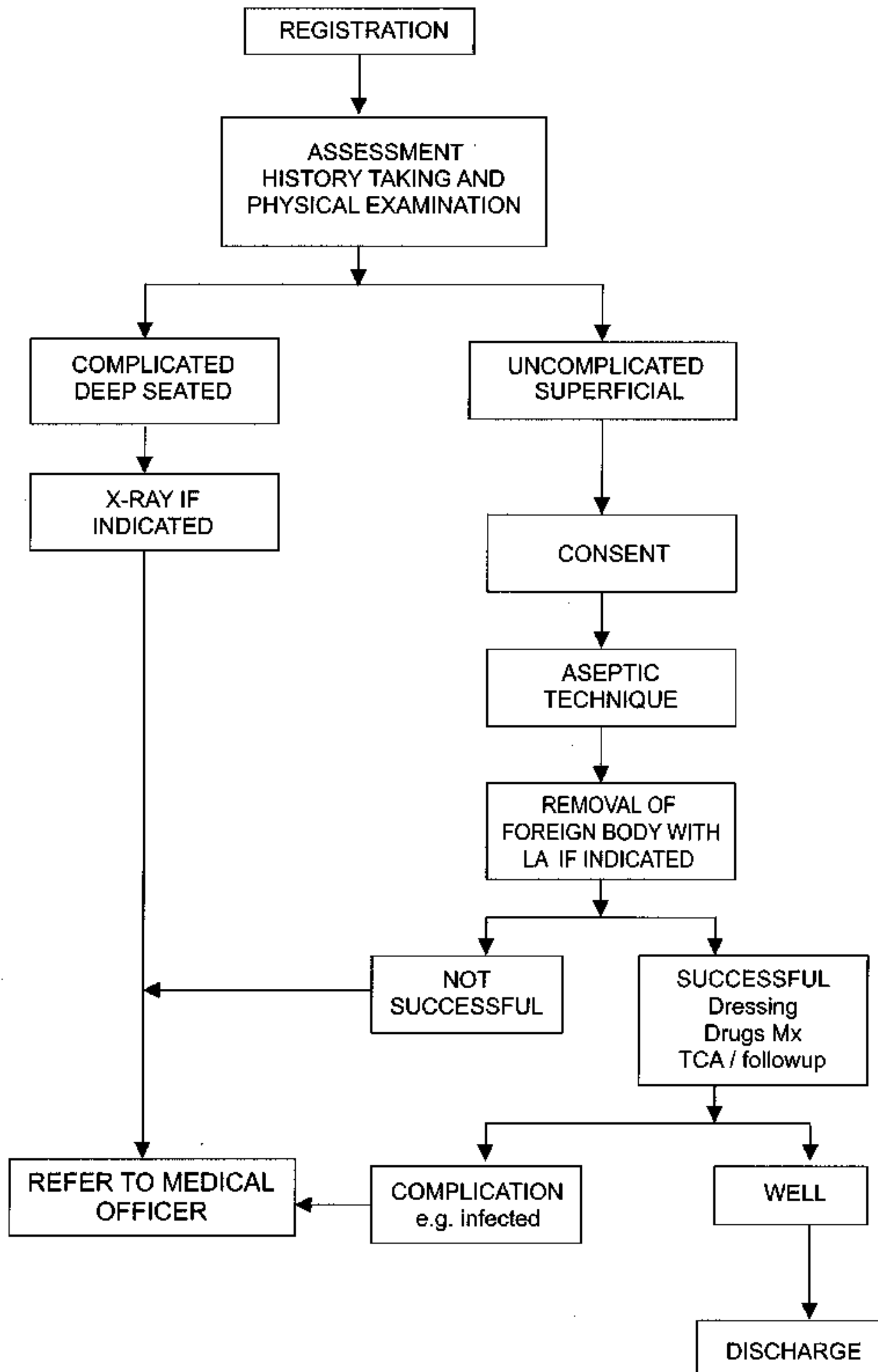


MANAGEMENT OF FITS

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
18.	**Management of Fits**		**1. Registration** **2. History Taking** **3. Assessment of patient** • General assessment - Level of consciousness - Breathing pattern/ breath odour • Vital signs - Temperature - Blood pressure (if possible) - Pulse rate - Respiration rate • Physical Examination: - Look for any injury e.g. head injury - Neck stiffness - Pupils PEARL' • Other systems if indicated	• All patients seen should be registered and history taken • All cases of fits seen should be fully examined and assessed	R2 R24 R51 R52 R53	**Equipments** - BP Set - Stethoscope - Thermometer - I/V Infusion set - Ambu bag - Oxygen and related equipment - Dextrostix - Glucometer - Airways - Suction equipment **Drugs** - Rectal Diazepam - Dextrose Solution. (for hypoglycaemia) - Syrup PCM

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			4. Investigation • Urine FEME • Blood — RBS, TWDC	These basic investigations should be done for all patients		
			5. Principles of management			
			• Patient comes with seizure	▪ Put patient in lateral position - ensure patent airway - suction - place airway between seizures		
			• Patient comes post seizure	• Put patient in a comfortable position		
			6. Criteria for referral • All cases of fit • If unsure of diagnosis	• All cases of fits should be referred to the Medical Officer after basic management		

19. FLOW CHART FOR MANAGEMENT OF FOREIGN BODY IN AN INJURY

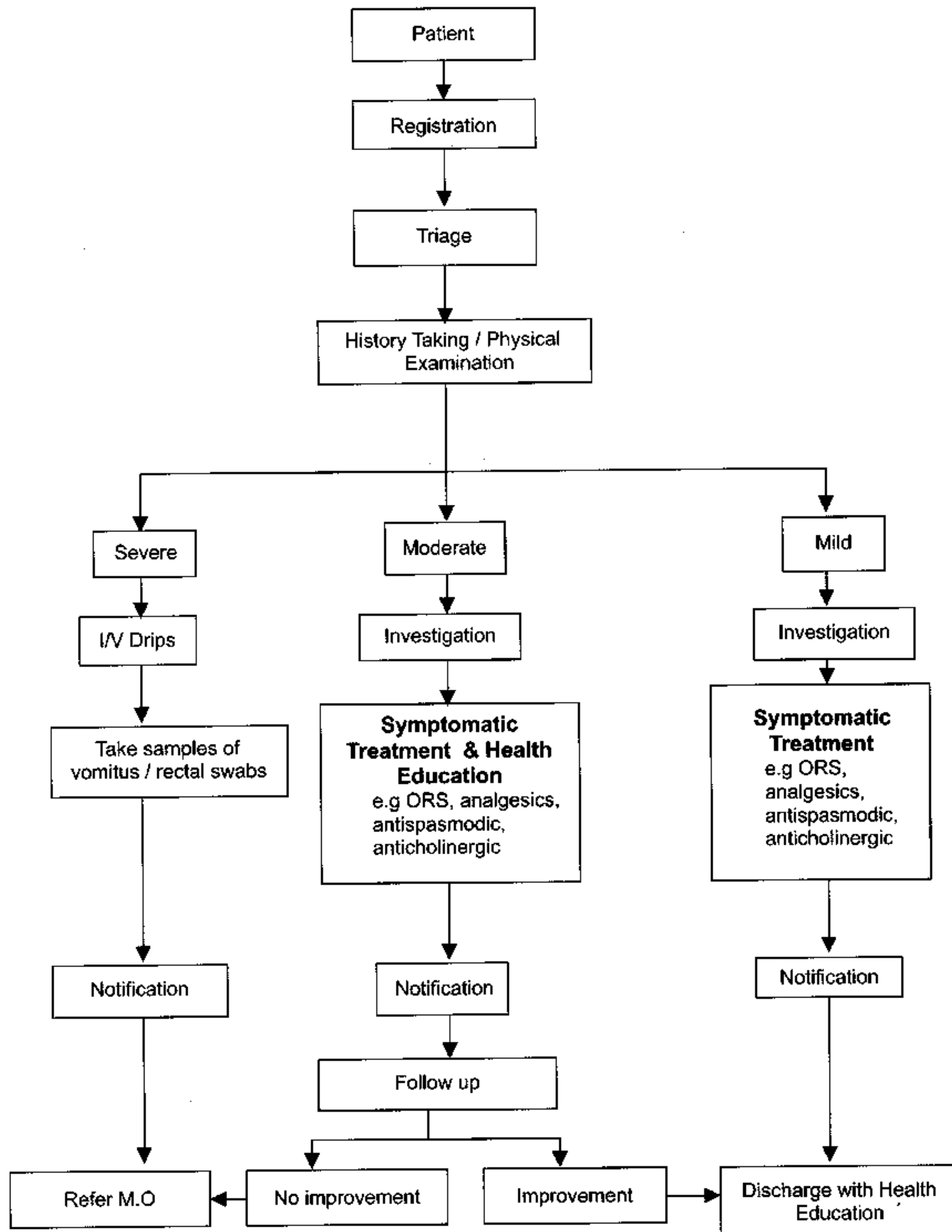


MANAGEMENT OF FOREIGN BODY IN AN INJURY

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUG
19	**Management of Foreign Body**	**1. Biodata** • Name • I/C No • Age • Sex • Race **2. History** • time of injury • mechanisme of injury • site of injury **3. Associated symptom** • pain • swelling • fever • redness **4. Other History** Previous illness - DM - Drug allergy	**1. Registration** **2. Put patient to a comfortable position.** **3. Physical examination.** • Site of injury • Severity • Assessment :- **Vital Sign** BP, Pulse , Respiration • Local examination • Redness **4. Investigation for :-** • Diabetes or suspected Diabetes — Dextrostix • X- Ray	• All cases should be registered and history taken • All cases should be examined and assessed • The basic investigation should be done for all cases	R2 R6 R17 R18 R24 R54	**EQUIPMENT** - BP Set - Stethoscope - Angle poise lamp - T & S set - Dressing set - Scapal blade - Surgical scissor - Dressing towel - Disposible needle 21G, 23G - Disposible Syringe 5ml, 10ml - Plaster - Sterile Gauze - Sterile Cotton - Bandage - Daflon no 3, 4, 5

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUG
			5. Management Simple FB - Take consent - Remove FB - Drug (analgesic) TCA, Follow up Complicated FB **6. Health Education** - Care of wound	- X-Ray Refer MO All patients should be given health education on care of wound		**DRUGS** - Liqnocaine 1% @ 2% - Analgesic - Oral Antibiotic

20. FLOW CHART - MANAGEMENT OF FOOD POISONING

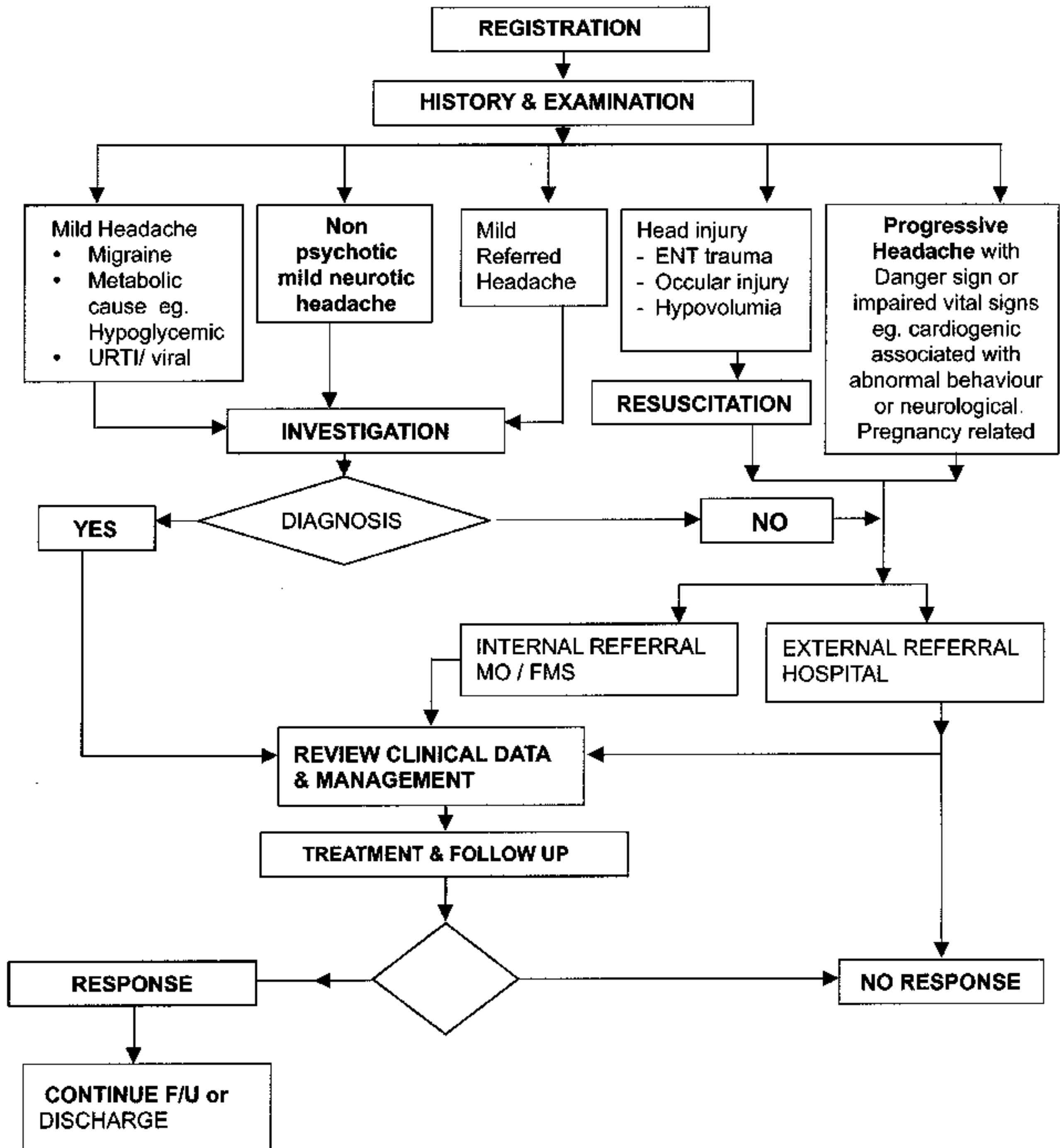


MANAGEMENT OF FOOD POISONING

BIL	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE:	EQUIPMENT/DRUGS
20.	**Management of Food Poisoning**	**1. Bio-data** • Name • I/C No • Occupation • Address • Sex / Age **2. History** • Onset • Severity • Food taken • Locality • Number of persons affected **3. Associated Symptoms** • Severe pain etc, colic • Vomiting • Loose motion • Blood/ mucus in stool	**1. Registration** **2. History Taking** **3. Physical Examination** • Put patient in comfortable position • General assessment of patients condition • Level of consciousness • Dehydration — skin turgor, sunken eyes, oral cavity dryness (as in SOP for Diarrhoea • Signs of shock e.g. cold and clammy, SOB • vital signs e.g BP, Pulse rate, Respiratory rate,Pallor	• All patients should be registered and history taken • Physical examination and assessment should be done for all patients	R1 R36 R57	BP set IV drip set IV Fluids ORS Oxygen Resuscitation equipment **Drugs** Antiemetics Injection Hyoscine Oral antibiotics Lab. Equipments Specimen media

BIL	PROCESS	DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE:	EQUIPMENT/DRUGS
		4. Other history • Epidemics e.g incidences of food poisoning, cholera, typhoid etc. • Food and eating habits of the locality and area • Social history Sanitation	**4. Abdominal Examination** Palpation — hard, soft Tenderness/site Liver/spleen ? Other masses Bowel sound			
			5. Investigation • Stool FEME, • BUSE • Swabs for vibrio cholera (when suspected) • Save food sample, vomitus and stool	All samples to be collected with adequate precaution		
			6. Notification	All cases of food poisoning should be notified		

21. FLOW CHART - MANAGEMENT OF HEADACHE



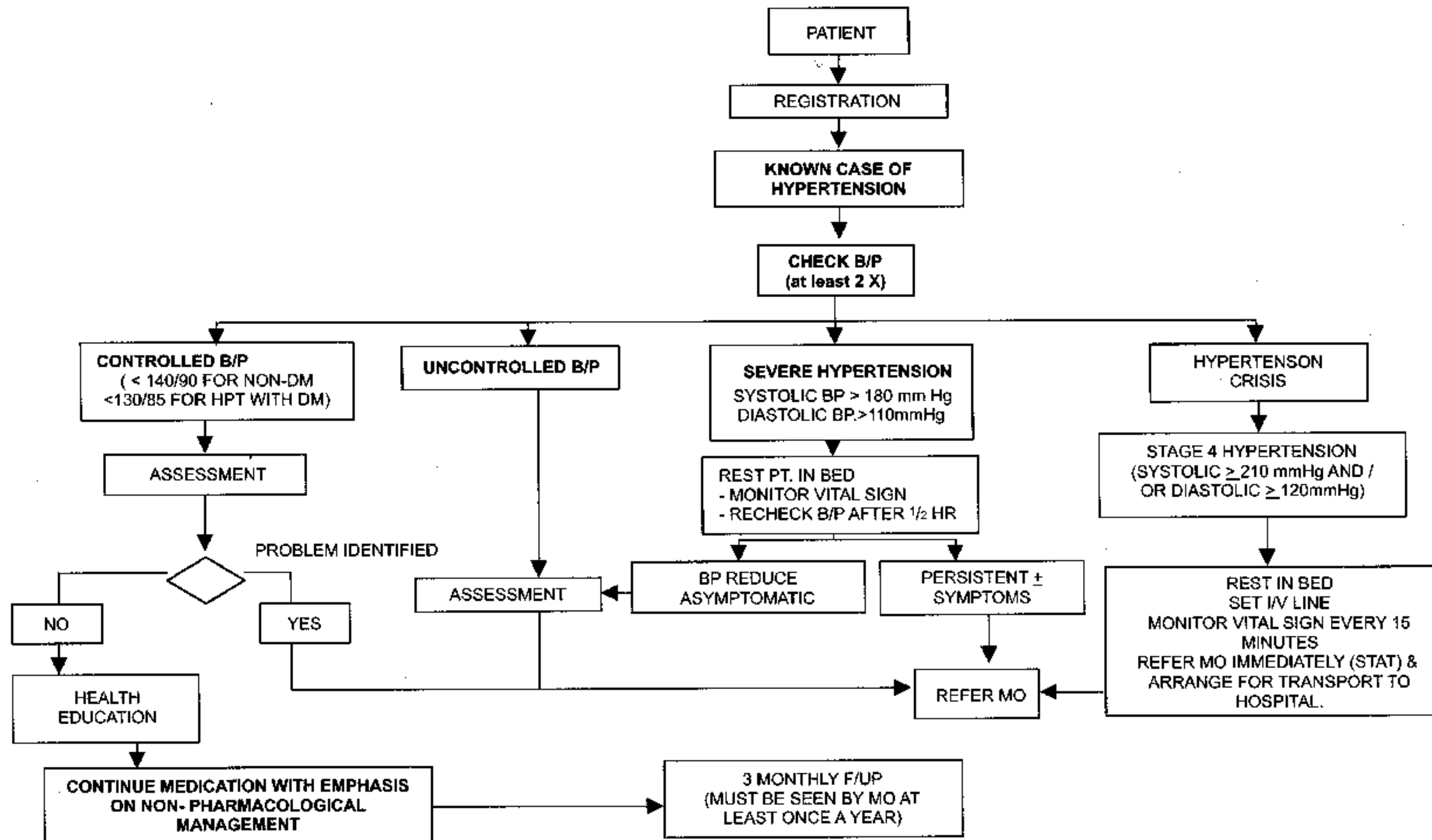
MANAGEMENT OF HEADACHE

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
21.	**Management of headache**	**1. Bio-data** • Name,Age • Sex • Address **2. Present History** • Onset • Duration • Location • Severity • Character • Frequency **3. Associated Symptoms** • Fever • Nausea / Vomiting • Aura • Blurring of vision • Rhinitis / blocked nose • Ear ache/ ear discharge	**1. Registration** **2. History Taking** **3. Physical Examination** • General Condition - Level of consciousness - Is the patient distressed? • BP, PR, Temp. • Neck stiffness • Eye — PEARL? - Is nystagmus present? - Occular movement - Visual acuity • Ear — is discharge present - TM abnormalities (all children & adults with symptoms) • Oral — dentures / throat • Gross neurological assessment - Any facial asymmetry - Any weakness of limbs	• All patients seen should be registered and history taken • All patients should be examined and assessed accordingly	R2 R6	**Equipments** • BP Set • Stethoscope • Thermometer • Snellens Chart • Tendon hammer • Diagnostic set • Torchlight **Drugs** • Analgesics eg - PCM - NSAIDs • Anti-histamines • Intravenous set with IV solution

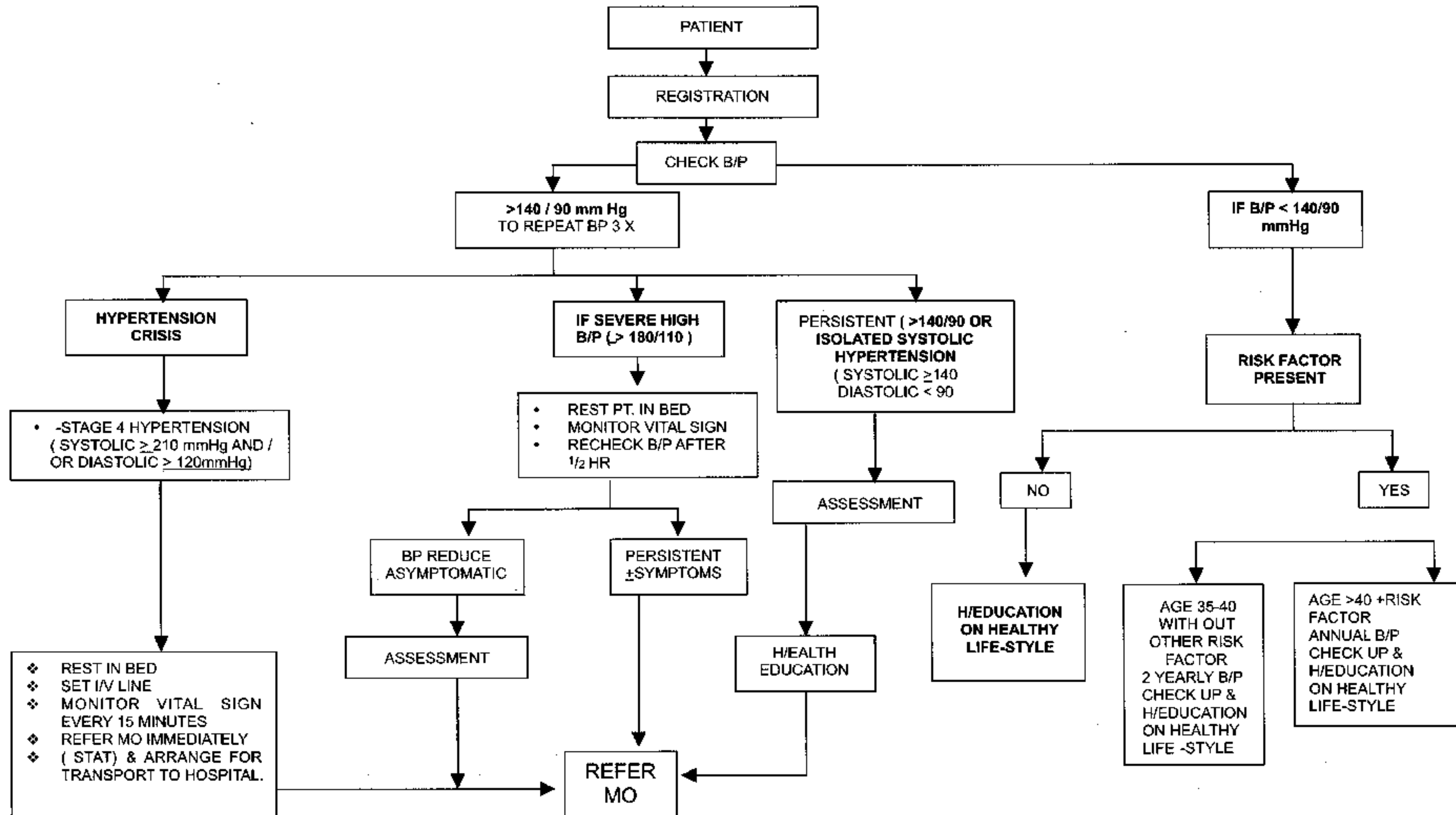
No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		4. Other relevant history • h/o trauma • h/o emotional stress / work pressure **5. Family history** • migraine • Intra-cranial bleeding **6. Past medical history** • h/o HPT/DM • Previous SOL/intra-cranial surgery **7. Menstrual History** (female)	**4. Investigation** • FBC • ESR • Dextrostix • Urine FEME / Ketones • BUSE • Skull X Ray **5. Principles of management** • If no danger signs/symptoms present: - Treat symptomatically (eg. Analgesic for tension headache, antihistamine for URTI/Sinusitis) - Review 3-7 days later pending patients condition • If danger signs/symptoms present: -Stabilize patient first eg. set IV line, monitor head chart and inform Doctor.	• If febrile • If patient > 60 yr. • In DM or hypoglycaemia suspected • if UTI suspected or excessive vomiting • if excessive vomiting • for trauma patients All patients should be managed accordingly		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		8. Alcohol / Drug History • eg. Anti-HPT drugs. Hypoglycaemic agents, anti-epileptic drugs	**6. Health Education**	· Advice on Healthy Lifestyle and stress management		
			7. Criteria for referral • All children < 3 years (if MO available) • All cases with neurological signs • All trauma / emergency cases • If unsure of diagnosis	• Refer all patients as per referral criteria		

22. FLOW CHART - MANAGEMENT OF KNOWN HYPERTENSION (A)



22. MANAGEMENT OF NON / UNKNOWN HYPERTENSION (B)



MANAGEMENT OF HYPERTENSION

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
22.	**Management of Hypertension**	**1. Personal Data** • Name • I/C No • Age • Gender • Race • Occupation **2. History Taking** • Duration of illness • Present symptoms	**1. Registration.** ♦ personal data	Register All Cases	R2 R24 R44 R45	1. B/P set 2. Stethoscope 3. ECG machine 4. Diagnostic set 5. Dextrostix 6. Weighing scale
		3. **Past medical/surgical H/O** • Diabetes • Heart Disease	**2. History taking** ♦ Present condition ♦ medical and surgical illness ♦ drug history ♦ Social H/O ♦ Family H/O	Full History Taking & Recording for new cases		**Medication** Antihypertensive drugs on follow up as referred by Physician / MO

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
		4. Family H/O • Hypertension • Diabetes • Heart Disease • Stroke • Hyperlipidaemia **5. Drugs history** • Steroids • NSAID • Nasal decongestants • Oral Contraceptive pills **6. Social history** • Smoking • Alcohol **7. Physical examination**	**3. Family H/O** • Present condition • Drug H/O • Social H/O **4. Physical Examination** **4.1 Aim:** ♦ To assess present condition ♦ To identify risk factor ♦ To exclude secondary causes ♦ To assess TOD (Target Organ Damage / Complication)	• To be taken at every visit		

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
		8. Investigations. **9. Health Education / Counseling**	**4.2 Assessment** • Put patient in comfortable position and assess vital signs.			
		10. Management **11. Referral** **12. Follow — up**	♦ Record B/P, Pulse, Respiration.	• Observation & recording of vital signs of all cases at every visit		
			♦ Height, Weight, BMI	• BMI taken for all cases at every visit		
			♦ **CVS** - Basal crepts - Ankle edema	• To assess every visit		

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
			- Apex beat displacement - Listen for carotid bruit & renal artery bruit. - Abdomen (palpate for palpable kidney). - CNS.	• To be assessed at first visit & annually • Physical examinations to exclude secondary causes to be done for all new cases.		
			5. Lab Investigations • Renal profile • Serum Uric Acid • FBS • Lipid profile • ECG • CXR • Urinalysis & microscopy	Lab Investigations • For all new cases • Urine for Albumin (6 monthly) • Renal profile & FBS & ECG annually • Lipid Profile annually		

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
			6. Health Education / Counseling To conduct health education sessions on hypertension & healthy life style: - Diet — Low Salt/ Cholesterol - Smoking / alcohol - Drug compliance & follow up To refer to Quit Smoking Clinic for smoker **7. Management** 7.1 Controlled hypertension: • Continue medication. - Emphasis on non-pharmacological management (i.e. diet, exercise and avoid smoking and drinking alcohol. - Stress management.	• Health Education for all cases • All cases with controlled BP		

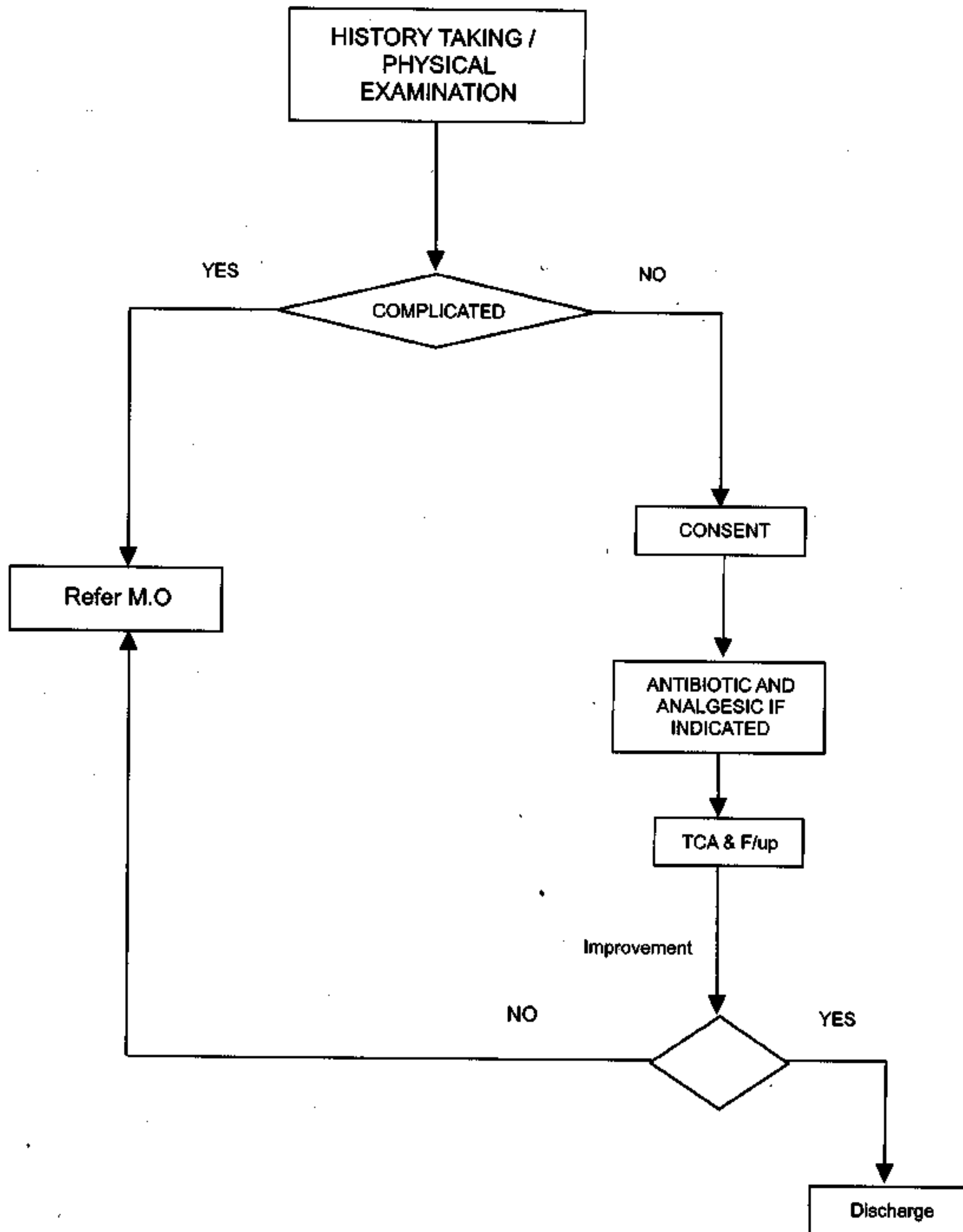
NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
			7.2 Refer doctor (Refer 8). **7.3. Severe Hypertension:** • Rest in bed. • Monitor vital signs. • Re-check B/P after half an hour. • Refer Doctor if B/P persistently high or symptom present. 7.4 **Hypertensive Crisis (Systolic BP $\geq$ 210 mmHg And/or Diastolic BP $\geq$ 120 mmHg $\pm$ symptoms*):** **REFER FOOT-NOTE** • RIB. • Set iv line • Monitor vital sign every 15 minutes • Refer MO immediately Arrange transport and refer to hospital.	• All cases with severe high BP. • All cases stage 4 hypertension $\pm$ symptoms		

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
			8. Criteria for Referral to M.O: All suspected cases of hypertension (after 3 BP readings more than 140/90 mm Hg on different occasions) Severe hypertension (BP 180 / 110 mm Hg) Poor control of blood pressure. Develop Complications Detection of associated disease such as Diabetes etc. Pregnancy induced hypertension Hypertensive crisis	• Cases to be referred as per referral criteria		

NO	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURES	STANDARD	REFERENCES	EQUIPMENT/ DRUGS
			9. Follow — up - 3 monthly for controlled hypertension - Doctors follow- up at least once a year.	• All cases follow appropriate schedule.		

- **FOOT-NOTE:**
  Symptoms of HPT crisis :
  Headache, dizziness, shortness of breath, vomiting, blurring of vision, severe epigastric pain, weakness/numbness of extremities or face.

23. FLOW CHART - MANAGEMENT OF INCISION AND DRAINAGE

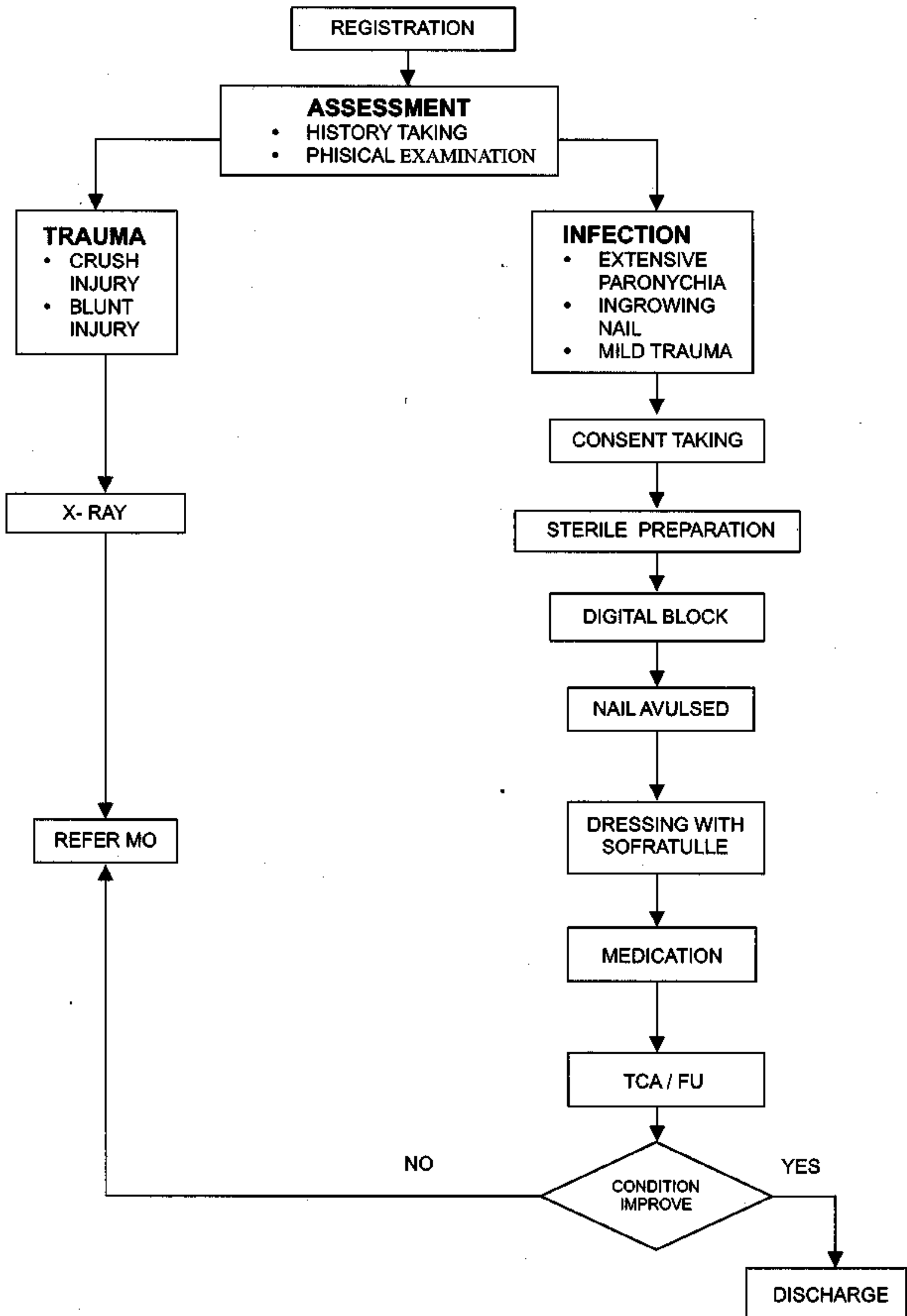


MANAGEMENT OF MINOR SURGICAL PROCEDUR - INCISION AND DRAINAGE.

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCES	EQUIPMENT / DRUGS
23.	**Management of Incision and Drainage**	**1. Biodata** • Name • Age • Sex • Race	**1. Registration**	Register all cases		- BP set - Stethoscope - Probe - Ankle poise Lamp - Sterile gauze - Sterile ribbon gauze/ - Cotton swabs - Dressing forceps - Ethyl Chloride spray
		2. History • Duration • Recent / recurrent / episode	**2. Physical Examination** Vital sign BP, Pulse, Temp, Resp, **Local examination:-** Size, site, redness, pus.	General and local examination should be done for all cases	Lecture Notes On Accident And Emergency Medicine by David M Yates.	
		3. Associated symptom • Fever • pain • Signs and Symptoms of diabetes	**3. Laboratory Investigation** - Dextrostix RBS.	If known DM or with symptoms of DM		

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCES	EQUIPMENT / DRUGS
		4. Past Medical History - Diabetic - HIV - Drugs allergy	**4. Management** Simple (non complicated) o Superficial abscess o Superficial cyst o Superficial boil. **Give treatment.** • consent • Sterile procedure • I & D **5. Complication - refer to MO** Criteria for referral • Uncontrolled diabetic • Deep abscess • Abscess near vital neurovascular structure. *eg: groin, popliteal fossa, face, neck, breast* • Unsure of diagnosis • All children < 3yrs and uncooperative children Size of the mass > 5cm	Refer all cases as indicated		- Sterile dressing towel - Dressing set - Povidone Iodine - Normal saline - Analgesic - Antibiotic eg. cloxacillin

24. FLOW CHART - MANAGEMENT OF NAIL AVULSION



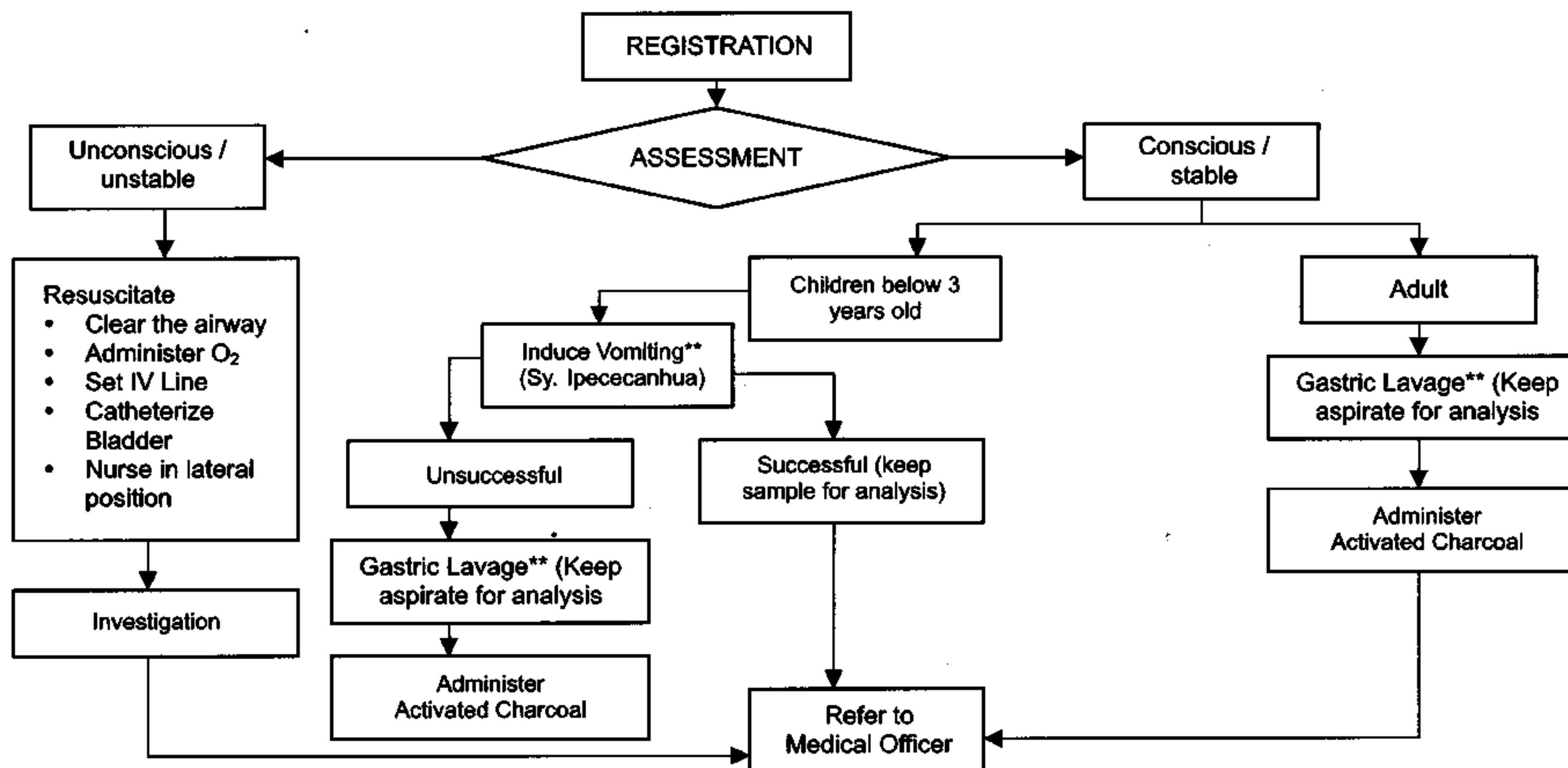
MANAGEMENT OF NAIL AVULSION

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/ DRUGS
24.	**Management of Nail Avulsion**	**1. Patients Biodata** • name • age • sex • race **2. Present History** If Injury :- • time of incident • duration • mechanism of injury • blunt / crushed injury If no injury :- • Recurrent **3. Associated symptoms eg.** Fever, pain, discharges, deformity	**1. Registration** **2. History taking** **3. Physical exam.** • Vital signs eg. BP, Pulse Rate, Temperature, Site of injury **4. Investigations** • Dextrostix, RBS • X-RAY	• All cases to be registered and history taken • Do general and local examination for all cases • If DM suspected • If trauma	R17 R18 R19 R20	• B / P Set • Thermometer • Stethoscope • Angle poise lamps • Disposable syringes 5ml, 10ml • Disposable needles 21G, 23 G • Inj. Liqnocaine 1% • Sterile gloves • Plaster • Dressing set • Sofratulle • Lotions for toilet eg saline, H202 etc. • Bandages • Dissecting forceps • Antibiotics eg. Cloxa • Analgesics eg. Mefenamic Acid

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/ DRUGS
		4. Past Medical / Surgical history • DM • Psoriasis • Drug allergy	**5. Management** • If trauma • Mild infection/trauma, • Digital block local anaesthesia • Avulse nail • Sofratulle dressing • Medication	• Refer to MO • Do nail avulsion • Take consent from all patients • Aseptic techniques should be strictly observed		

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS/ DRUGS
			6. Follow up • Daily sofratulle dressing • No improvement — refer to MO 7. Health education — care of the toes & feet (prevention of ingrown nails)	For all patients		
			8. Criteria for referral • Major trauma • Infection • Other major complications	• Refer as per referral criteria		

25. FLOW CHART - MANAGEMENT OF POISONING BY INGESTION



** If not contraindicated (not due to ingestion of corrosive/volatile substances like kerosene, caustic soda etc. If contraindicated, set IV line and refer to Medical Officer.

MANAGEMENT OF POISONING BY INGESTION

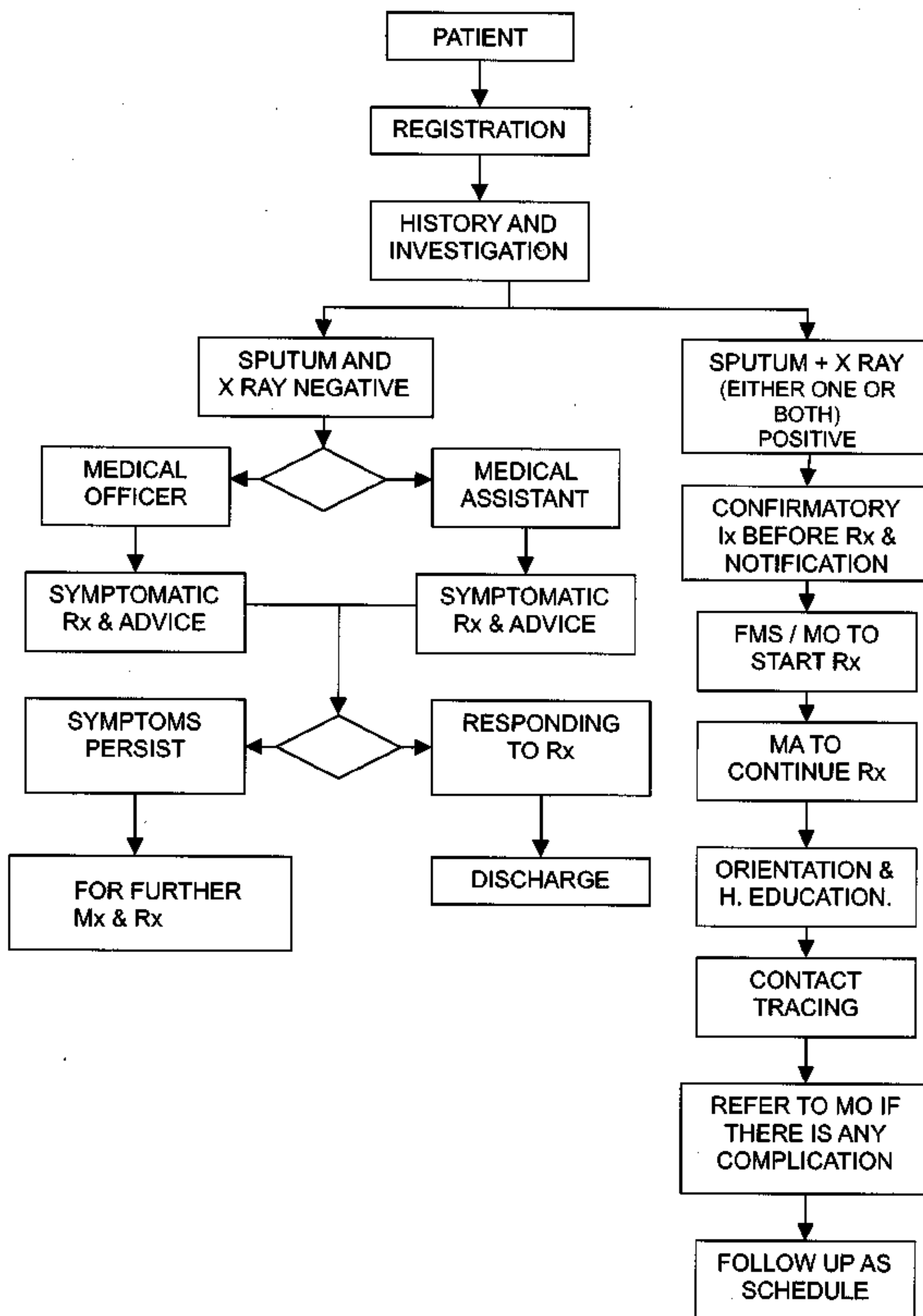
No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
25.	**Management of Poisoning By Ingestion**	**1. Bio-data** • Name • IC/No • Age • Sex • Marital status • Occupation **2. Present History** • Time of occurrence • Type / amount of poison ingested • Is the poison container / substance available for identification? • Types of poisoning (Accidental / attempted suicide / homicide)	**1. Registration** • Register patient • Trace old card if any **2. History Taking** **3. Physical Examination** • .General Condition - Level of consciousness - Convulsions • Is the patient in shock / distressed? • BP, PR, Temp., Resp. Rate • Cyanosis • Cold and clammy skin • Eye - pin-point / dilated pupils / reaction to light • Oral — ulcers, burn marks, salivation • Gag reflex	• All patients seen should be registered and the history taken • All cases should be examined accordingly	R55 R56	**Equipment** • BP Set • Stethoscope • Thermometer • Tendon Hammer • Diagnostic set • Torchlight • Spatula • Resuscitation trolley • Oxygen • Gastric lavage set • Suction equipment **Drugs** • Syrup Ipecacuanha emetic mixture • Powdered Activated charcoal

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		▪ Did the patient vomit subsequently **3. Associated Symptoms** • Nausea / Vomiting • Abdominal pain • Shortness of breath • Blurring of vision **4. Other relevant history** • Any precipitating incident (eg quarrel, depression, recent bereavement) • Is this the first episode?	• Any smell indicating substance ingested eg alcohol, kerosene • Respiratory system — air entry / breathing patterns / crepts. present? • Abdomen — tenderness, guarding **4. Principles of management** • Ascertain level of consciousness **- If unconscious:** a) Clear the air way of vomitus / dentures b) Administer oxygen (except if suspected paraquat poisoning) c) Setup IV line d) Nurse patient in lateral position e) Catheterize the bladder f) Refer to Medical Officer with sample of toxic agent if available	• All patients should be managed as indicated		- Gastric lavage solution (warm water or diluted Normal Saline solution)

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		5. Family history • H/o psychiatric illness **6. Past medical history** • H/o psychiatric illness • H/o chronic / terminal illnesses • H/o recent childbirth **7. Alcohol / Drug History/ Substance abuse**	**If conscious and stable** a) Attempt to induce vomiting in children with syrup Ipecacuanha emetic mixture (not the undiluted fluid extract) - Contraindicated in corrosive / volatile substances eg. Kerosene b) Gastric lavage in adult - if large amount ingested - Ideally done within 4 hours of ingestion of poison - Contraindicated in corrosive / volatile substances eg. Kerosene (Keep sample of gastric aspirate for drug analysis) c) Administer absorbent eg. Powdered Activated charcoal (20 — 50 gm in 100 — 200 ml water)	• All patients should be managed as indicated		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
			5. Health Education Safety Education • Keep all poisons/ drugs out of reach of children • Dont change containers where poison are stored • Label all poisons properly • Read all labels properly before dispensing	Health Education for all patients		
			6. Criteria for referral • All cases to be referred to MO / Hospital.	• All patients should be referred to MO/Hospital		
			7. Notification ▪ All cases to be notified to Police Department. ▪ Notify the Occupational Safety & Health Unit in District Health Office(Borang WEHU D1/D2)	• All cases should be notified accordingly		

26. FLOW CHART - MANAGEMENT OF PULMONARY TUBERCULOSIS



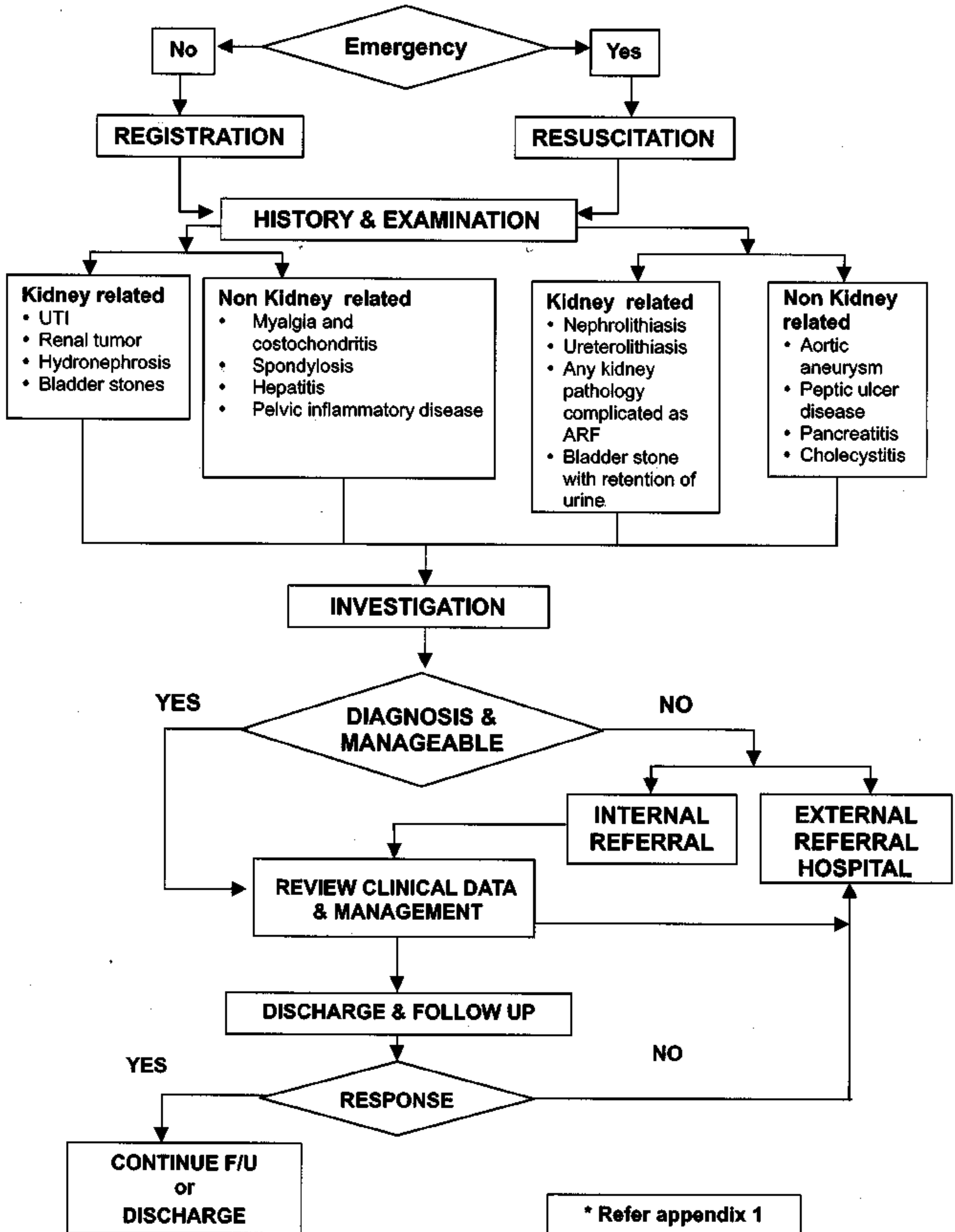
MANAGEMENT OF PULMONARY TUBERCULOSIS (PTB)

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
26.	**Management of PTB**	**1. Bio-data** • Name • Age • I/C No • Occupation • Sex/Race **2. Present History** • Cough>2/52 • Hematesis • Loss of weight • Chest Pain • Coarse voice • Lethargic / easily tired • Night sweat	**1. Registration** **2. History taking** • Present concition • Present associated symptoms • Other history • Social history • Family history **3. Physical examination** • General conditions -Vital signs(BP, Pulse, Temp, Resp rate and pattern) • Systemic evaluation - Chest —resonance - Heart - Abdomen	• All cases should be registered and the history recorded • All cases should be examined as indicated	R 10 R 11 R 12 R 14 R 15 R 16 R 20 R 58 R 59 R 60	**Equipment** • B/P set • Stethoscope • Thermometer • Ruler • X-ray illuminator • Glucometer **Drugs** • C. Rifampicin • INH • Inj SM • Ethambutol • Second line drugs

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		3. Associated symptoms • Fever • Dysuria • Haematuria • Diarrhoea • Prolong Headache • Fits **4. Other history** • Current Medical Problem - Diabetes - HIV/AIDS -Renal impairment	**4. Investigation** • Sputum AFB Direct Smear x 3 • ESR • Hb TWDC • Mantoux • RBS • Gastric Lavage for AFB Direct smear • Chest X Ray **5. Principle of Management** • Thorough investigation prior to actual Rx :- - Renal profile - LFT - Visual acuity - Hb, TWDC - Platelet Count • Initiate symptomatic treatment - Paracetamol for fever - Cough mixture for cough	• For all suspected cases • If no sputum available • For person with chronic cough • All cases to be managed as indicated		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		5. Social History • Smoking • Alcohol • Types/working condition • House/Living condition • Behaviour	• Refer to Medical Officer for proper treatment regimen • Continue treatment as Directly Observe Therapy Shortcourse (DOTS) • Contact tracing	All PTB patients and their immediated family		
			• Notification	Notify all cases as required by CDC (Health 71)		
			6. Health Education for patient / family members / carers • About PTB • Treatment regime • Side effect of PTB drugs • Implication of defaulters • Importance of DOTS • Prevention of PTB & Healthy Lifestyle	Health Education for all		

27. FLOW CHART - MANAGEMENT OF RENAL COLIC



MANAGEMENT OF RENAL COLIC

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
27.	**Mangement of Renal Colic**	**1. Registration of Personal Data** - Name - I/c No - Nature of work - Sex **2. History taking & examination** 2.1 **Nature of pain,** severity, relieving & aggravating factor 2.2 **Location of pain** - Duration and frequency - Radiation - Related with positioning 2.3 **Past Medical History** - H/O Renal stones - H/O of Gall stones - H/O of HPT and Diabetes - H/O of Gout	**1. Registration & History taking** **2. Comfort of patient** • Put patient in a comfortable position **3. Detail assessment** - Severity of pain - Level of pain - Level of hydration - Pallor - Oedema - Toxicity **4. Physical examination** a) Inspection of abdomen - Peristaltic movement - Distention - Old scar	All patients should be registered and history taken All patients should be examined and assessed as indicated	R 24 R 32 R 62	• BP Sets • Stethoscope • Thermometer • Ultra Sound Machine • Syringes/ Needles **Materials Acute** - IM Pethedine 50-75 mg - IM Buscopan 2cc - IM Stemetil 12.5 mg - IM Maxalon 10 mgm IM Voltaren 50-75 mg

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		- H/O unirary retention - H/O of Recurrent UTI - H/O of Worm Infestation - LMP for female **2.4 Family History** - HPT - Renal stone - Gout **2.5 Social History /Habit** - Alcohol - Sea food - Salty food - Phosphate diet - Calcium intake - Occupational history - predisposed to dehydration - Low intake of fluid	b) Abdominal (Bimanual) - Ballotable - Other associated mass - Hernias c) Percussion - Look for resonance - Dull note d) Auscultation - Bowel sound e) Renal punch f) Bladder - H/O NPU - Distention —retention of urine g) PR examination - For prostatic hypertrophy	All patients with Abdominal pain		**Non Acute** - Mist Pot Citrate - Buscopan - Stemetil - Maxolon and Voltaren when indicated **Antibiotics** - Bicampicillin - Bactrim - Ampicillin - Metronidazole **Radiology and lab services** - KUB, X-ray Abd UREME & Renal Profile - IV infusion set - Catheterization set - C & S bottles

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		3. Associated symptoms - Fever - Abd Pain - Vomiting - Dysuria - Oliguria - Haematuria - Urethral discharge **4. Precipitating or aggravating factors** - Drugs/medication containing - Phosphated - Oxalates - Lactase - Diuretics - Beta blockers - Calcium - Sea food - Salty diets - Alcohol	**5. Monitoring of vital signs** - BP - Pulse - Respiration - Temperature **6. Relieve the pain whenever indicated** - Catheterization - CBD - SPC - Anti spasmodic - Analgesic **7. Investigation** a) Immediate - Urine FEME - Urine C & S - FBC - Serum Uric acid and Renal profile b) Diagnostic confirmation - KUB - MRI - Ultra sound - Renal profile	Vital signs of all patients should be monitored As indicated As indicated		

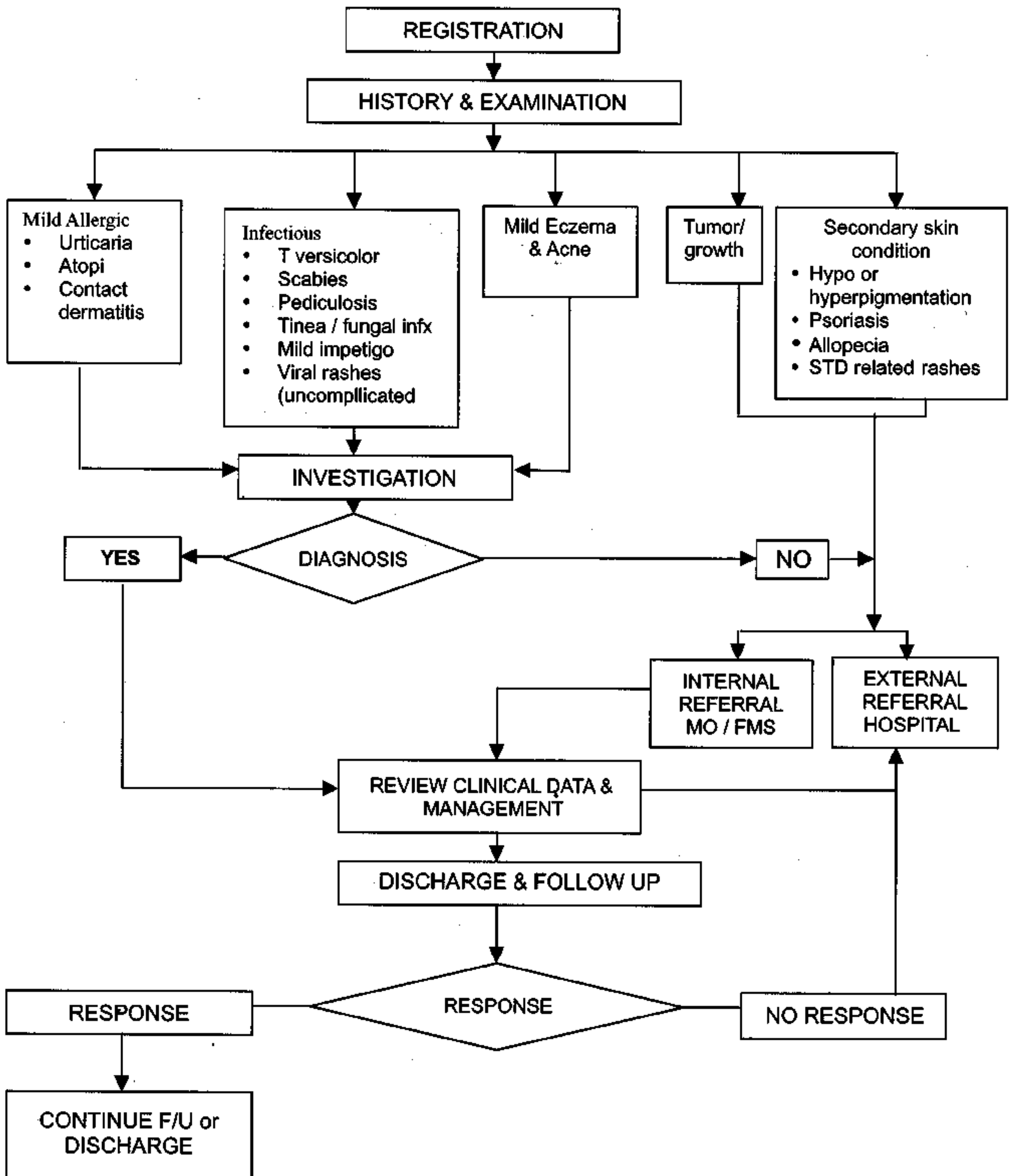
No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		5. Previous history - Recent admissions - Passing out stone - Recurrent UTI - BPH - Gout - Hypertension **6. Diffential Diagnosis** - Dissecting aortic anneurysm - Peptic ulcer with perforation - Ectopic pregnancy - Ureterolithiasis - Myalgia - Endometrosis & PID	**8. Set up i/v infusion** **9. Management** - Maintain vital sign - Catheterization if NPU - Relief pain - Antibiotics - Increase fluid intake **10. Referral** **11. Criteria for referral** **12. Health education**	When necessary See work flow See appendix 1 See appendix 1		

Appendix 1:
Referral protocol for renal calculi including advises.

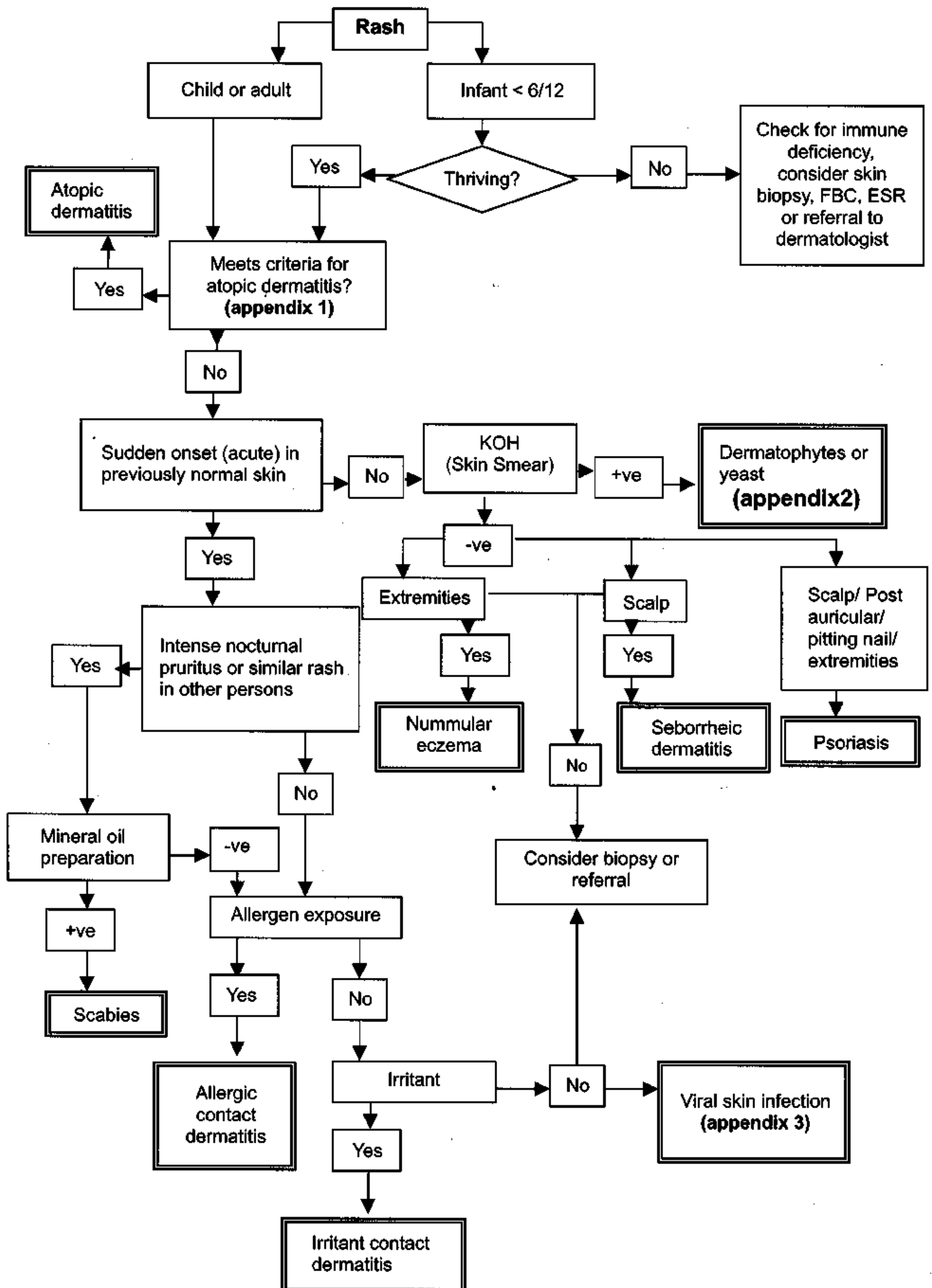
SEE MO / FMS:
Does kidney calculi a/w: - renal failure manifested by oliguria, anuria, oedema sallor and shortness of breath - gross hematuria with or without anemia and persistent loin and groin pain despite acute pain management - history of recurrent passing out stone - secondary bacterial infection with h/o dysuria and suprapubic pain +/- fever - loss of appetite and loss of weight - hydronephrosis as manifested by ballotable kidney
SEE MA :
Does kidney calculi a/w: - known kidney calculi for management of uncomplicated acute pain - nausea and vomiting
ADVISE:

- consult medical help immediately when in acute pain
- prevention:
  - drink plenty of fluids (at least 13 glasses of fluid/ day) to keep urine diluted enough to hold all dissolved salts in solution and keep them from forming stones
  - if the stone proves to be calcium or phosphorus, avoid products made with milk, chocolate and nuts
  - if the stone is a phosphate, an acid-ash diet will keep the urine slightly acidic
  - if the stone is a urate or cystine stone, an alkaline- ash diet will keep the urine slightly alkaline
  - low fat, high fiber diet recommended

28. FLOW CHART - MANAGEMENT OF SKIN DISEASE



28. FLOW CHART - MANAGEMENT OF SKIN RASHES



MANAGEMENT OF SKIN DISEASE

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
28.	**Management of Skin Diseases**	**1. Registration of Personal Data** • Name • I/C No • Age • Sex / Race • Occupation **2. Risk factors** o Age > 60 o Nature of work, exposure to sun or other irritant o Immunosuppressed eg from medication o Past medical condition that predisposed to skin disease like diabetes mellitus o Patient with pigmentation problems such as impetigo	**1. Registration & History taking** **2. Physical examination** - appearance of the lesion rash, ulcer, pigmentation, depigmentation, growth and hair loss - site/ localised or generalised - B/P - Lung — Tracheal shift, air entry, crepitations, cervical and supra clavicular lymph node **3. Diagnosis**	All cases should be registered and history taken Examine all clients that come with skin disease as indicated All clients that come with skin disease should be diagnosed and given an initial clinical impression	R65 R66 R67	Glove Syringe/needle Skin scraper Glass slide Magnifying glass Dressing set Gowning and drape facilities Swab C&S facilities KOH soln Mineral oil Skin patching if available Microscope Digital camera Teleconsultation Device **Investigation** 1. TWBC 2. VDRL/ TPHA 3. HIV 4. KOH Smear 5. ESR

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		3. History a) Presenting complaints (is it rashes, hypo or hyper pigmentation & tumour) b) Symptom pattern: - Paroxysmal or continuous? - Recurrent c) Time of starting and duration aggravating & relieving factors. Eg with temperature & humidity d) Frequency of previous attack (episodes per week/month) e) Precipitating factors - febrile, cold, humidity, & contact with allergen/ irritant f) Associated factor - Fever, running nose & cough - Itchiness and discharge	**4. Investigation to confirm Diagnosis** - skin scraping Preparation of KOH Smear examination (for dermatophytes) - Mineral oil preparation for scabies - swab for C&S - Allergen exposure eg skin patch (if available) **5. Preparation** for any procedure that is planned. Gowning and drapping should be appropriate to the patient symptoms and body part to be examined.	For all cases of scaly skin lesion suspected of fungal infection and scabies For eruption with or without vesicles and with pus discharge For all clients that come with skin disease that require examination prior to any procedure		1. Topical - Ung whitefield - hydrocortisonse cr - calamine cr / lotion - betnovate cr - podopyline - acne lotion - tinea lotion - Sodium Thiosulphate 2. Oral / systemic - anti fungus - anti histamine - antibiotic - analgesic 3. Dressing - Nacl , eusol - Kmno4

NO.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENT / DRUGS
		g) Past and current drugs used (name/ tablet/capsule &colour) - Steroid - Antibiotics h) H/O admission with skin disease i) Concurrent illness & treatment j) Social background (including education level & caregiver) k) Pregnancy l) How does the skin lesion affect patient's daily activity m) Allergic history - family history of asthma, atopi, rhinitis & conjunctivitis n) Personal and social history including personal hygiene, lifestyle and sexual habits.	**6. After the examination**, instruct the client about home care, remove all soiled and contaminated supplies, and maintain cleanliness of the room and surroundings. **7. Referral Criteria** ▪ If not responding to treatment ▪ If unsure of diagnosis	All clients should be given Health Education Refer all cases as Per referral criteria		

Appendix 1:

To diagnose atopic dermatitis, a person must answer yes or respond as indicated by the explanation in italics, to 4 of the specific (major) features plus 3 of the less specific (minor) features.

Major Features

1. ONSET DURING CHILDHOOD
Were you between 2 months and 12 years old when the rash first began?
COMMENT, Atopic dermatitis usually begins in infancy and 85 percent of cases are manifest by age 5. If the rash began in adulthood consider scabies, contact dermatitis, or other diagnosis.

2. PRURITUS
Does your skin and/or rash itch?
COMMENT. Pruritus is virtually always present in atopic dermatitis. Infact, atopic dermatitis often referred to as "the itch that rashes.

3. TYPICAL DISTRIBUTION
Where was your rash and itching mostly located when you were a child? Where was it when you were an adolescent?
COMMENT. During childhood, atopic dermatitis occurs most commonly on facial and extensor surfaces. Infants below age 2 may have a rash on the cheeks that is dry, red, and scaly. During adolescence, the rash most commonly occurs on flexural surfaces (i.e., antecubital or popliteal and demonstrates lichenification and linearity.

4. CHRONIC OR CHRONICALLY RELAPSING
Does your rash and itching go away and come back, or just gets a little better but is always present?
COMMENT. Atopic dermatitis is, by definition, a chronic or cbronically-relapsing condition. Finding that a patient has received numerous treatments with topical steroids or oral antipruritics establishes cbronicity.

5. PERSONAL OR FAMILY HISTORY OF ATOPY
Do you, or does anyone in your family, have a similar rash, or eczema, asthma, or allergies that affect the nose and eyes?
COMMENT. 31 percent of individuals with atopic dermatitis have a personal history of allergic rhinitis or asthma, 62 percent have a family history of respiratory allergies, and only 21 percent have no such personal or family history. 50 Percent of persons with atopic dermatitis will ultimately develop allergic rhinitis or asthma. A medical record that documents prescriptions for asthma medications can establish this criteria in the absence of a specific atopic diagnosis.

Minor Features

1. XEROSIS
Is your skin dry?
COMMENT. Dry skin is often present since birth

2. ICTHYOSIS VULGARIS
Do you, or does anyone in your family, have heels that are so dry and cracked that they rip thin socks or hose?
COMMENT. Feet with thick, rough scaling may be a sign of icbtbyosis vulgaris which is sometimes associated with atopic dermatitis.

3. PALMAR HYPERLINEARITY
Do you have deep grooves or folds on your palms? Can 1 see them?
COMMENT Hyperlinearity of the palms is seen as deep linear grooves crossing perpendicular to the long axis of the thenar or hypothenar eminence.

4. KERATOSIS PILARIS
Do you have bumps on your upper arms (cheeks in children) that get dry and itch?
COMMENT. Keratosis pilaris is present in one-third to half of persons with atopic dermatitis.

5. PERIFOLLICULAR ACCENTUATION
Is the rash more prominent around the hair or pores of your skin?
COMMENT. Perifollicular accentuation is most easily seen in individuals with darker skin.

6. INVOLVEMENT OF HANDS OR FEET
Do you have a rash on your hands and/or feet?
COMMENT. While not highly specific for atopic dermatitis, involvement of the bands and or feet is common in about 30percent of patients, atopic dermatitis begins on the bands and 70 percent have hand dermatitis at some time in their life.

7. CHEILITIS
Do your lips chap easily?
COMMENT. Upper lip cheilitis is common in atopic dermatitis.

8. NIPPLE ECZEMA
Do you have a rash on your nipples?
COMMENT. Nipple eczema is uncommon, but is a relatively specific indicator of atopic dermatitis if it is present.

9. INCREASED SUSCEPTIBILITY TO CUTANEOUS INFECTION
Are there any problems now, or have you had problems is in the past, with skin redness or crusting that looked infected?
COMMENT- There is an increased susceptibility to cutaneous infections (especially S. Aureus, molluscum contagiosum, varicella and herpes simplex viruses)

10. TYPE 1 IMMEDIATE HYPERSENSITIVITY
Have you ever had allergy tests that showed you were allergic to something?
COMMENT. Typically, immediate type 1 hypersensitivity is seen following intradermal skin testing.

Appendix 2:

Fungal Skin Infections

The most common fungal infections of the skin dermatophytosis are caused by a group of fungi called dermatophytes. There are several and the treatment similar. The group of fungal diseases called tinea is collectively known to the lay public as ring worm.

Tinea Capitas

Tinea capitas affects the scalp. It is contagious and appears most frequently in children. It is characterized by round, gray, **scale** patches (dried skin flakes) and area of **alopecia** (baldness). There are usually no symptoms with the exception of light itching.

Tinea Corporis

Tinea corporis, or tinea eircinata, is exhibited on non hairy portions of the body. It is characterized by itchy red rings that are clear in the center with a scaledlike border. It is frequently found on the face and arms.

Tinea Cruris

Lesion which cause marked itching, are red macules with clear centers and scalelike borders. The are found on the skin in the groin area and the gluteal folds.

Appendix 3:

Viral Skin Infections

Herpes Simplex

Herpes simplex infections are also called cold sores or fever **blisters.** (A blister is a collection of fluid in or beneath the epidermis.) The lesions, which appear on the lips, mouth, face, and nose, are small vesicles grouped together on a red base. They eventually erupt, leaving a painful ulcer, then a crust. They cause burning and stinging and may he precipitated by other infections, menstruation, fatigue, trauma, stress, or exposure to the sun.
Fever blisters are caused by herpes simplex virus.
They are recurrent and no effective treatment eliminates or controls the disease. Acyclovir has shown promise in reducing the severity of the disease, but it does not offer a cure. Treatment is aimed at relieving discomfort with topical ointments.

Herpes Zoster

It is commonly believed that herpes zoster, or shingles, is caused by the same virus that causes chickenpox. After exposure to chickenpox, the virus may lie dormant in the body for years until reactivated. It spreads down the length of a nerve to the skin, causing redness, swelling, and pain. After about 48 hours, a band of lesions develops, which begin as **papules,** small, red, solid elevations on the skin (see Fig. 30-2B). These progress to vesicles and pustules, then dry crusts. The lesions last for several weeks. Scarring and alterations in pigmentation are common. Pain often remains after the lesions have disappeared, in some cases as long as several months. Shingles commonly appear on the face, back, and chest. Lesions are frequently unilateral. The disorder usually occurs in adults. The virus remains dormant in the nervous system of anyone who has had the disease and may recur in times of physical or emotional stress.
Treatment includes narcotic analgesics for the discomfort or nerve blocks for severe pain. Locally, calamine lotion may he used. The area must be protected from air and the irritation of clothing. Acyclovir is sometimes used to alleviate the severity of the disease.

Verruca

A verruca is a wart. Warts are squamous cell papillomas (benign skin tumors) that appear as rough, raised lesions with a pitted surface. Warts occur singly or in groups and may he found anywhere on the skin or mucous membranes. They commonly appear on the fingers or hands. Warts vary in size, shape, and appearance, and are thought to be caused by papilloma viruses. Treatment of warts includes removal with keratolytic agents, liquid nitrogen, podophyllum resin, laser therapy, or surgery. They also disappear spontaneously.

Appendix 4:
Referral protocol for common skin conditions including advises.

<table>
<tr><th>SEE MA / SN</th></tr>
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Does it associated with:

- raised red and itchy spots that turn into blisters (chicken pox)
- acute itchy patches of slightly raised erythematous rash a /w allergies (urticaria)
- slightly raised itchy spots in a small area (Insects bites)
- widespread itchy rash , a /w tiny grey lines or red infected — looking spots between fingers or on wrists (scabies).
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<tr><th>SEE MO/FMS:</th></tr>
<tr><td>
Childhood rashes
Does the child have these problems:
- very bad headache
- stiff neck
- convulsions
- act strange
- throws up over and over
Is it hard to wake up the child ?
Is the child confused ?
Is it hard for the child to breath ?
Does the child have cancer or is the child taking medicine that makes it easier to get sick ?

Does he or she have a fever of 102°F more ?

Does the rash associated with:

- rash of purple spots a /w vomiting ,headache , dislike of strong light ,pain when trying to bent
head forward.(meningitis)
- red rash , a/w headache , retrobulbar pain , severe backache & aching of irritants. (Dengue fever)
- chronic itchy patches of reddened skin , a/w allergies or exposures to irritants. (Eczema)
- one or more patches of reddened skin over warm & moist area ie: between skin folds especially in diabetics. (fungal infection)
- sore areas around mouth , +/- blisters (cold sores), or (hand foot and mouth disease)
- a rash of dull-red spots or blotches , a /w runny nose ,cough ,red eyes (measles)
red rash a/w swollen glands in the back & sides of the neck , never vaccinated (rubella)
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ADVISE:

"Newborn rash":

- It is a raised, **red rash** that **looks like insect bites**. Each spot may appear for only a few minutes or several hours and then another spot will appear in different place. This **may go on for about a week** and **nothing can be done** for it . In time, it will just fade away. It **does not itch or bother the baby in any way.**

Face rash:

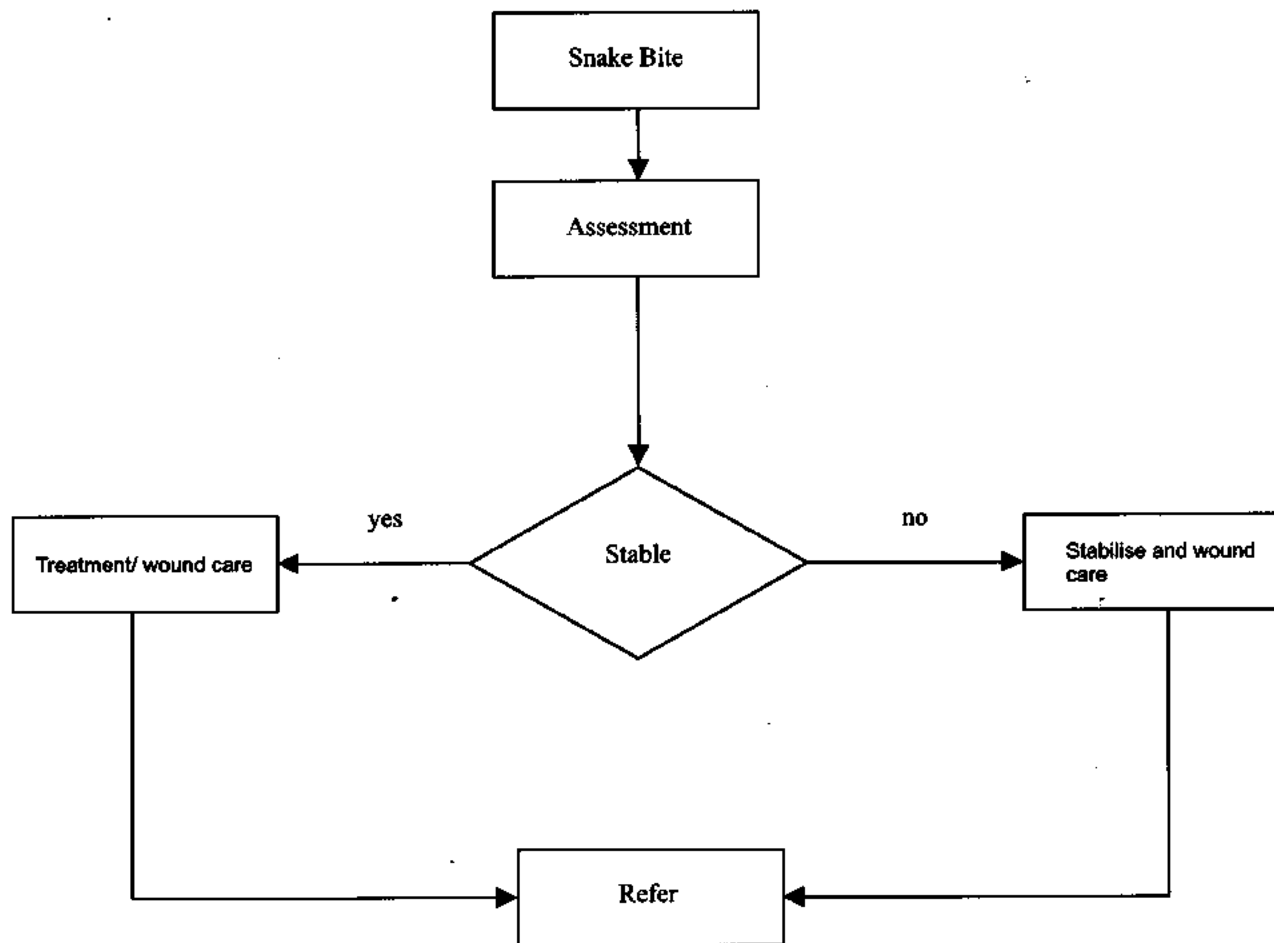
- Shortly after birth you may see **small whitish papules or pimples on your babys face.** This is a common condition **called milia** which is cause by blocked oil glands. It will **come and go on its own for several weeks** and **needs no treatment. Do not squeeze the pimples** – it's **painful** for the baby and could **cause an infection**

- When your baby drools or spits up onto his bed sheets, he may get a red rash on his cheeks or chin **from the saliva or milk** rubbing on his skin. This rash is best **treated by applying recommended ointment to the rash before laying your baby down.**

Diaper rash:

- Change your baby frequently and clean diaper area well at changing times. If you are away from home where no water is available, carry moist towelettes or a small bottle of baby lotion and cotton balls in your diaper bag.
- Avoid the prolonged use of disposable diapers and plastic or nylon pants. These hold in moisture and ammonia which can irritate your babys skin.
- Soap and detergents can irritate a babys skin. Rinse diapers thoroughly after washing (this may require several rinse cycles).
- If your baby does develop diaper rash, keep the diaper area as dry as possible. Expose the rash area to air with no ointment for least 15 minutes, four times a day. To protect the skin from further irritation during sleep, cover the rash area with a diaper ointment such as recommended.
- If these steps do not cure the diaper rash in a few days, please see the doctor.

29. FLOW CHART - MANAGEMENT OF SNAKE BITE



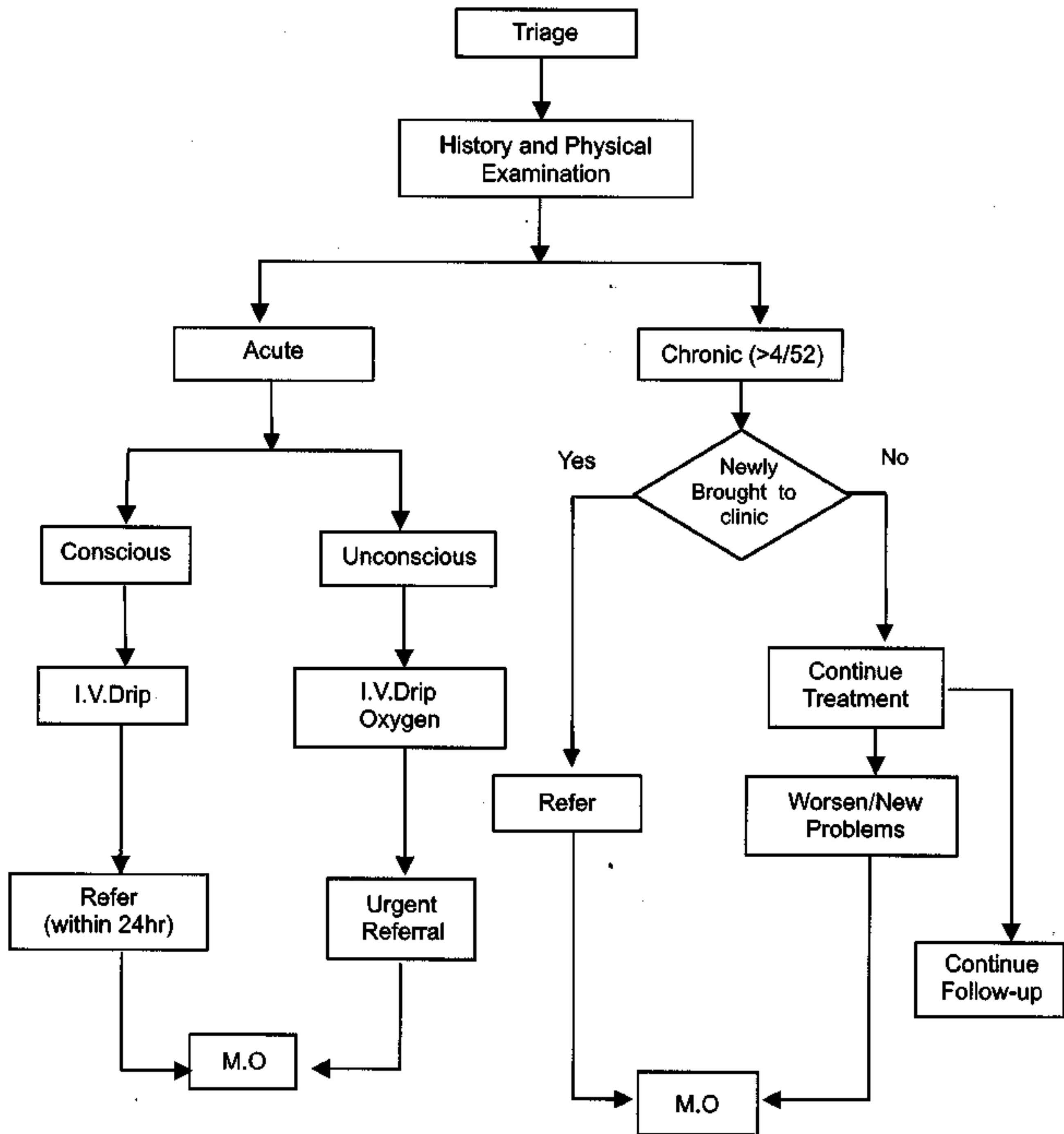
MANAGEMENT OF SNAKE BITE

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
29.	**Management of Snake Bite**	**Biodata** • Name, Age • Sex • Occupation **Present History** • time of occurrence • site of bite • type of snake • place of occurrence **Associated symptoms:** • Dyspnoea • difficulty in speaking • pain	**1. Registration** **2. History taking** **3. Physical Examination :-** • **Assess patient's general condition** – Airway – Breathing – Circulation – Level of consciousness – Vital signs : BP, Pulse rate, Resp Rate, pupils-size & reactivity	• All patients should be registered and history taken • All patients should be examined as indicated	R18 R24 R28 R33 R64	**Equipment** - B/p set - Stethoscope - I/V set - Emergency Trolley - Bandages & splints **Drug/vaccines/ solution** – Normal saline etc. – Inj.ATT – Emergency drugs eg. Atropine, adrenaline etc. - Inj. Hydrocortisone

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		• swelling • bleeding • vomiting • haematemesis • headache • blurring of vision • numbness • paralysis • dysphagia • abdominal pain • pain over the groin	• **Local Examination for:** Swelling, local reaction, bleeding, bitten site i.e. one or paired puncture wound ▪ Systems review Lungs, abdomen CNS **Principles of management** • **Wound management** - keep patient warm and as still as possible - do not wash/manipulate the wound/apply ice/use a tourniquet - immediately bandage the bitten site firmly (not too tight) using a crepe bandage . Extend above the site 15 cm. - splint the limb to immobilize. - Injection ATT 0.5 ml - vital signs.	• All cases of snake bite should be managed as indicated		

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		• Past medical /surgical history - DM - HPT - IHD Drugs eg. warfarin	• **Unstable patients :-** - Administer IV infusion e.g. N/S - Maintain airway, give O2, ½ hourly observation **Criteria for referral :** All cases of snake bites (to refer with dead snake if possible)	• Refer all cases of snake bites •		

30. FLOW CHART - MANAGEMENT OF STROKE



MANAGEMENT OF STROKE

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
30.	**Management of Stroke**	**1. Bio-data** – Name – Age – Gender – Race – Occupation	**1. Put patient in a comfortable position**	All cases should be in comfortable position	R63	**Equipments** • B/P set • Stethoscope • IV Drip — set & fluids • Glasgow coma scale chart • Portable Oxygen set • Resuscitation set • Sucker
			2. Registration	Register all patients		
		2. History • Present History • Past medical / surgical history • Drug history/ substance abuse • Social history • Family history	**3. History Taking** Present History • Onset • Severity • Character • Look for the following signs & symptoms (warning signs of Transient Ischaemic Attack) • Sudden numbness / weakness of face, arm or leg • Slurring of speech or difficulty in understanding simple statements	All patients' history should taken and recorded		

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			• Sudden loss of vision in one or both eyes, blurred vision or double vision • Difficulty walking, loss of balance or coordination **Past medical / surgical history** • Hypertension • Diabetes • Heart diseases • Stroke • Thyrotoxicosis • Drug history/ substance abuse **Social history** • Smoker • Alcohol **Family history** • Hypertension • diabetes mellitus • heart diseases, stroke			

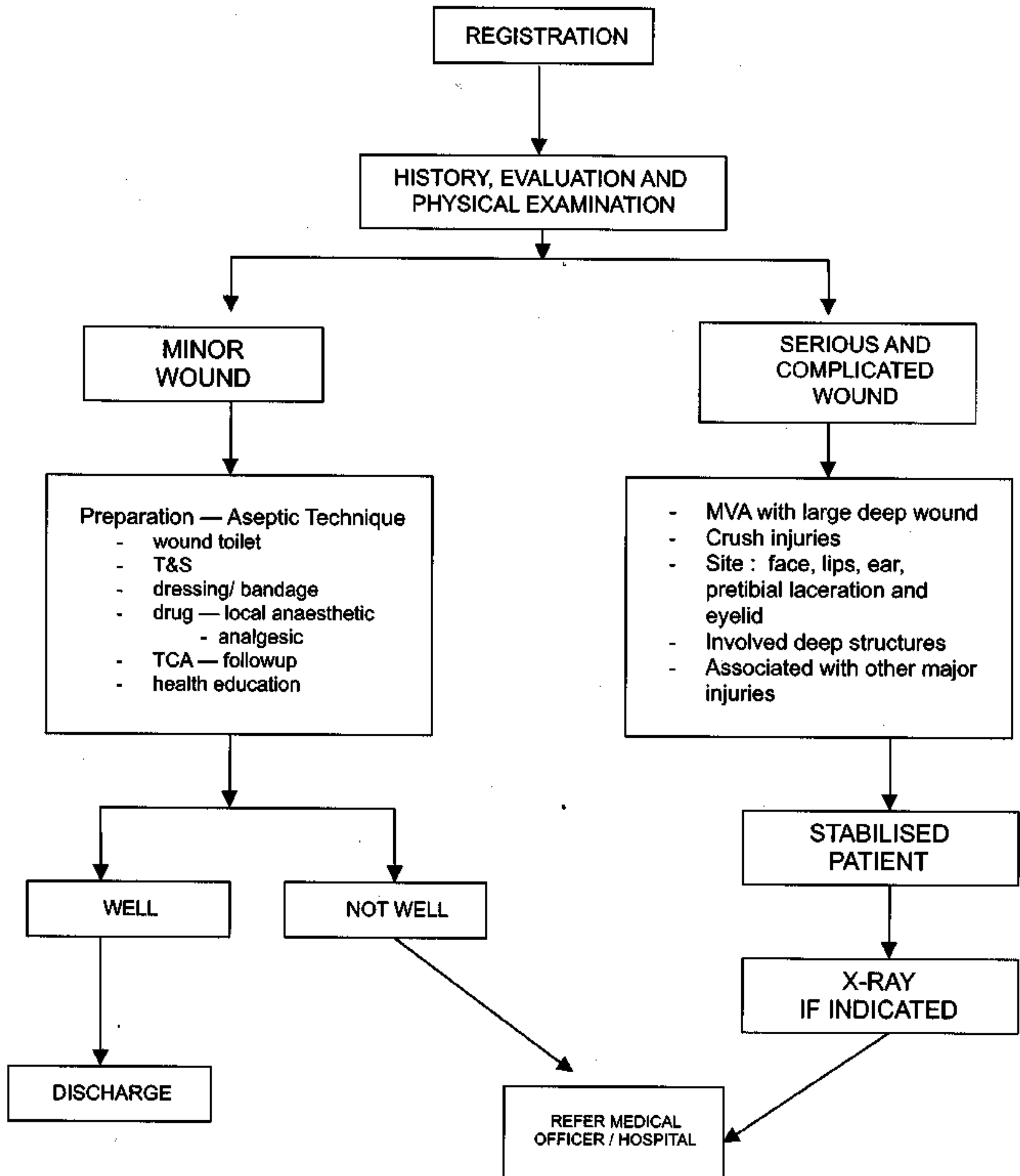
BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			4. Physical Examination: **Assess general condition** Check for level of consciousness If unconscious, rate according to Glasgow coma scale and observe ABC:- Airways — ensure airways is not blocked Breathing Circulation Record and monitor vital signs - Blood Pressure - Pulse rate — look for irregular pulse rate; (underlying heart disease; atrial fibrillation. - Breathing (rate & pattern) - Temperature - Look for presence of ankle oedema - Corotoid bruit - Body Mass Index	All cases should be examined and assessed as indicated		

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			Systemic CVS – Apex beat – Irregular rhythm **Respiratory.** – Air entry – Look for basal crepitations **CNS** – Tone – Power reflexes	All cases should be examined and assessed as indicated		
			5. Laboratory Investigation • Hb (polycythaemia) • TWDC (for underlying infection) • Random blood sugar (Hypo/DM) • Blood lipid • Platelet count • PCV • ECG	For all cases as indicated		

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			6. Management **Acute Cases** Perform resuscitation of unconscious patient • Set I/V Drip • Administer Oxygen • Monitor patients vital signs **Chronic Cases** • Assess general condition • Continue present medication and treatment	Appropriate management for all patients as indicated		
			7. Health Education for the patient and carers • Emphasis on non-pharmacological management and prevention of secondary stroke • Advise on smoking ceasation • Diet and exercise	All patients and carers should be given the appropriate Health Education		

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			8. Referral • All acute cases need to be referred to M.O / FMS / hospital • Newly brought in cases of chronic stroke • Chronic stroke with complication • Recurrent stroke	Refer all cases of stroke as per criteria		

31. FLOW CHART FOR TOILET AND SUTURING

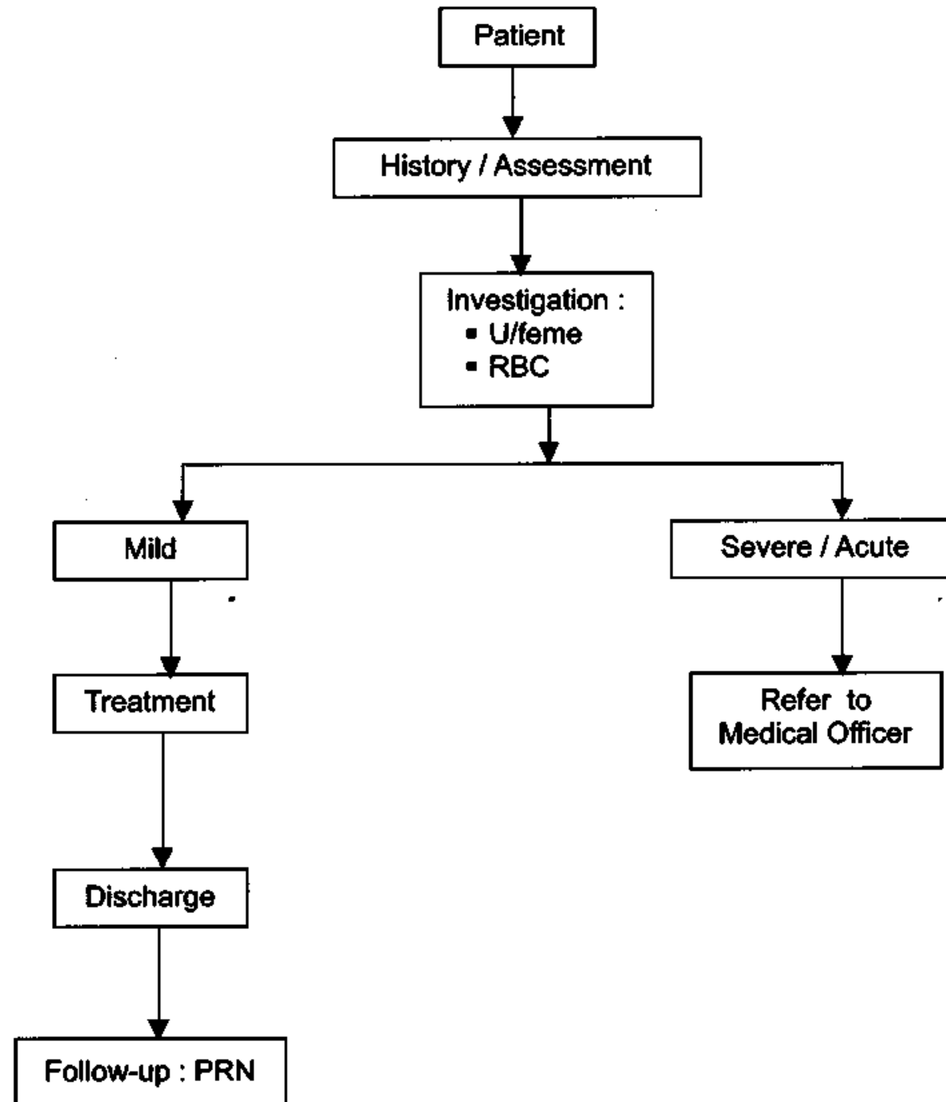


MANAGEMENT OF TOILET AND SUTURING

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
31.	**Management of Toilet and Suturing**	**1. Bio-data** • Name • I/C No • Age • Sex / Race **2. History of present illness** • Time of injury • Mechanism of • injury • Velocity of injury • Site of injury • Blunt/ crush injury	**1. Registration** **2. Physical examination** - vital sign (BP/Pulse) - site of wound - evidence of contamination - involvement of deep structure - abnormality of limb - loss of function	Register all cases All cases should be examined and findings recorded	R2 R17 R18 R19 R20 R24 R68	**Equipments** - B/p set - Stethoscope - Angle poise lamp - Sterile glove - T&S Sets - Needles 21G,23G - Sutures Daflon size 3,4,5 - Dressing sets - Surgical scissors - Sterile gauze and cotton - Antiseptic lotion - Splints - Plaster - Bandage

Bil.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		3. Other History - Medical (e.g. DM) - Drug/social - Alcohol - Drug allergy	**4. Investigation** - Dextrostix - X-ray	if diabetic if indicated		- I/V set and solution - Resusscitation kits
			5. Management • Simple wound no need referral - Wound toilet - Aseptic technique - T/S - Drugs (antibiotic if indicated, analgesic) - TCA / Follow-up	All cases should managed as indicated		**Drugs** - Local Anaestetic (lignocaine 1&2%) - Analgesics - Antibiotic
			6. Criteria for Referral	All cases of complicated wounds should be referred to MO		

32. FLOW CHART - MANAGEMENT OF URINARY TRACT INFECTION



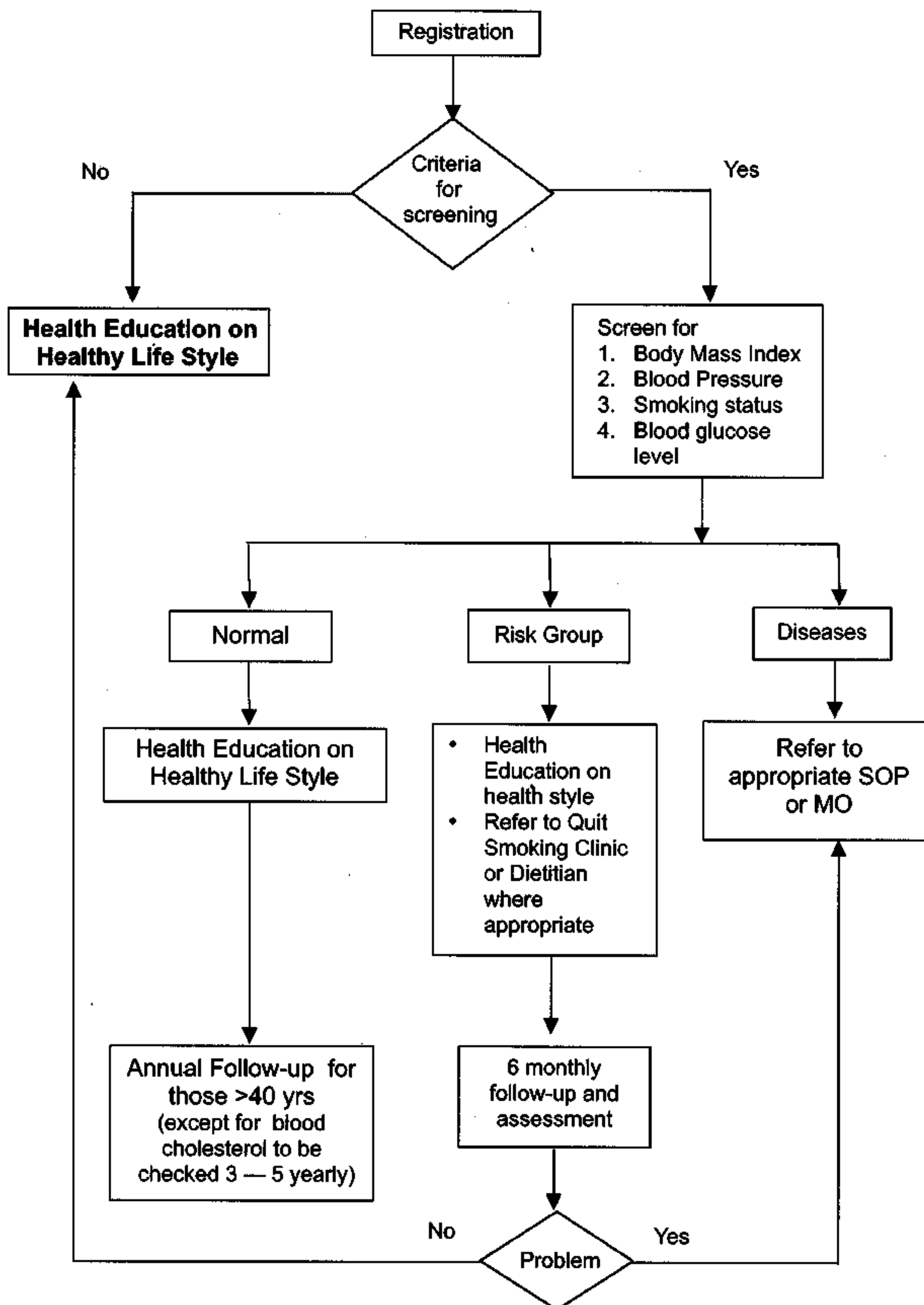
MANAGEMENT OF URINARY TRACT INFECTION

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
32.	**Management of Urinary Tract Infection**	**1. Bio-data** • Name • Age • Sex • Occupation **2. History** - Dysuria - Frequency of micturation - Pain suprapubic - Discomfort suprapubic - Haematuria - Fever - D/Mellitus	**1. Registration** **2. History taking** **3. Physical Examination** • General Condition • Vital Signs — temperature • Pulse, Respiration, BP • Hydration • Pallor • Abdominal Examination for: Tenderness Renal (renal punch) Loin (loin tenderness) Distension of bladder Percussion (dull note / resonance)	• All cases should be registered and the history recorded All cases should be examined as indicated	R69	**Equipments** • Thermometer • BP Set • Stethoscope • Glucometer

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			4. Laboratory Investigation • Urine Feme/ C&S • Renal profile/ Bld. TBC	• For all cases		
			5. Treatment • Pain — give analgesic • Spasm — Give antispasmodic • Antibiotic for simple infection Eg Bactrim /Nitrofurantoin/	• Give treatment as indicated		
			6. Attention to special groups • Children < 5 years • Vesico-ureteric reflux • Congenital Abnormality • Pregnancy • Suspected underlying diseases Calculus Benign prostate hypertrophy	Refer accordingly		

No.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			7. Health Education	All cases should be given Health Education		
			8. Refer Cases to Doctor if : ▪ Fever ▪ Haematuria ▪ Children < 5yrs with UTI • Patients with recurrent infections	Refer all cases as per referral criteria		

33. FLOW CHART - MANAGEMENT OF WELL ADULT SCREENING



MANAGEMENT OF WELL ADULT SCREENING

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
33.	**Management of Well Adult Screening**	**1. Bio-data** – Name – Age – Gender – Race – Occupation	**1. Registration**	All patients must be registered	R9 R11 R12 R14 R15 R26 R29	**Equipments** - B/P set - Stethoscope - Weighing scale with height (meter) - Pap smear sets
		2. Screening Criteria Age > 35 years Risk factors - Obese - Smoker - Family history of Hypertension, diabetes mellitus, heart diseases and cancer	**2. Screen the following** Body Mass Index (BMI) - Smoking status - Blood pressure - Blood glucose - Blood cholesterol - Pap smear (female - Self-breast examination	Screen all patients as indicated	R30 R42 R43 R44 R48 R71 R72 R73	- Glass slides - Blood samples tubes with suitable anti-coagulant - Syringes - Needles - Glucometers - Glucometer strips - BMI chart

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
		3. Presence of symptoms - Symptom of diabetes - Chest pain - Breathless - Severe headache - numbness	**3. Management** **Criteria for patients considered to be normal** - BMI 18.5 - <25 - Non smoker - Blood Pressure <130/85 mmHg - Random blood sugar < 7.0 mmol/L	**<u>Note</u>** For those normal give health education with emphasis on Healthy Life Style -Annual follow-up for those >40 years with continuing Health Education		

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			Criteria for risk group – BMI > 30 – Smoker – Systolic BP 130-139 mmHg – Diastolic BP 85-89mmHg – Impaired glucose tolerance MGTT-7.8-11 mmol/L – Cholesterol >5.2 mmol/L **Note** – Health Education (diet,exercise,quit smoking)	**Note** - Health Education (diet, exercise, quit smoking) - Refer to quit smoking clinic and dietitian - 6 monthly follow-up and assessment Give Health Education to all patients		

BIL.	PROCESS	BASIC DATA	STANDARD OPERATING PROCEDURE	STANDARD	REFERENCE	EQUIPMENTS / DRUGS
			4. Referral Those found to be suspected HPT, DM and hyperlipidemia **<u>Indication for referral</u>** – BP > 140/90 on 3 occasions – Diabetic — FBS >7.8 mmol/L – Hypercholestrol mia >6.5mmol/L a. High risk group with problem – Refer to quit smoking clinic for smoker – Refer to dietitian for obesity, high cholesterol and impaired glucose tolerance.	All patients fulfilling criteria are referred		

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