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Annex 12
Development of Clinical Guidelines for Sub-District Level

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ABBREVIATIONS

ARI	Acute Respiratory Infection
BMA	Bangladesh Medical Association
BMRC	Bangladesh Medical and Research Council
CBC	Complete Blood Count
COPD	Chronic Obstructive Pulmonary Disease
C/S	Culture Sensitivity
CXR	Chest X-ray
DH	District Hospital
DG	Director General
DGHS	Directorate General of Health Services
ECG	Electrocardiogram
EMO	Emergency Medical Officer
GIT	Gastro Intestinal Disease
H2RA	Histamine 2 Receptor Antagonist
Hb	Haemoglobin
HEU	Health Economics Unit
HP	Hypertension
IHD	Ischaemic Heart Disease
IMCI	Integrated Management of Childhood Illnesses
IMO	Indoor Medical Officer
KfW	German Development Bank
MA	Medical Assistant
MI	Myocardial Infarction
MIS-Health	Management Information System- Health
MLSS	Member of Lower Sub-ordinate Staff
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
MP	Malarial Parasite
NSAID	Non- Steroidal Anti Inflammatory Disease
OPC	Organophosphorous Compounds
ORS	Oral Rehydration Salt
PBF	Peripheral Blood Film
PEM	Protein Energy Malnutrition
PPI	Proton Pump Inhibitor
RDT	Rapid Diagnostic Test
RP	Resident Physician
R/E	Routine Examination
SSK	Shasthyo Surokhsha Karmasuchi
SSN	Senior Staff Nurse
TOR	Terms of Reference
UHC	Upazila Health Complex
USG	Ultrasonography
UTI	Urinary Tract Infection

1 EXECUTIVE SUMMARY

The Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MOHFW) is planning to pilot a health protection scheme titled “Shasthyo Suroksha Karmasuchi” (SSK) with support from German Development Cooperation through KfW and GFA Consulting Group. This scheme is being developed in order to increase access to hospital inpatient care by reducing financial barriers. The SSK pilot will require clinical guidelines to support consistent decision-making processes in quality patient care.

Clinical guidelines are the detailed outline of steps to be followed in the treatment of a patient. These need to be developed and implemented to reduce errors and unjustified variations in clinical practice as well as to contain costs. These guidelines provide a more rational basis for referral, promote efficient use of resources, and also provide a focus for continuing education.

The objective of this study is to identify availability of clinical guidelines on top-10 diseases for Upazila (subdistrict) levels, and analyse missing clinical guidelines in order to develop them and their utilization in SSK pilot areas.

A recently compiled list of guidelines reveals that the guideline development process is not well documented and coordination is not evident. Guidelines for the ten most reported diseases for inpatient care at the Upazila Health Complex (UHC) level are not available. Although the Directorate General of Health Services (DGHS) has developed some clinical protocols (top-down-approach), these have not been published and field-tested at UHC level for their suitability. Clinicians at UHC level need simple, patient specific, user-friendly guidelines.

Several methodological techniques were used, such as desk review, interview, and assessment of the status of available guidelines in accordance with the opinion of the stakeholders of the pilot Upazilas and other experts. Group discussions were held and field visits to a SSK pilot area, namely Ghatail UHC & Tangail District Hospital were made. Furthermore, a workshop with the stakeholders was organized at the Tangail District Hospital.

The guidelines on top-10 diseases in this study were developed after consultation with users at the UHCs initially, then with subject specialists at district and tertiary level hospitals of Dhaka, and finally through reality checks in a workshop organized at the Tangail District Hospital. The guidelines were also prepared by involving the stakeholders (bottom- up-approach). These guidelines should be made available to all physicians of the three pilot Upazilas of Tangail district. More workshops with the doctors of the three pilot UHCs need to be conducted at local level for better understanding of the local situation and also for continuous development, updating, and utilization of clinical guidelines.

2 INTRODUCTION

The Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MoHFW) is supported by German Development Cooperation (financed through KfW) and GFA Consulting Group with technical assistance in the areas of health financing/ health economics/ equity. The HEU is planning to pilot a health protection scheme titled “Shasthyo Suroksha Karmashuchi” (SSK) in order to increase access to hospital inpatient care by reducing financial barriers. The SSK pilot will require clinical guidelines to support consistent decision-making processes in quality patient care.

Clinical guidelines are systematically developed statements designed to help practitioners to make decisions about appropriate health care for specific circumstances. Clinicians need simple, patient specific, user-friendly guidelines. Many encounters with patients involve multiple decisions, so the key to developing usable guidelines is to identify only the most important ones. These decisions and their consequences may often be difficult to map, and remarkably little is known about how doctors actually make decisions.

3 OBJECTIVES

3.1 General Objectives

As stated in the Terms of Reference (TOR), the general objective of this study is to identify availability of top-10 diseases clinical guidelines for Upazila (subdistrict) levels, and analyse missing clinical guidelines in order to develop them and their utilization in SSK pilot areas, that will assist providers in diagnosing and treating medical conditions and to ultimately contribute to the improvement of service delivery at Upazila (subdistrict) levels.

3.2 Specific Objectives

- Identify top 10 indications in the framework of SSK;
- Identify availability of clinical guidelines for top 10 indications & analyse missing clinical guidelines;
- Initiate development for missing clinical guidelines, including approval procedures;
- Proposal for utilization of clinical guidelines in SSK pilot areas, including training needs assessment;
- Proposal for continuous development, updating & utilization of clinical guidelines;
- Improve concept note as necessary.

3.3 Methodology

According to Management Information System (MIS) of Directorate General of Health Services (DGHS), the top-10 diseases of Ghatail, Modhupur & Kalihati Upazila Health Complexes (UHCs) are similar, but not identical. There are some variations of diseases in ranking and also some specific diseases in each of the UHCs are not common in all UHCs.[1] So this study in total considers up to 13 diseases:

1. Diarrhoea,
2. Assault,
3. Pneumonia,
4. Peptic ulcer,
5. Enteric fever,
6. Fever of different ages,
7. Acute Respiratory Tract Infections (ARI),
8. Poisoning,
9. Asthma,
10. Chronic Obstructive Pulmonary Disease (COPD),
11. Anaemia,
12. Urinary Tract Infections (UTI),
13. Hypertension.

These top 13 diseases cover top 10 diseases of Ghatail, Modhupur, and Kalihati Upazilas of Tangail District.

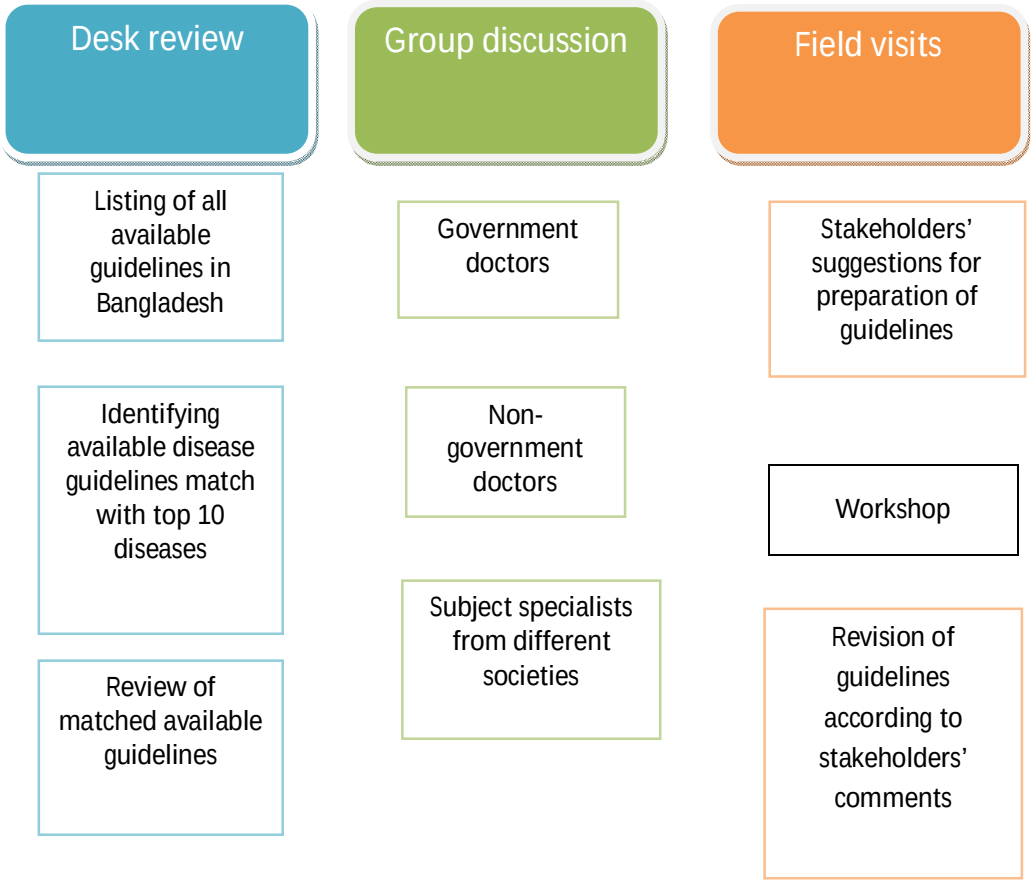
Several methodological techniques were used to meet the above objectives. This included a desk review as well as assessment of the status of available guidelines in accordance

[1] Health Bulletin 2012, MIS, DGHS, MOHFW

with the opinion of the stakeholders of the pilot Upazilas and other experts. Group discussion and consultations were held with Government physicians, non-government physicians, and medical specialists. Moreover, field visits to an SSK pilot area, namely Ghatail UHC & Tangail district hospital were made. Interviews were used for training need assessment for the health personnel at the UHC as methodology.

3.3.1 Key Stages of Clinical Guideline Development

Table 1: Diagrammatic representation of the development of clinical guidelines



3.3.2 Desk Review

Over the last decade, worldwide development of clinical guideline has become a major clinical trend, which has united general practitioners, specialists, and consultants for the common goal of excellent patient care. The desk review entailed a comprehensive stocktaking of currently available guidelines used in Bangladesh and a review of their flowcharts for the Top 10 diseases of 3 pilot Upazilas.

3.3.3 Group Discussion

Group discussions were held several times with medical specialists of Ghatail, Kalihati, Modhupur, Tangail and various hospitals in Dhaka for development of new guidelines. Several meetings were held with the President of the Bangladesh Medical Association (BMA), who is also the President of the Gastroenterological Society of Bangladesh. Members of Gastroenterological Society of Bangladesh who are Professors at various medical colleges and universities contributed to the development of the guideline on Dyspepsia/ Peptic ulcer. Similarly, members of the Asthma Association of Bangladesh contributed to the development of Asthma and COPD guidelines.

Group discussions were held several times with multidisciplinary specialists in areas such as general medicine, surgery, gynaecology, obstetrics, and paediatrics for the preparation of the disease guidelines. Opinions and comments of several specialists were incorporated, including those of UHC doctors who attended workshops at Dhaka during the month of June 2013, organised by the Directorate General of Health Services and Bangladesh Medical Research Council (BMRC).

3.3.4 Field Visits

Field visits to SSK pilot areas such as Ghatail and Tangail District Hospital were done. At the Upazila Health Complex, the consultant interviewed the following persons: Upazila Health & Family Planning Officer, Junior Consultant Paediatrics, Junior Consultant Cardiology, Medical Officer of Integrated Management of Childhood Illnesses (IMCI), and Indoor Medical Officer etc. The consultant along with Mr Azmal Kabir, Research, and Monitoring & Evaluation Specialist of GFA Consulting Group based at Dhaka, visited a training session on IMCI at Ghatail UHC. All the doctors were quite informative in their respective discipline. They were asked about the ways they diagnose and treat the top 10 diseases of their UHC, whether they are acquainted with clinical guideline of diseases, their suggestions regarding development of clinical guidelines, and whether they need any training regarding clinical guideline of top 10 diseases.

At the Tangail District Hospital, the consultant interviewed the following persons:
Assistant Director of Tangail General Hospital (250 beds), Senior Consultant Cardiology, Junior Consultant Cardiology, Resident Physician (RP) Medicine, Senior Consultant Gynaecology, Junior Consultant Gynaecology, Senior Consultant Orthopaedic Surgery, Junior Consultant Orthopaedic Surgery, Senior Consultant Medicine, Senior Consultant Surgery, and a couple of medical officers (MOs).

The interviews were conducted during their busy hour of seeing patients. They were also asked about the way they diagnose and treat the diseases in their respective discipline, and whether they have any clinical guideline for those diseases.

Furthermore a workshop was conducted at the Tangail District Hospital on the 29th June 2013 with the doctors of Ghatail, Modhupur, Kalihati UHCs and Tangail DH. This workshop was designed to cross-check the top 10 disease draft guidelines with the participants, using a simple practical flow chart (participants list is attached). The participating doctors also gave comments and suggestions on those clinical guidelines according to their context i.e. UHC level. Accordingly, their suggestions and comments were incorporated and the draft guidelines were revised and updated.

4 RESULTS AND FINDINGS

4.1 Availability of Existing Clinical Guidelines

In our earlier study, we identified 101 clinical protocols and therapeutic guidelines available in Bangladesh[2]. The majority of these guidelines address broad areas such as child health, maternal health, HIV/AIDS, tuberculosis, malaria, kala-azar etc. The Asthma and COPD Guidelines developed by the 'Asthma Association of Bangladesh' is a huge document containing 126 pages and is not available at Upazilas and district level. There are no flowcharts for UHC doctors in those guidelines. Similar situations exists more or less for other diseases as well. Clinicians need simple, patient specific, user-friendly guidelines. It is not clear how and why a particular disease was selected for guideline development. It is also not clear whether user friendliness of the developed guidelines was tested with practitioners at the various levels of service provision.

There were also guidelines for diarrhoea, pneumonia & ARI as these are included in the Integrated Management of Childhood Illnesses (IMCI). The IMCI guidelines are available at the UHC level and some of the doctors are trained on IMCI. Some clinical protocols were developed by the DGHS, such as acute respiratory distress, jaundice, acute poisoning, diabetes mellitus, acute abdomen, unconscious patients, hypertension, acute bleeding, and acute febrile illness, but those have not been published yet following existing procedures. They are not really focussed for UHCs and some are not disease specific to Upazila level. The guidelines and protocols are prepared and implemented by DGHS (top-down-approach) rather than by the involvement of service providers (bottom-up-approach).

4.2 Development Stages of New Guidelines

New guidelines of top 10 diseases were developed in this study after consultation with users at the UHCs, subject specialists at the district and tertiary level hospitals of Dhaka and after reality checks at a workshop organized at Tangail DH with the stakeholders of UHCs and DH on 29 June 2013. The workshop participants' suggestions were taken into account and incorporated in the development of final guidelines (bottom- up-approach). The workshop participants, including the three pilot Upazilas, recommended to develop clinical guidelines on 50 diseases in different phases of the pilot project, because the diseases of the women and some common diseases/ conditions faced at the emergency department of the pilot UHCs did not appear in the top 10 diseases of MIS Health Bulletin 2012 of DGHS.

4.3 Approval Procedure of Guidelines

It has been agreed with HEU that these guidelines will be used in three pilot UHCs (Kalihati, Ghatail & Modhupur UHCs) of Tangail district. The approval of these guidelines will be given by the DG, HEU as these are for the pilot areas only. Continuous utilization by doctors of the pilot UHCs and the experiences made by them will lead to an update of these guidelines. Final approval could be issued by the Ministry of Health and Family Welfare in the future.

[2] Assessment and availability of clinical and therapeutic guidelines and protocols and recommendations for preparing additional clinical and therapeutic guidelines and protocols for all levels of service delivery, June 2012.

4.4 Training Needs Assessment

Consultants and medical officers of Ghatail UHC stated that some newly recruited medical officers have received orientation training from the 250 beded Tangail General Hospital for 3-4 days, but this training had been mainly administrative. No training on clinical guideline was conducted, except for IMCI. The clinical guidelines are also not available at UHC and DH except for the IMCI guideline.

The participants of the needs assessment also stated that newly recruited medical officers need training on emergency management at the UHCs. Furthermore, they mentioned that an emergency management curriculum is virtually absent in the Bachelor of Medicine and Surgery (MBBS) curriculum in Bangladesh. The doctors at the UHCs have to face various emergencies, especially assault, rape cases, acute poisoning, unconscious patients, etc. They need guidelines about these indications and training regarding the management of emergencies.

During informal discussions participants also mentioned that currently emergencies of UHCs are managed by Medical Assistants (MAs), Senior Staff Nurses (male) and on duty MLSS (Ward Boys). So sometimes police cases are registered in general patients register and general patients are recorded in the police register. When a patient gets admission, the Senior Staff Nurse (female) identifies wrong register and overwrites the cases in the register. But this type of overwriting in the register creates problems when doctors are summoned by the court to give witness. Doctors face problems at court when they give testimony on police cases.

Participants also suggested that emergency management training should not only be required for doctors but the whole team of the emergency department of UHCs. The whole team means Emergency Medical Officer (EMO), Indoor Medical Officer (IMO), MA, SSN (male), SSN (in charge, female), on duty MLSS. They also mentioned that Junior consultants do not require training but orientation regarding clinical guideline. Some orientation will also be required for writing up the referred cases. The referral form prepared by the DGHS is attached in Chapter 7, Annex-B.

5 LIMITATIONS, RISKS AND ASSUMPTIONS

Interview with the doctors at the UHC level were done during their appointments with outpatients. So the interviews were frequently interrupted by patient visits, other administrative functions, and phone calls. Due to these constraints it was not possible to gain a full understanding of the local context for the preparation of guidelines. However, conducting workshops at the Tangail DH with the doctors of three pilot Upazilas covered the deficiencies recurring during interviews at the outpatient department of Ghatail UHC. The workshop had only the duration of a few hours. For better understanding more discussions with the local doctors regarding the pros and cons of these guidelines are needed.

6 CONCLUSION AND RECOMMENDATIONS

Clinical guidelines are necessary to be developed and implemented to reduce the errors and unjustified variations in clinical practice, so as to improve the health care quality based on the best practice as well as to contain the cost. These guidelines will provide a more rational basis for referral, promote efficient use of resources, and will also provide a focus for continuing education. Therefore continuous development, updating, and utilization of clinical guidelines are strongly recommended.

These guidelines should be made available to all physicians of the three pilot Upazilas of Tangail District. More information is required on how doctors are trained on guideline use and how guidelines are distributed.

A number of clinical guidelines on the management of asthma have been published in the past, but have not been well disseminated among the doctors in Bangladesh[3]. Clinical guidelines on 50 diseases in different phases of the pilot project need to be developed. More workshops with the doctors of the three pilot UHCs need to be conducted at the local level for better understanding of the local situation and also for continuous development, updating, and utilization of clinical guidelines.

[3] We kindly refer to National Guidelines Asthma & COPD, 2012, Asthma Association of Bangladesh.

7 ANNEX: GUIDELINES FOR TOP-10-DISEASES FOR SSK PILOT IMPLEMENTATION

Annex A: Peptic Ulcer/ Dyspepsia Guideline

Note:

Although we are getting disease diagnosis from UHC level as 'Peptic ulcer' but in reality 'Peptic Ulcer' can't be diagnosed at UHC level (Gastroenterological Society of Bangladesh). So the better term 'Dyspepsia' guideline is preferable at UHC level. Dyspepsia refers to a symptom or set of symptoms that is (are) considered to originate from the gastro duodenal region. The dyspeptic symptoms are:

Epigastric pain

Epigastric burning,

Postprandial fullness or early satiety.

Co-existing and supportive symptoms may be -

Bloating, nausea and vomiting

Common Causes of Dyspepsia

Peptic ulcer disease
Gastroesophageal reflux disease
Gastric cancer and other tumors
Cholelithiasis
Medications, e.g., NSAIDs
Functional dyspepsia

Alarm Features or When to refer?

Unintended weight loss;
Progressive dysphagia;
Recurrent or persistent vomiting;
Evidence of GI bleeding;
Anemia
Family history of gastric cancer
New onset dyspepsia in a patient over 50 years of age
Odynophagia
Unexplained iron deficiency anemia
Palpable mass or lymphadenopathy

Common investigations for dyspepsia:

1. Endoscopy of upper GIT – Gold Standard investigation for dyspepsia
   Ba-meal study -This investigation is not recommended for investigation of dyspepsia today.
2. Investigation to exclude other diseases
   a. USG of abdomen

b. Plain x-ray abdomen

3. Others – As H. Pylori is highly prevalent in Bangladesh. So the serological test (Anti - H. Pylori antibody) is discouraged.

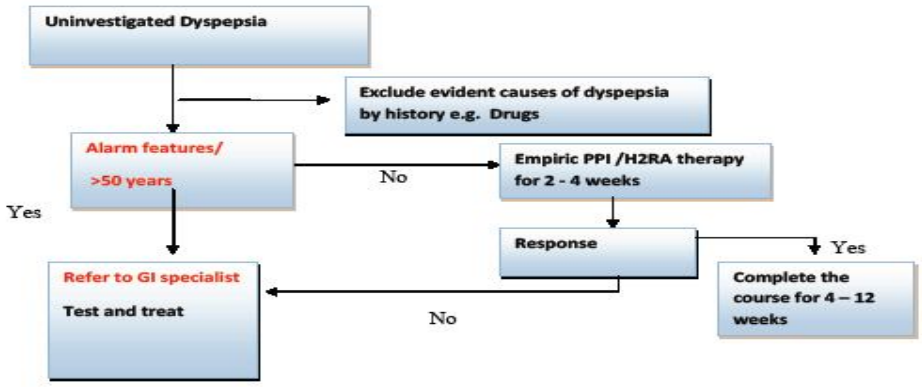
Doses of commonly used anti ulcer drugs:

Omeprazole : 20 mg BD
Pantoprazole : 20 mg OD
Esomeprazole : 20 mg OD
Rabeprazole : 20 mg OD
All should be given for 4 – 12 weeks

Note: Anti- HP therapy should not be given empirically but if really needed should be decided by a gastroenterologist.
Maintenance therapy with PPI/ H2RA is indicated exclusively in some cases of proven Peptic Ulcer Disease.

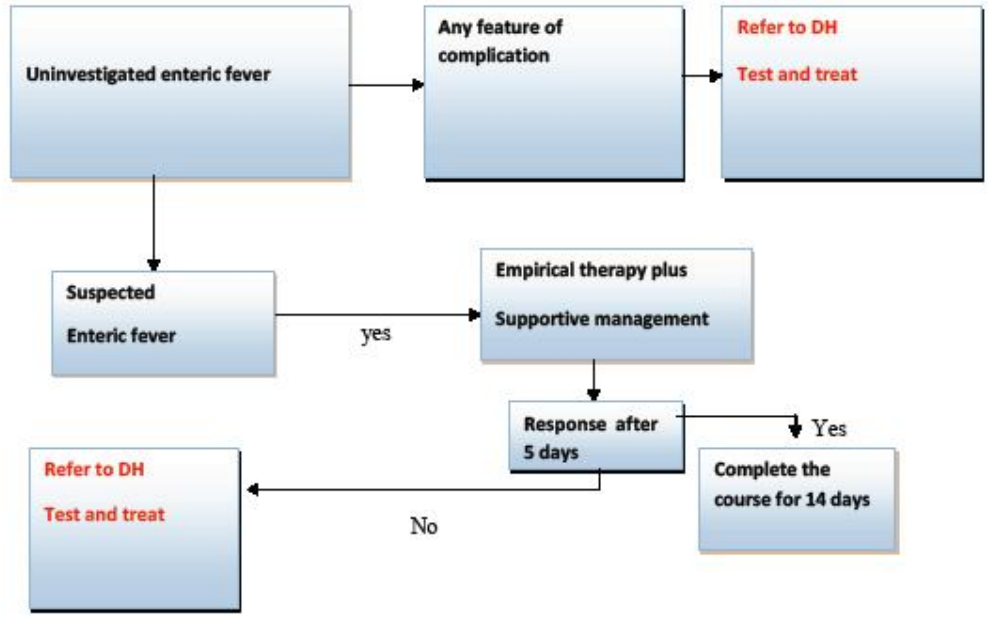
Peptic ulcer/ Dyspepsia Guideline

Management Algorithm for uninvestigated dyspepsia



Annex B: Enteric Fever Guideline

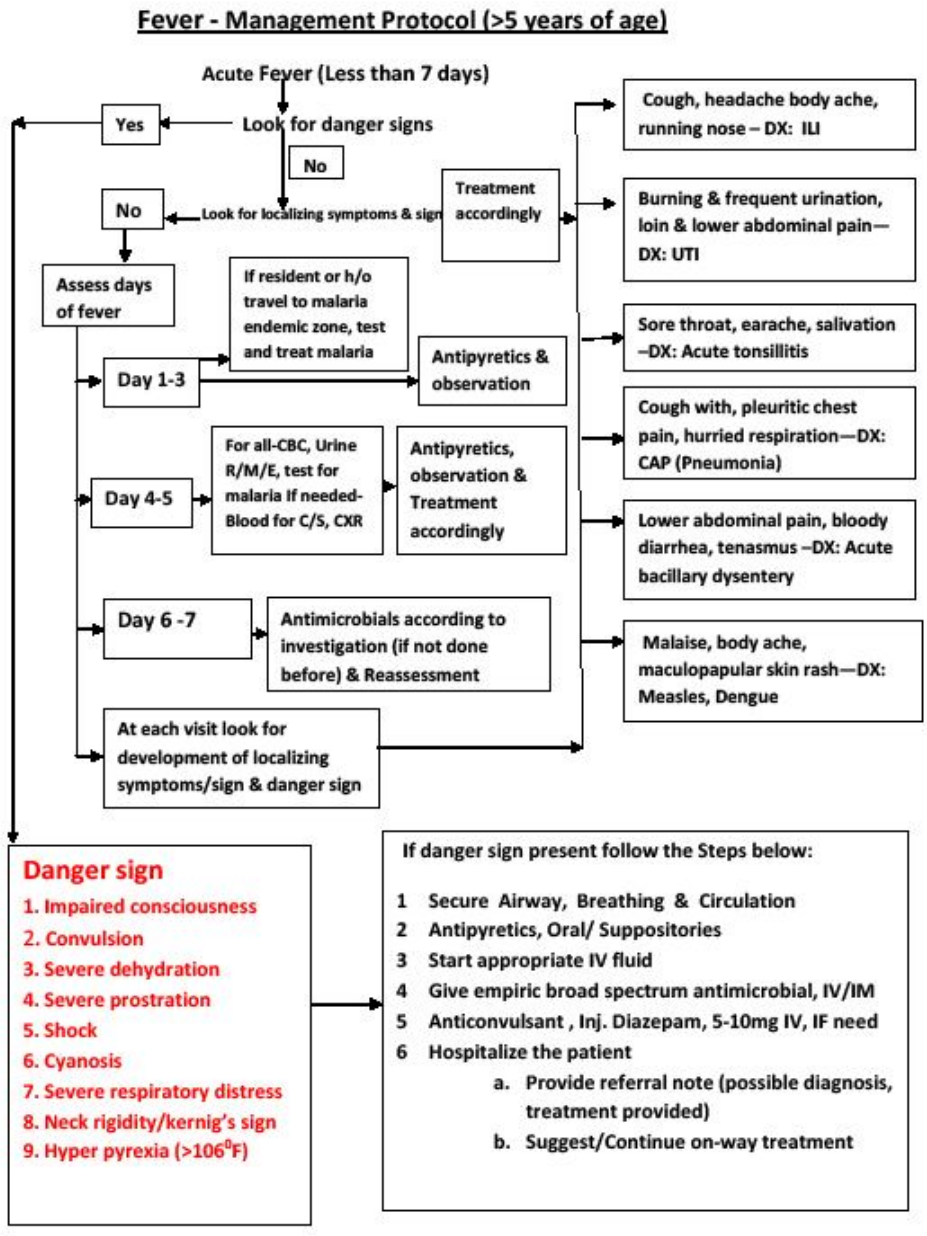
Management Algorithm for uninvestigated Enteric Fever

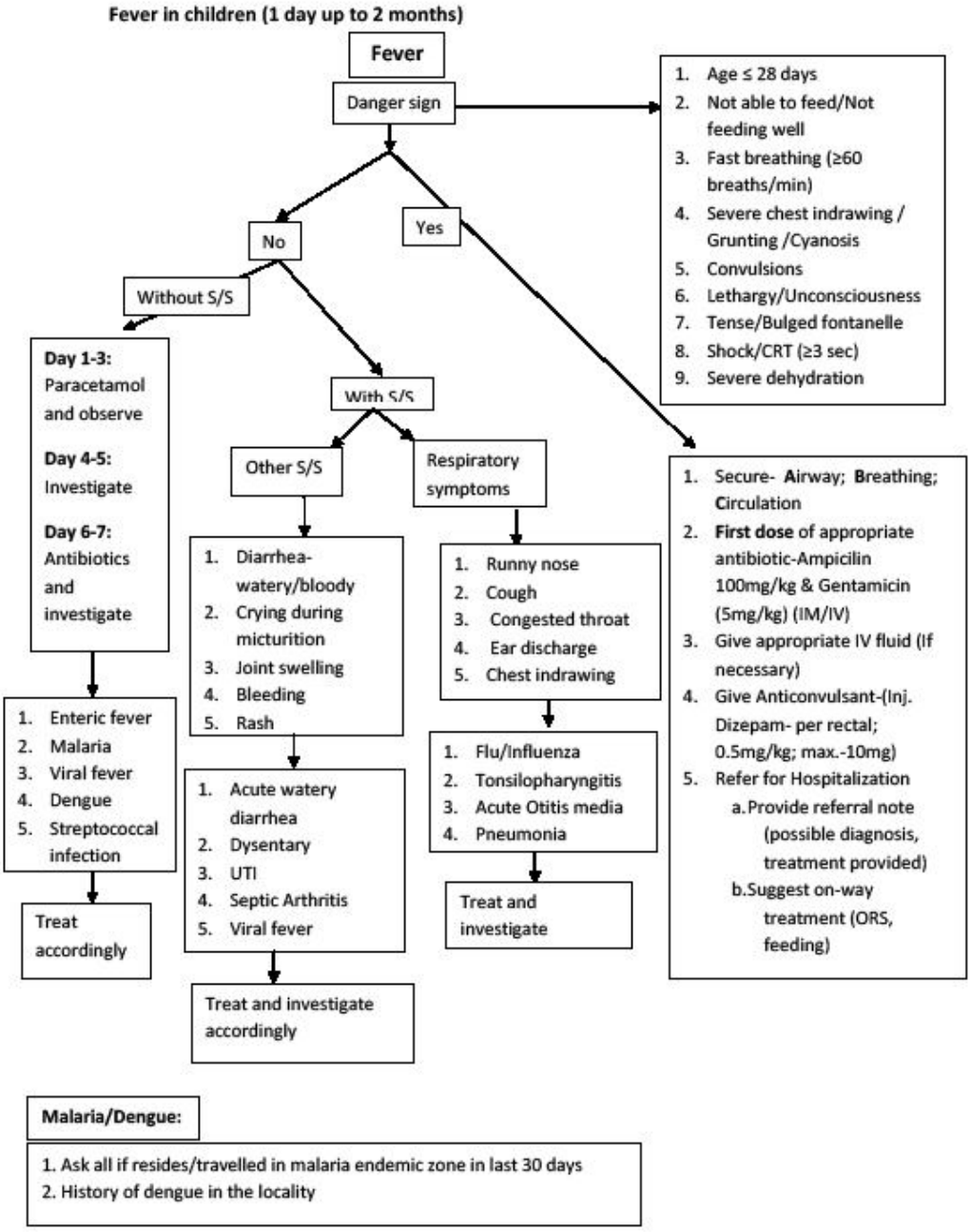


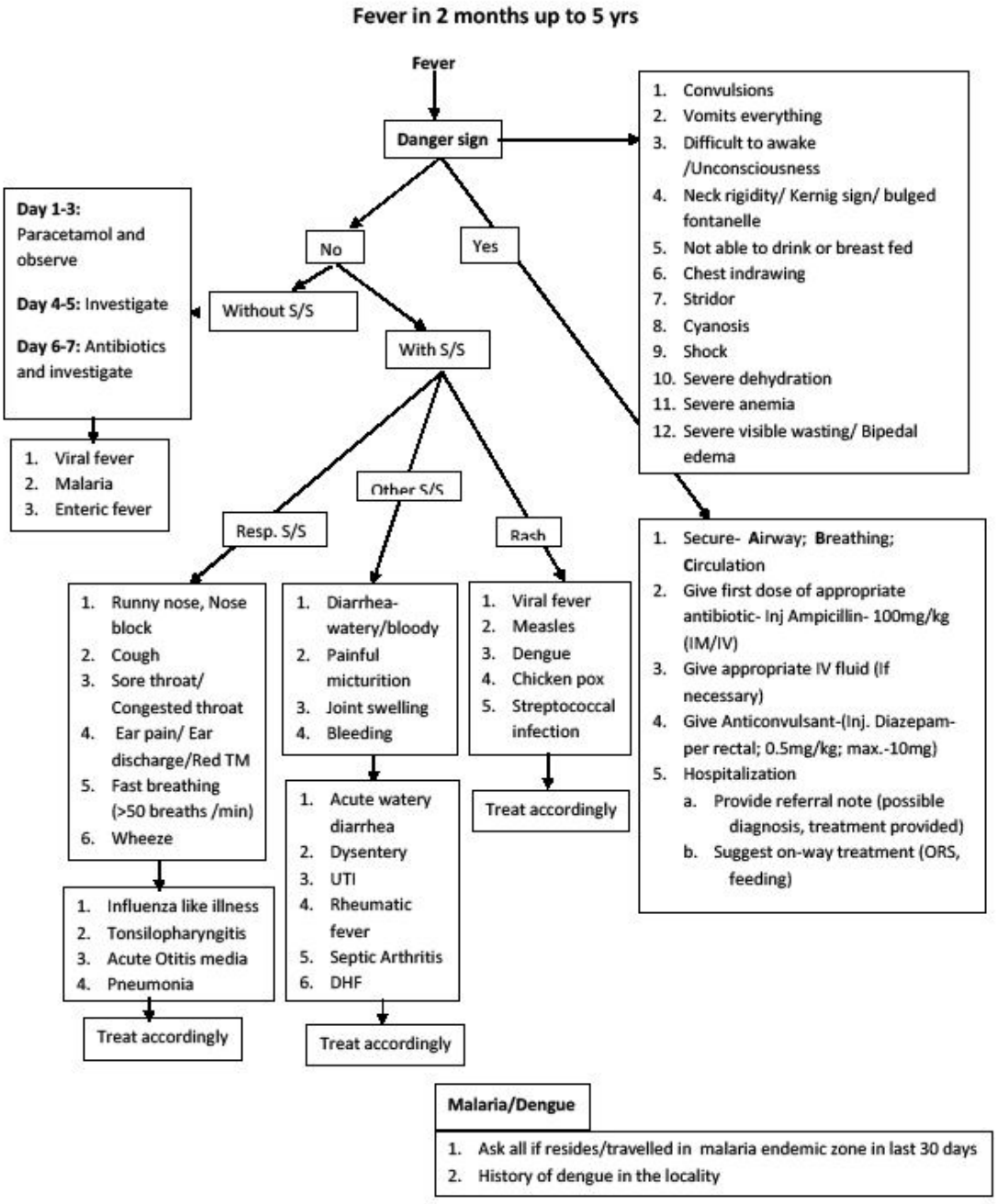
When to Refer:

- No response after 5 days of empirical therapy
- Intestinal perforation
- Intestinal haemorrhage
- Septicemia
- Cholecystitis
- Meningitis
- persistence gallbladder carriage
- bone and joint infection, myocarditis, nephritis

Annex C: Acute Fever Guideline




Fever in children (1 day up to 2 months)
Fever
Danger sign
1. Age ≤ 28 days
2. Not able to feed/Not feeding well
3. Fast breathing (≥60 breaths/min)
4. Severe chest indrawing / Grunting /Cyanosis
5. Convulsions
6. Lethargy/Unconsciousness
7. Tense/Bulged fontanelle
8. Shock/CRT (≥3 sec)
9. Severe dehydration
No
Yes
Without S/S
With S/S
Day 1-3: Paracetamol and observe
Day 4-5: Investigate
Day 6-7: Antibiotics and investigate
Other S/S
Respiratory symptoms
1. Secure- Airway; Breathing; Circulation
2. First dose of appropriate antibiotic-Ampicilin 100mg/kg & Gentamicin (5mg/kg) (IM/IV)
3. Give appropriate IV fluid (If necessary)
4. Give Anticonvulsant-(Inj. Dizepam- per rectal; 0.5mg/kg; max.-10mg)
5. Refer for Hospitalization
a. Provide referral note (possible diagnosis, treatment provided)
b. Suggest on-way treatment (ORS, feeding)
1. Enteric fever
2. Malaria
3. Viral fever
4. Dengue
5. Streptococcal infection
1. Diarrhea- watery/bloody
2. Crying during micturition
3. Joint swelling
4. Bleeding
5. Rash
1. Runny nose
2. Cough
3. Congested throat
4. Ear discharge
5. Chest indrawing
Treat accordingly
1. Acute watery diarrhea
2. Dysentary
3. UTI
4. Septic Arthritis
5. Viral fever
1. Flu/Influenza
2. Tonsilopharyngitis
3. Acute Otitis media
4. Pneumonia
Treat and investigate
Treat and investigate accordingly
Malaria/Dengue:
1. Ask all if resides/travelled in malaria endemic zone in last 30 days
2. History of dengue in the locality


Fever in 2 months up to 5 yrs
Fever
Danger sign
1. Convulsions
2. Vomits everything
3. Difficult to awake /Unconsciousness
4. Neck rigidity/ Kernig sign/ bulged fontanelle
5. Not able to drink or breast fed
6. Chest indrawing
7. Stridor
8. Cyanosis
9. Shock
10. Severe dehydration
11. Severe anemia
12. Severe visible wasting/ Bipedal edema
No
Yes
Day 1-3: Paracetamol and observe
Day 4-5: Investigate
Day 6-7: Antibiotics and investigate
Without S/S
With S/S
1. Viral fever
2. Malaria
3. Enteric fever
Resp. S/S
Other S/S
Rash
1. Runny nose, Nose block
2. Cough
3. Sore throat/ Congested throat
4. Ear pain/ Ear discharge/Red TM
5. Fast breathing (>50 breaths /min)
6. Wheeze
1. Diarrhea- watery/bloody
2. Painful micturition
3. Joint swelling
4. Bleeding
1. Viral fever
2. Measles
3. Dengue
4. Chicken pox
5. Streptococcal infection
1. Secure- Airway; Breathing; Circulation
2. Give first dose of appropriate antibiotic- Inj Ampicillin- 100mg/kg (IM/IV)
3. Give appropriate IV fluid (If necessary)
4. Give Anticonvulsant-(Inj. Diazepam- per rectal; 0.5mg/kg; max.-10mg)
5. Hospitalization
a. Provide referral note (possible diagnosis, treatment provided)
b. Suggest on-way treatment (ORS, feeding)
1. Influenza like illness
2. Tonsilopharyngitis
3. Acute Otitis media
4. Pneumonia
1. Acute watery diarrhea
2. Dysentery
3. UTI
4. Rheumatic fever
5. Septic Arthritis
6. DHF
Treat accordingly
Treat accordingly
Treat accordingly
Malaria/Dengue
1. Ask all if resides/travelled in malaria endemic zone in last 30 days
2. History of dengue in the locality

Tips for management (1 day up to 5 years)

A. Investigation:

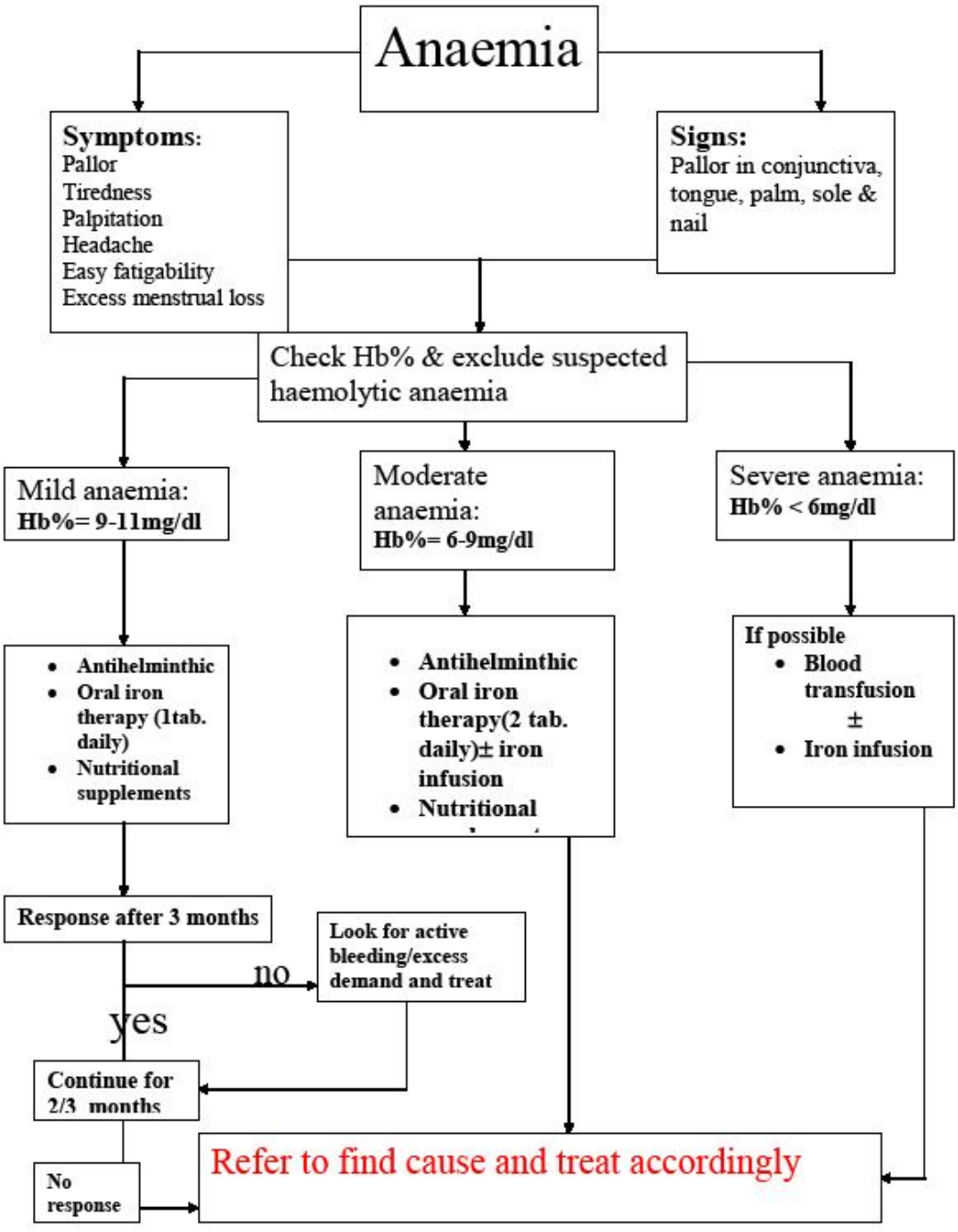
1. On day 1-3:
    a. In patient without focus: Not needed; MP or RDT in patient from malaria endemic zone
    b. In patient with focus (as needed): CBC, PBF, MP or RDT for malaria, CXR, Urine R/E & C/S, throat swab-C/S
2. On day 4-5:
    a. In patient with or without focus (as needed): CBC, PBF, MP or RDT for malaria, CXR, Blood C/S, Urine R/E & C/S, throat swab-C/S
3. On day 6-7:
    a. All patients (as needed): CBC, PBF, MP or RDT for malaria, CXR, Blood C/S, Urine R/E & C/S, Widal test, Anti-dengue antibody, Throat swab-C/S

B. Treatment:

1. Antipyretics (Paracetamol, NSAID):
    a. Paracetamol (15mg/kg/dose, 4-6 hourly, max. 4 doses if temperature is $\geq 101^0$F)
    b. Efficacy is not different between oral and suppository paracetamol preparation
    c. Dose for NSAID: Variable (Ibuprofen - 5-10mg/kg/dose 6-8hourly)
    d. Sponging with luke- warm water (not with ice cool water)
    e. NSAID – Avoid in suspected dengue infection
    f. Aspirin must be avoided in children as antipyretic (can cause Reye syndrome/hepatic failure)

2. Antibiotics:
    a. Give empiric antibiotic if fever $\geq$6 days
    b. Pneumonia, tonsillitis - Amoxicillin (30-50mg/kg/day 8 hourly) for 5 days
    c. Typhoid- Azithromycin, Ciprofloxacillin, Ceftriaxone for 5-14 days
    d. **First dose** of appropriate antibiotics in child (2months up to 5 years) with danger sign:
        i. 2 months up to 5 years: Inj. Ampicillin/Ceftriaxone/Ceftazidime
3. For viral fever:
    a. Antipyretics only
    b. Tab. Diazepam 0.5 mg /kg/day (history with febrile seizure)
    c. Prophylactic antibiotic not necessary in chicken pox and other viral fever
    d. Antiviral (Acyclovir) may be given in Herpetic infection
    e. Antihistamine has little role in viral rhinitis
    f. Bronchodilator can be used in cough with viral fever
4. IV fluid:
    a. Diarrhea- Cholera saline
    b. Shock- Normal saline- 20ml/kg (bolus or running)
    c. In Severe PEM: Give very slow infusion

Annex D: Anaemia Guideline



Anaemia Guideline (Con..)

Active bleeding:

Haemoptysis
Haematemesis
Melaena
Epistaxis
Gum bleeding

Excess Demand:

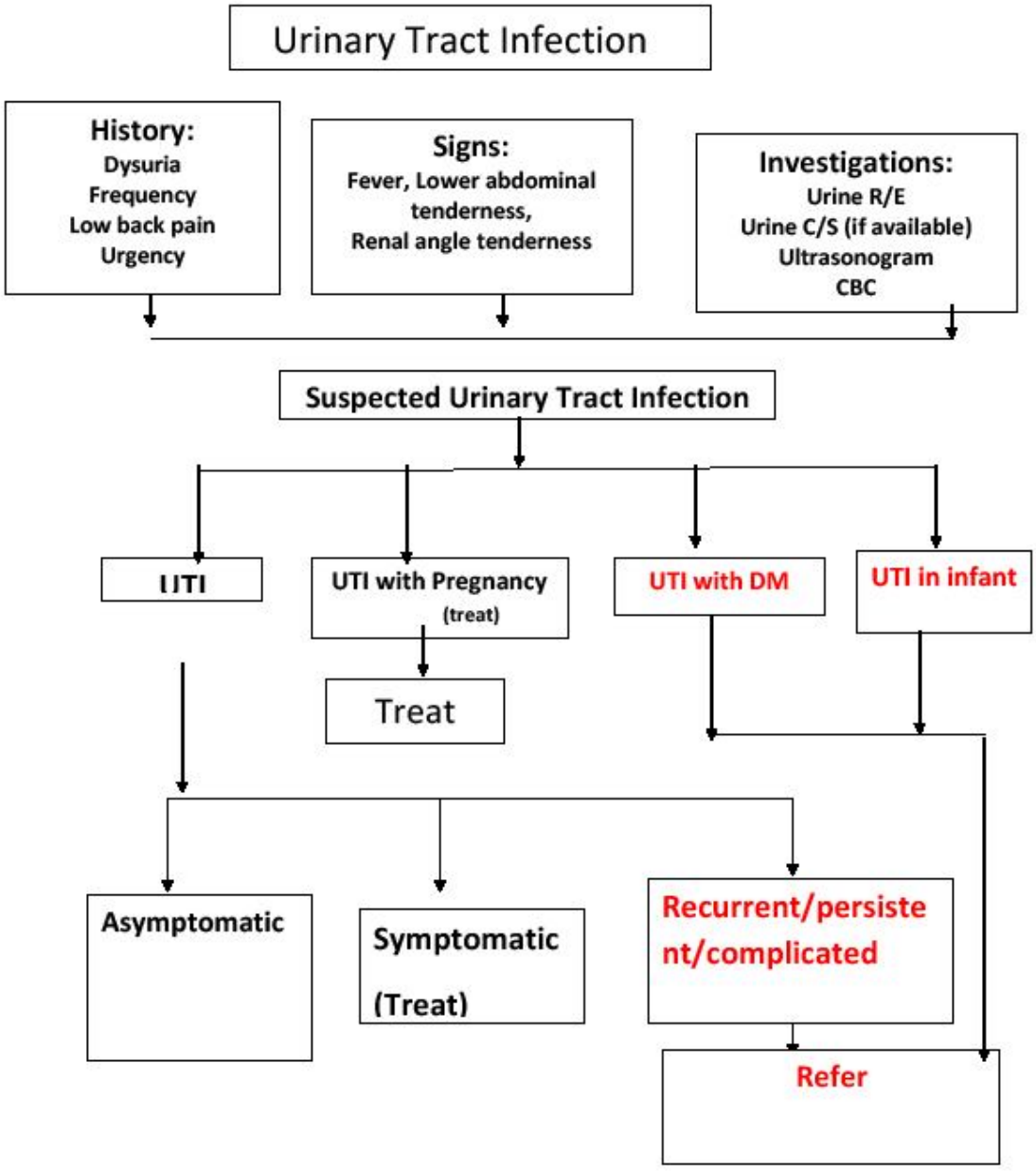
Pregnancy
Lactating mother
Growing child

When to refer?

- Severe anaemia
- Mild and moderate anaemia not responding to treatment
- Clinically unexplained anaemia
- Suspected haemolytic anaemia
- Anaemia with suspected malignancy
- Anaemia with co-morbidities

N.B. Need to exclude hemolytic anemia (suspected) at first by seeing hepatosplenomegally, anaemia (Hb%), Jaundice (seeing bilirubin) etc. as Iron therapy should be carefully used in hemolytic anemia.

Annex E: Urinary Tract Infection Guideline



Urinary Tract Infection

Treatment

- Antibiotic
- Antipyretics
- Analgesic

Antibiotics used in pregnancy

Tab. Ceforoxime 500 mg BD 7-10 days

Or Tab. Cefixime 200 mg BD 7-10 days

Or Tab. Nitrofurantoin 100 mg BD 14 days

Antibiotics used in UTI

Tab. Ciprofloxacin 500 mg B.D. 7-14 days

Or Tab. Neofloxacin 500 mg B.D. 7-10 days

Or Tab. Ceforoxime 500 mg BD 7-10 days

Or Tab. Cefixime 200 mg BD 7-10 days

Or Tab. Nitrofurantoin 100 mg BD 14 days

When to refer

- Persistent/recurrent UTI
- UTI in infant/pregnant women
- UTI with known urinary tract abnormality
- Complicated/resistant UTI
- UTI with disorientation/confusion
- Pylonephritis
- UTI with septecemia

Advice for all patients:

- Take adequate water
- Frequent voiding
- Maintain personal hygiene
- Voiding before coitus

Annex F: OPC Poisoning Guideline

Organophosphorus compounds are widely used as insecticide in agricultural sector by the farming community in Bangladesh. Since it is easy and widely available, pesticide has become a popular method of self-harm. It is the most common poisoning found at different level of hospitals of Bangladesh.

Clinical features:

- Smell of OPC
- Bronchorrhea (bronchial secretions)
- Bradycardia,
- Hypotension,
- Incontinence of urine & stool,
- Miosis
- Hyper salivation.

Signs of atropinization:

- **Inj. Atropine**
- **Inj.Pralidoxime (if available)**

Signs of atropinization:

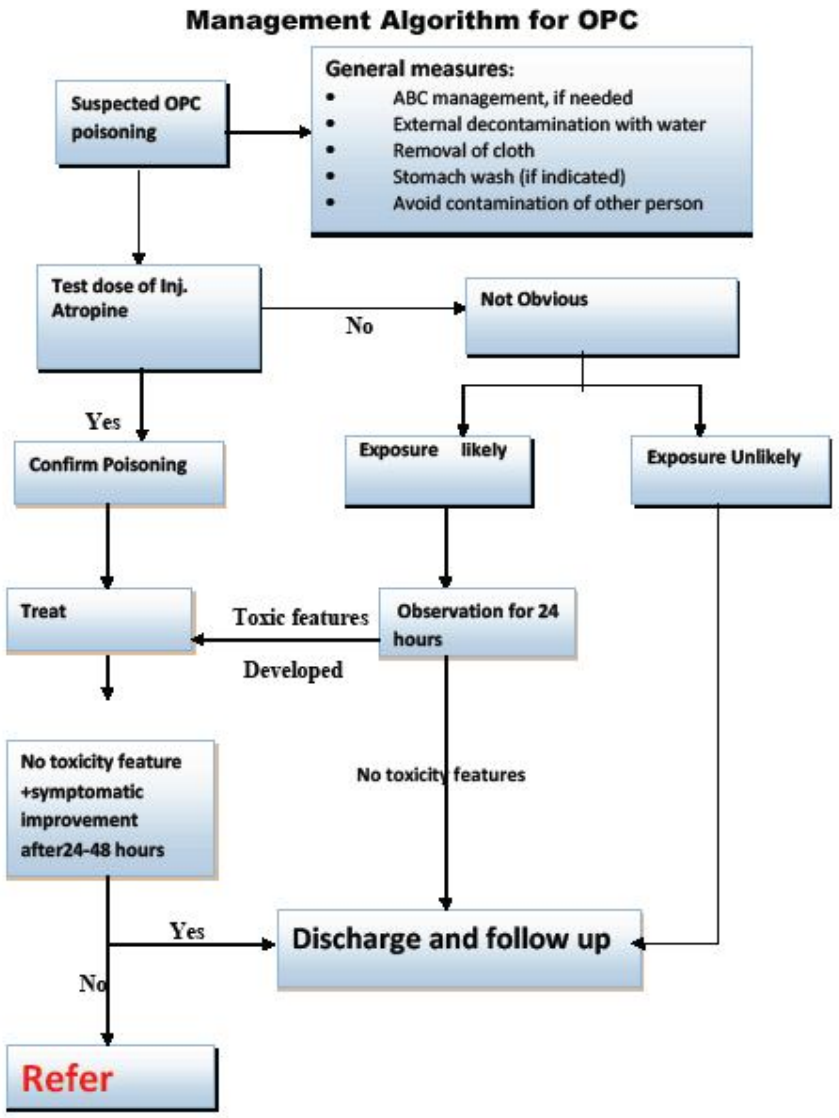
- **Clear chest on auscultation, no wheeze**
- **Heart rate > 80 b/m**
- **Pupils no longer pinpoint**
- **Dry axillae**
- **Systolic B.P. >80 mmHg**

Organophosphorus compounds:

- **parathion**
- **malathion**
- **fenthion**
- **diazinon**
- **dichlorvos**
- **chlorpyrifos**
- **dimethoat**

Atropine toxicity features:

- **Restlessness**
- **Tachycardia**
- **Fixed dilated pupil**
- **Hyperpyrexia**
- **Dry mouth**
- **Blurred vision**
- **Delirium, coma**


Management Algorithm for OPC
Suspected OPC poisoning
General measures:
ABC management, if needed
External decontamination with water
Removal of cloth
Stomach wash (if indicated)
Avoid contamination of other person
Test dose of Inj. Atropine
No
Not Obvious
Yes
Confirm Poisoning
Exposure likely
Exposure Unlikely
Treat
Toxic features Developed
Observation for 24 hours
No toxicity feature +symptomatic improvement after24-48 hours
No toxicity features
Yes
Discharge and follow up
No
Refer

Annex G: COPD Guideline

COPD is diagnosed clinically and by spirometry. It is not fully reversible like asthma. It is chronic, slowly progressive disease of airflow limitation.

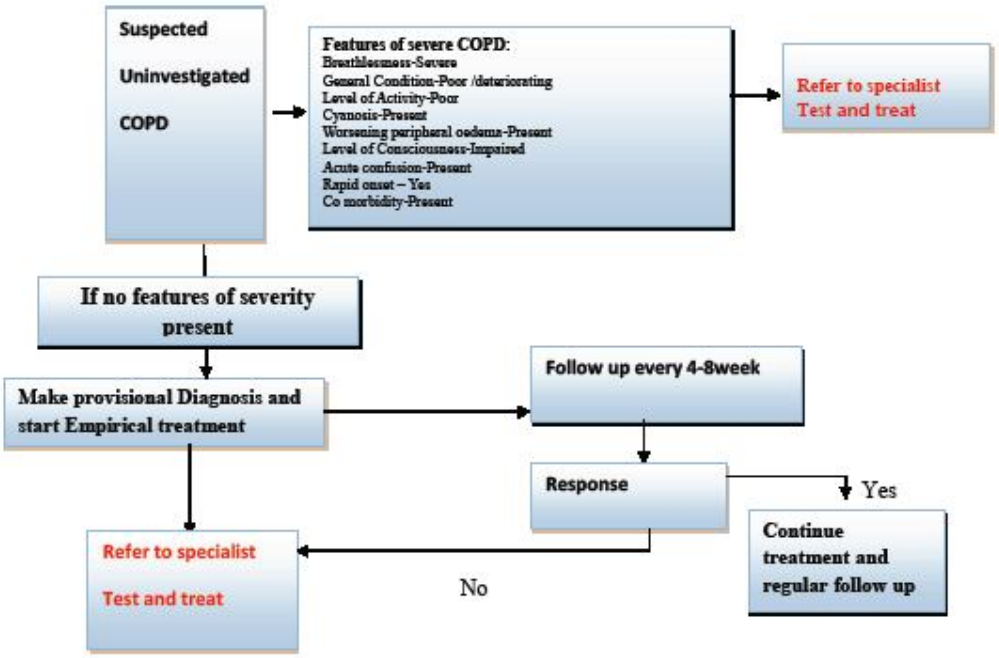
History

- Smoking
- Environmental/Occupational factor
- Cough (chronic, productive)
- Dyspnoea
- Wheezing
- Acute chest illnesses: frequencies, productive cough, fever

Clinical Features

- Wheeze
- Breath sound: vesicular with prolonged expiration.
- Decreased intensity of breath and heart sounds.
- Low diaphragmatic position.
- Pursed lip breathing
- Use of accessory respiratory muscles
- Indrawing of lower intercostal spaces
- Mild dependent edema.

Management Algorithm for COPD



Annex H: Asthma Guideline

It is a chronic inflammatory condition of respiratory tract presenting with features of reversible airflow obstruction.

Features of suspected un-investigated asthma are:

History
Family history
Atopic history

Clinical Features

Breathlessness
Wheeze
Chest tightness
Cough
Vesicular prolong expiration
Cyanosis

Trigger factors

Allergen
Irritant
Others-Upper respiratory infection exercise, drugs, season change

Pattern of attack

Attacks at night or early morning
Attack on exercise
Attack on Trigger factors
Attack on taking drugs

Investigations:

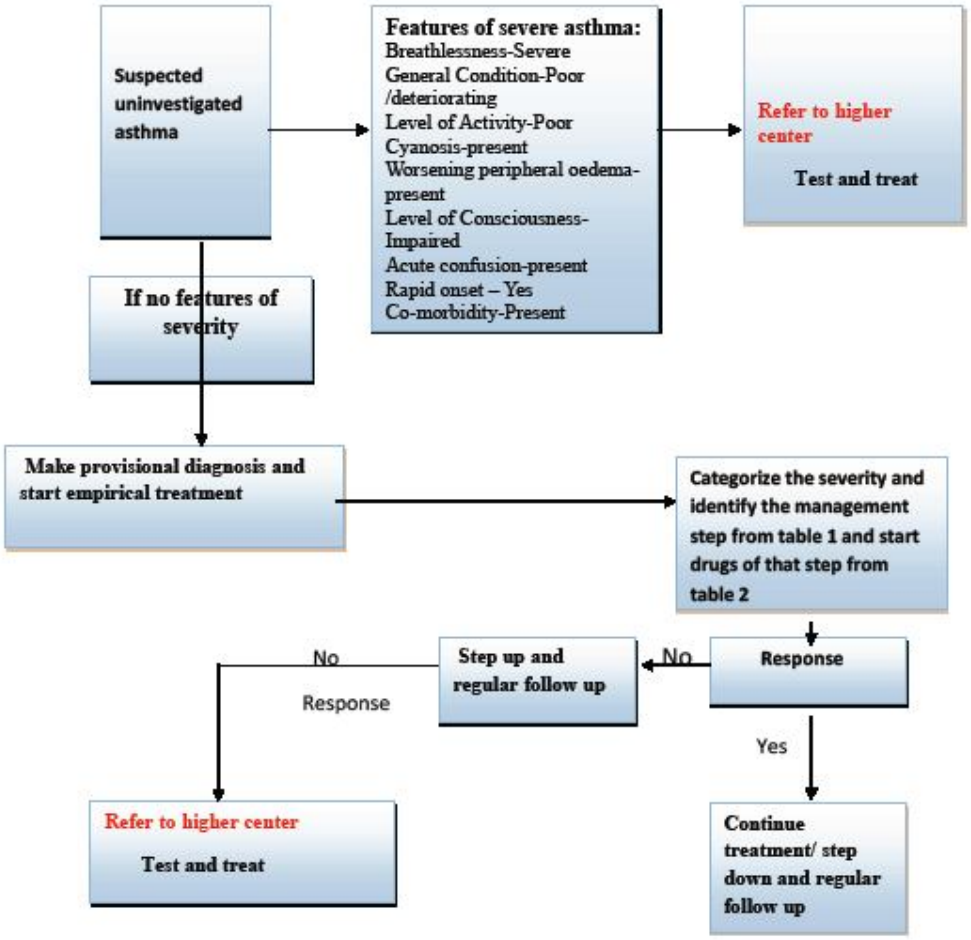
- CBC
- Sputum examination
- Spirometry

Drugs and doses:

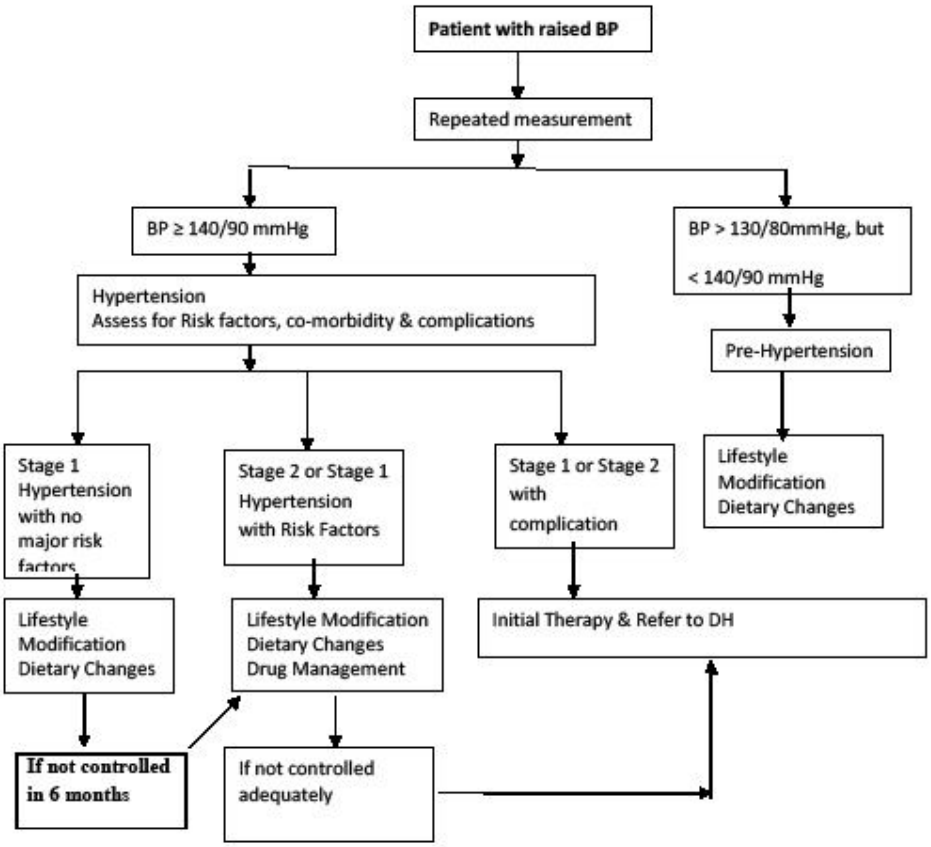
- Inhaler Salbutamol (100-200 microgm) 2 puff up to 4 times daily
- Tab.Thephylline 200-400 mg Daily Twice
- ICS (beclomethasone):
- HD= >400 micro gram, MD=200-400 micro gram, LD=100-200 Micro gram

- Leukotriene modifier (Tab.montelukast 10 mg daily)
- LABA= Inhaler. Salmeterol

Management Algorithm for Asthma



Annex J: Hypertension Guideline



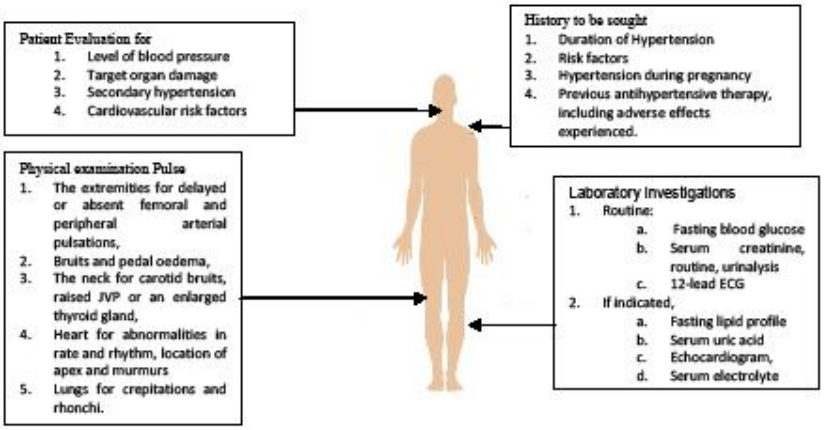
Classification of Hypertension

Classification	Systolic BP (SBP) mmHg	Diastolic BP (DBP) mmHg
Normal	<120	And <80
Pre-Hypertension	120 – 139	Or 80 – 89
Stage 1 Hypertension	140 – 159	Or 90 – 99
Stage 2 Hypertension	≥160	Or ≥100

Target Blood Pressure To Be Achieved With Treatment

Without any risk factor <140/90 mmHg
With any risk factor ≤130/80 mmHg
With Protienuria ≤125/75 mmHg

Preferred Drugs :
HTN with IHD : Beta-Blocker, Verapamil, Diltiazem
HTN with LVF : Frusemide, other Diuretics, ACE-I/ARB, Carvidolol/Bisoprolol (after stabilization)
HTN with DM : ACE-I/ARB
HTN with CVD : ACE-I/ARB, CCB
HTN with Bronchial Asthma : CCB, ACE-I/ARB, Diuretic
HTN with Nephropathy : ACE-I/ARB
HTN with CKD : Frusemide, Alpha blocker, Beta Blocker, CCB, ACE-I/ARB



Cardiovascular Risk Factors

Age above 55years
Hypertension
Sex Male
Family history of IHD
Tobacco usage, smoking
Diabetes
Dyslipidemia
Obesity
Physical Inactivity
Micro albumiuria

Complications:

Heart
- LVH
- Angina/ H/O MI
- H/O Angioplasty/ Stenting or CABG
- Heart failure

Brain
- Stroke
- Dementia

CKD
Peripheral arterial disease
Retonopathy (Grade 3 or 4)

Hypertensive emergencies : It is characterised by severe elevation in BP (≥180/120 mmHg) complicated by evidence of impending or progressive target organ dysfunction

These are Hypertension with
- Acute Coronary Syndrome
- Left Ventricular Failure
- Stroke
- Acute Renal Failure
- Pre-Ecclampsia

Post-Operative severe hypertension

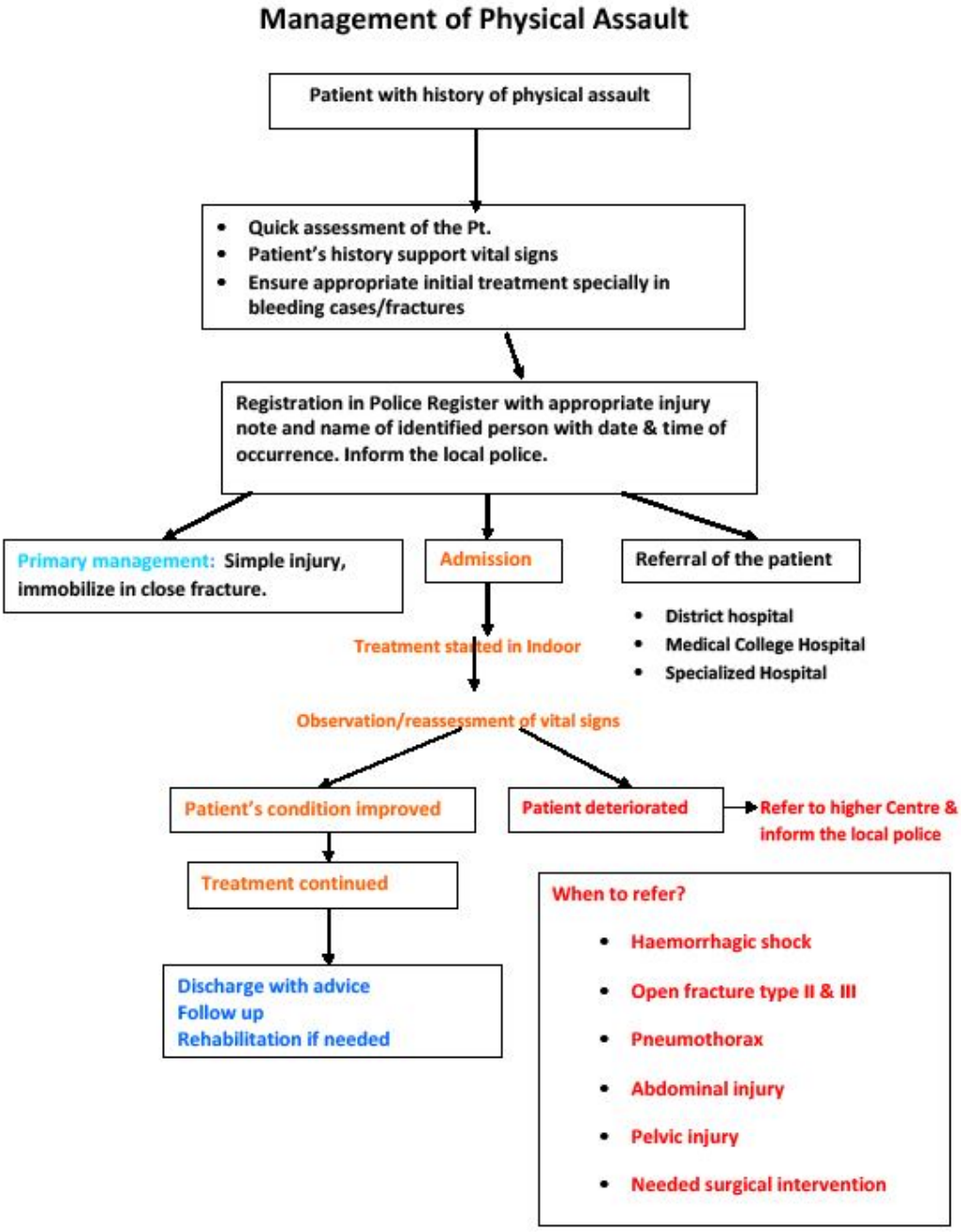
Hypertensive Urgency : It is termed for those situations associated with severe elevation in BP without progressive target organ dysfunction.

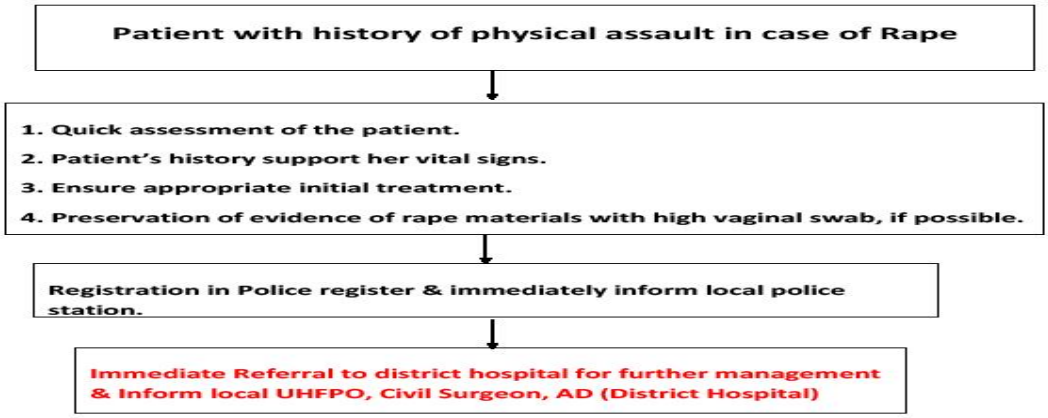
Refer the patient if BP not controlled with 3 drugs (including a diuretic) patients with CKDor symptomatic IHD are also to be referred to specialists for further management.

Lifestyle Modification :

Weight reduction,
Physical activity: 30-45 minutes of brisk walking or swimming at least 3-4 times a week
Salt intake ≤ 6 gm/day.
Avoid added salt, processed foods, and salt-containing foods such as pickles, chips, chutneys.
Stop smoking or consumption of tobacco in any form (Jarda, Sada or Gul).
Diet should be low calorie, low fat, low sodium diet with normal protein content, adequate potassium intake from fresh fruits and vegetables
Less Tea and Coffee.

Annex K: Physical Assault





When to refer?

A. Medical conditions:

i) Acute renal failure.
ii) Septicemia, Bacterimia.
iii) Any other severe conditions that can't be treated UHC.

B. Surgical conditions:

i) Perforation of organs
ii) Any other operable conditions that can't be performed at UHC

C. Psychological:

i) Severe anxiety disorder
ii) Severe adjustment disorders
iii) Panic or phobic attack
iv) Suicidal attempt

8 ANNEX: PATIENT REFERRAL FORM

Govt . of the Peoples Republic of Bangladesh
Directorate General of Health Services
Mohakhali, Dhaka-1212
www. hamdghs-bd.org
(For the use of UHC, DH & MCH)

01

Form - B

Patient Referral form

1. Name and address of the referred patient :.....
2. Reg. No. [ ] Age [ ] Sex (M / F) [ ]
3. Name of the referring institution :.....
   (Indoor/Outdoor/Emergency) .....
4. Name of the referred institution :.....
   (Upward / Downward) .....
5. Date and Time of referral :.....
6. Diagnosis /Provisional diagnosis :.....
7. Disease Code (ICD-10) :.....
8. Reason for referral :.....
9. History :.....
   .....
10. Physical examination findings :.....
    .....
    .....
11. Treatment given :.....
    .....
    .....
12. Lab. Exam./ Investigation result :.....
    .....
    .....
13. Advice for the patient :.....
    .....
14. Advice for the institution :.....
    (for downward ref.) .....

Signature of the doctor

9 ANNEX: PARTICIPANTS LIST OF THE CLINICAL GUIDELINE WORKSHOP

Workshop On Chinical Guideline
Date-29 June 2013
Venue-Confarance Room,250 Bedded General Hospital,Tangail.

SL No	Name & Designation	Place of Posting	Signature
1.	Dr. Md. Mokhlesur Rahman Assistant Director	250 Bedded General Hospital, Tangail.	
2.	Dr. Sayed Ebne Sayeed DCS.	Civil Surgeon Office, Tangail	
3.	Dr. Laws Kyaw	SSK Project Team Leader	
4.	Md. Azmal Kabir	SSK Project Research, M&E Specialist	
5.	DR. MD. SHAFIQUL ISLAM	Associate Professor, NIPSOM	
6.	Dr.Md.Mokhlesur Rahman Jr.Consultant(Ortho Surgrry)	Upazila health complex,Kalihati,Tangail	29.06.13
7.	Dr.Zakia Rashid Jr.Consultant(Gynea)	250 Bedded General Hospital,Tangail	29.6.13
8.	Dr.Tapos Kanti Bhowmic Jr.Consultant(Cardio)	250 Bedded General Hospital, Tangail	29/06/13
9.	Dr.Farid Ahammad Jr.Consultant(Surgery	250 Bedded General Hospital, Tangail	
10.	Dr.Md.Niyatuzzaman R.P(Medicine)	250 Bedded General Hospital, Tangail	
11.	Dr.Md.Jasim Uddin Pathologist	250 Bedded General Hospital, Tangail	
12.	Dr.Biplob Kumar Podder Radiologist	250 Bedded General Hospital, Tangail	29.6.13
13.	Dr.Afrina Akther IMO(Blood Bank)	250 Bedded General Hospital, Tangail	29.06.13
14.	Dr.Asma Akther A/R(Gynea)	250 Bedded General Hospital, Tangail	29/6/13
15.	Dr.Nazmin Jahan Sultana A/R(Paed)	250 Bedded General Hospital, Tangail	29.06.13
16.	Dr.Saiful Islam Mo(Paed)	250 Bedded General Hospital, Tangail	
17.	Dr.Khandoker Mehedi Hasan(MO)	250 Bedded General Hospital, Tangail	29/06/13
18.	Dr.Haider Ali Medical Officer	250 Bedded General Hospital, Tangail	29.6.13

19.	Dr.Md.Kamrul Islam Medical Officer	250 Bedded General Hospital, Tangail	29/6/13
20.	Dr.Susmita Saha Medical Officer	250 Bedded General Hospital, Tangail	29.06.13.
21.	Dr.Md.Nurul Islam Jr.Consultant(Paed)	Upazila health complex,Ghatail,Tangail	
22.	Dr.Md.Abul Hossain Jr.Consultant(Cardio)	Upazila health complex Ghatail,Tangail	
23.	Dr. ~~Md.Asadur Rahman~~ Medical Officer	Upazila health complex Ghatail,Tangail	
24.	Dr.Md.Belayed Hossain Indoor Medical Officer	Upazila health complex Ghatail,Tangail	
25.	Dr.Farjena Tasmin(Shanta) Indoor Medical Officer	Upazila health complex Ghatail,Tangail	29/06/13.
26.	Dr.Nisfun Nahar Medical Officer	Zamuriai Union Sub.Ghatail.	29/06/13