

Auxiliary Staff Training Participant Handouts:

Uganda Integrated Non-Communicable Disease Chronic Care

- Cardiovascular risk-based management of hypertension, diabetes and other risk factors to reduce strokes, heart attacks, and hypertensive heart failure;
- Management of asthma and COPD; and
- Management of rheumatic heart disease.

DRAFT

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Chapter 1: Introduction

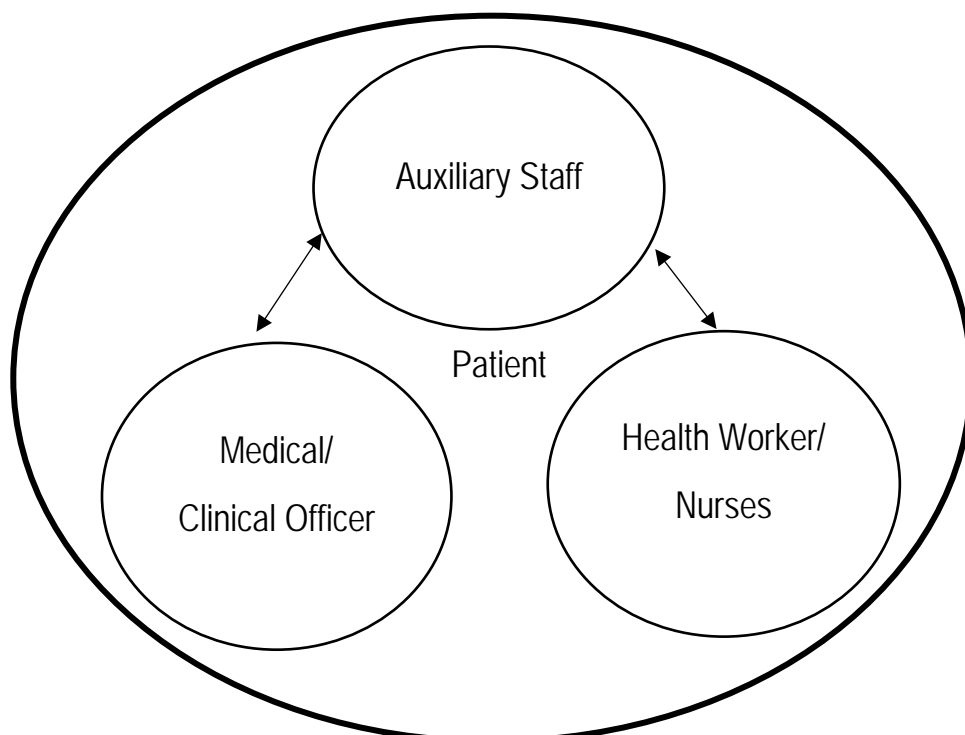
Goals of the course

The goal for the training programme is to ensure that auxiliary workers are skilled in the following:

1. **Screening/early identification-** to determine who to screen, to measure blood pressure, to calculate body mass index and to assess CVD risk using WHO/ISH country adapted charts
2. **Triage** patients who come to health centre or OPD for integrated NCD chronic care
3. **Counselling** to support patients with education about the chronic condition, healthy lifestyle, adherence and treatment preparation, patient support, and monitoring.

The Chronic Care TEAM

The chronic care clinical team should include the medical/clinical officer at the health centre or next level facility, nurses, auxiliary staff or community health workers (CHW) or expert patients and nutritionist (if one is available). In the best interest of the staff and patients, it is important to have good communication between all cadres at the health centre. Below provides a brief summary of the role of each position.



1.1 Auxiliary Staff/ CHW/ Expert Patients

Auxiliary staff include ambulance drivers, front desk staff, health educators and other administrative and **non-clinical positions** at an outpatient department or health centre. These are important positions that keep the facility running effectively and safely. Auxiliary staff often have the first contact with patients and need to know how to identify patients as priority versus patients who may wait in the queue, how to help in an emergency, and when to get immediate assistance. Communication and empathy with patients is an important part of this position.

Community health workers (CHW) and trained expert patients can also help with the health care team. CHW are an important linkage with the community and health centre. They can screen patients, refer and provide counselling. Trained expert patients or people who live with chronic disease such as diabetes or hypertension can help in counselling patients and also help in screening.

1.2 Clinical health worker/Nurses

Health workers such as nurses are trained in the detection and diagnosis of disease and are often the main point of contact for the patient. The health worker initiates treatment or refers the patient depending on the chronic care plan and potential complications.

1.3 Medical/Clinical Officer

Medical/Clinical Officers supervise clinical teams and develop treatment plans for patients with complications. They develop management plans in conjunction with the primary care team, manage acute and chronic complications, and have an adequate capacity to assess complications, monitor the disease process and supervise the primary health facilities. The medical/clinical officer establishes systems to support patient referral to and from health centres.

Discussion:

What positions do you have at your clinic?

Describe your role in your clinical team.

Why is good communication between the roles important?

Chapter 2: Cardiovascular Disease Risk

Cardiovascular Disease (CVD) and Risk Factors

Discussion:

What is cardiovascular disease?

Explain heart attack (myocardial infarction) and stroke (cerebrovascular accident).

What are modifiable and nonmodifiable risk factors for CVD?

Information needed to estimate CVD risk:

- Age
- Gender
- Smoking status
- Systolic blood pressure
- Total cholesterol* or Body Mass Index (BMI)
- Presence or absence of diabetes*

*Total cholesterol or diabetes status is not needed for non-lab based BMI charts.

Body Mass Index (BMI)

BMI Calculation

$$\frac{\text{Weight (kg)}}{\text{Height(m)} \times \text{height(m)}} \quad \text{OR} \quad \text{weight (kg)} \div \text{height (cm)} \div \text{height (cm)} \times 10,000$$

BMI Table-see Chronic Care module (inside back cover)

BMI Categories:

| BMI Categories | BMI |
|-----------------------|--------------|
| Underweight | Below 18.5 |
| Normal weight | 18.5-24.9 |
| Overweight | 25-29.9 |
| Obese | 30 and above |

Calculate total cardiovascular disease risk:

- Use risk charts if no prior CVD or CKD history.
- Before using the chart to estimate the risk of the individual, the following information is needed:
 - Presence or absence of diabetes
 - Gender
 - Smoker or non-smoker—has the patient been smoking in the last year?
 - Age
 - Systolic blood pressure
 - Total blood cholesterol or body mass index (BMI). If in mg/dl divide by 38 to convert to mmol/l.
- STEP 1: Select appropriate chart- lab or non-lab based
- STEP 2: Select male or female table
- STEP 3: Select smoker or non-smoker boxes
- STEP 4: Select age group boxes
- STEP 5: Within this box, find the nearest cell where the person's systolic blood pressure and total blood cholesterol cross or BMI.
If cholesterol assay cannot be done, use the chart based on BMI.
- STEP 6: Record the CV risk percent on the patient monitoring card

CVD Risk and DM Screening Form

This form can be used for auxiliary staff, lay providers or trained expert patients who will be screening patients for cardiovascular disease risk and diabetes.

| Cardiovascular (CVD) Risk and Diabetes Assessment for Auxiliary Staff/Lay Providers: Screening then Clinical Health Worker Verification- | | | |
|--|--|--|--|
| UNIT | | REGISTRATION NO: | |
| NAME: | | ADDRESS or DISTRICT/SUBCOUNTY/VILLAGE | |
| 1. Fill what you can and send form with patient to next step. DATE: | | 2. Health worker verification DATE: | |
| Sex (circle) | M | F | New Results |
| Age (fill in) | | | |
| History of smoking in last year? (circle) | Yes | No | |
| Take Blood Pressure (BP) X 2 (5 minutes between measurements)* | BP1 | | |
| | BP2 | | |
| On hypertensive medicine? (circle) | Yes | No | verified? |
| History of diabetes (DM) | | | verified? |
| Or on DM medicine? (circle) | Yes | No | verified? |
| Measure Height | | cm | |
| Take Weight | | kg | |
| Calculate BMI (from table) | | | |
| Screen for DM, if status not known. Check fasting blood glucose (FBG). Repeat for DM diagnosis. | FBG | | FBG |
| History of heart attack, stroke, chronic kidney problem? (circle) | Yes | No | Verified? Also ask re TIA, angina, PVD; CKD, including diabetes with overt nephropathy |
| IF YES, STOP HERE. High risk from prior CVD or chronic kidney problem (circle) | | | High risk from prior CVD chronic kidney problem (circle) |
| CVD risk % (from BMI risk chart) (circle) | < 10 % 10 to < 20 % 20 to <30% ≥30% | < 10 % 10 to < 20 % 20 to <30% ≥30% | |
| Follow-up *If SBP>180/100, to see health worker immediately. | | | |
| NAME/SIGNATURE: | | NAME/SIGNATURE: | |

Chapter 3: Chronic Care

Discussion:

List examples of acute conditions and chronic conditions.

Discuss chronic care.

The Aim of Chronic Care

1. Control symptoms
2. Prevent worsening of disease and complications
3. Maintain quality of life

Summary of the 10 general principles of good chronic care

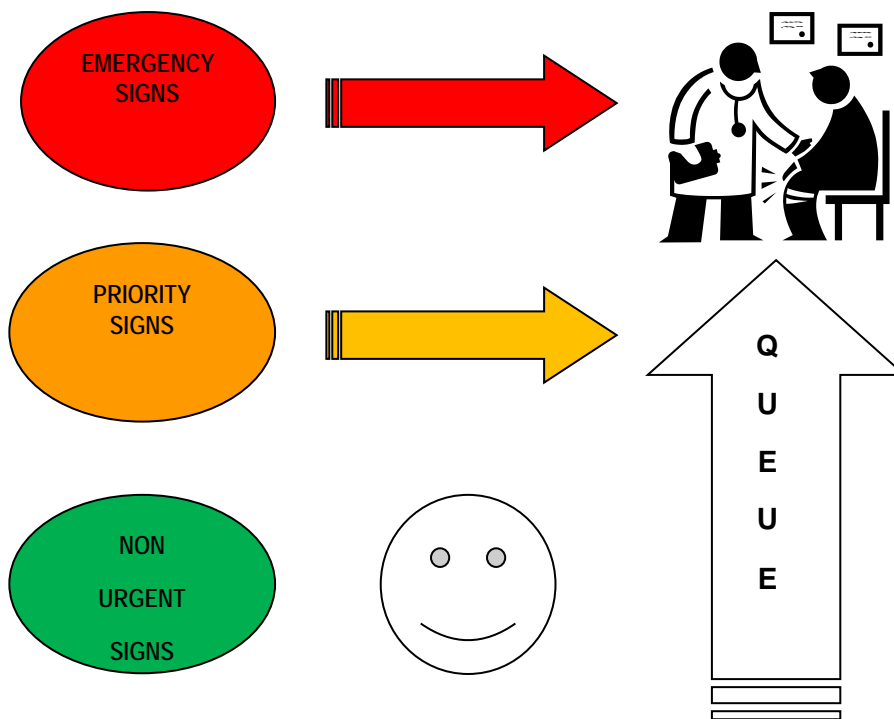
1. Develop a treatment partnership with your patient.
2. Focus on your patient's concerns and priorities.
3. Use the **5 As: Assess, Advise, Agree, Assist and Arrange**.
4. Support patient self-management and family support.
5. Organise proactive follow-up.
6. Involve "expert patients," peer educators and support staff in your health facility.
7. Link the patient to community-based resources and support.
8. Use written information—registers, treatment plan, treatment cards and written information for patients—to document, monitor and remind.
9. Work as a clinical team.
10. Assure continuity of care.

Chapter 4: Triage

TRIAGE

Is the SORTING of patients into PRIORITY GROUPS
according to their NEED and the SEVERITY of their condition

Process of TRIAGE



Triage for Chronic Care

TRIAGE (for registration-this may be clerk or initial health worker; top portion of chronic care form may be filled out)

- Always check for emergency signs (airway, breathing, circulation, unconscious/convulsing or pain)—see IMAI Acute Care. If any positive signs, call health worker immediately who will provide emergency treatment and decide if referral needed to hospital
- Greet the patient
- Register if new patient
- If follow-up, retrieve records/file
- Measure height at first visit
- Measure weight at **each visit**
- Calculate **BMI**
- Measure blood pressure at **each visit**
- Smoking? Y or N?- Record "Yes" if smoking during the last 12 months. If YES, record on patient monitoring card. If other tobacco use, write in below within the risk assessment box.
- Alcohol? Y or N?-Record "Yes" if person drinks alcohol in last 30 days. If yes, how often and record number of units per day. One unit (drink) = half pint beer/lager (5% alcohol), 100 ml of wine (10% alcohol), spirits 25 ml (40%alcohol).
- Adequate physical activity? Y or N?- Record "Yes" if person engages in at least 30 minutes of physical activity 5 days a week (or 2.5 hours per week)
- Determine reason for visit
- For new patients, ask about any concerns that they have. For follow-up, take interval history
- **Determine functional status**--Record whether patient at initial visit, annually or if there is a change:
 - Able to work, go to school, do housework, harvest or play (in child) (**W**)
 - Ambulatory but not able to work (**A**)
 - Bedridden (**B**)

- Calculate cardiovascular disease (CVD) risk at first visit then every 3 months [or yearly]

If this is a new patient or new problem, the patient should see the clinician for treatment plan before counselling the patient (go to step 3).

ASK- for all follow-up visits:

- Have you had any medication changes or new medications started since the last visit? Record in register.
- Any problems/concerns that you have today?
- Decide if patient needs to see clinician on this visit. Patient should see the clinician:
 - If it is their first ever visit
 - For scheduled clinical visit
 - For any new symptoms

HOW TO FILL OUT THE NCD PATIENT CARD: DIABETES, HYPERTENSION or ELEVATED CARDIOVASCULAR RISK

A sample patient card allows the health care team at the facility keep track of all care, treatment and follow-up (clinical, lifestyle interventions and psychosocial) over time in one place. This card provides quick access to important information and allows for communication of the patient's clinical status between the health care team and therefore ensure continuity of care.

The front of the card is the **front summary page** that includes key patient information including demographic and contact data, patient medical history and complications, comorbidities, follow-up status, and important data collected on a three- and 12-monthly basis and any hospitalizations. The inside **encounter pages** is where the health worker fills information during a clinical visit – one row per visit – often using short-hand codes listed in boxes at the bottom of the second encounter page. Some of this information will also be transferred to the summary page (e.g. updated complications, follow-up status). Photocopies of this page may be used and inserted as they are filled up. Each page is able to accommodate 19 visits (number of rows). The **back follow-up page** consists of key education and counseling interventions that are necessary for patient follow-up. There are three sections (1 basics and healthy lifestyle; 2 treatment preparation and ongoing support and monitoring; and 3 home-based care and support) and multiple columns where brief notes may be written for future follow-up. Only relevant parts of this section will be completed at each visit.

Instructions for filling in the form:

1. Fill in the patient's name, age, sex, date of birth, enrolment date, address, supporter information, and community health worker information (if available). This can be done by any member of the health care team.
2. Record family history. Tick premature cardiovascular disease (CVD) if heart attack or stroke in 1st degree relative-male < 55 years, female <65 years.
3. Fill in drug allergies and medications that the patient is taking. Fill out any labs that may have come with patient, given to you by the laboratory or that you have obtained through point of care testing.
4. Turn the page to the encounter pages, fill out visit date. If patient has been referred to the health centre from another facility or the community, information may be filled out in the first encounter row and indicate "referral" to the left of the visit date.
5. Fill in patient height in box, weight on encounter line and calculate BMI and write below weight on same encounter line. Circle BMI if obese category.
6. Record blood pressure measurements (two readings) and the blood glucose (fasting preferred; if diabetic or initial/annual visit for everyone else).
7. Record patient's response to questions about tobacco, physical activity and alcohol use. Also record patient's functional status if initial or annual visit (or change) on 1st page. The rest of this page can be filled out by the clinical health worker (HW).

8. The health worker should now be able to fill out the rest of the first page including the patient's pertinent medical history such as history or prior cardiovascular disease as well as other medical problems, any remaining investigations or recent hospitalizations/referrals.
9. The back counselling and education page can be filled out by any member of the health care teams- this includes ancillary staff, community health worker, the doctor or the nurse.

Chapter 5: Patient education and support

Education and Support the Patient at Every Visit-

Use the 5 As



REVIEW ANNEX A. EDUCATION AND SUPPORT GUIDELINES-For all patients enrolled in chronic care at each visit- use the applicable sections based on patient diagnosis and treatment status (A1-A21)

Protocol 2: Asthma and Chronic Obstructive Pulmonary Disease

Chapter 6: Triage and Introduction to asthma/COPD

6.1 Triage

Triage and registration for patients with asthma and COPD are the same as Protocol 1 except for two additions-respiratory rate (RR) and pulse oximetry- see p66.

How to determine respiratory rate

A person's respiratory rate is the rate at which a person breathes. In order to determine the respiratory rate, count the number of times the chest rises in 1 minute. In adults, the normal respiratory rate is 12-20 breaths per minute. The rate is considered abnormal if less than 12 or above 20 and can indicate that the patient may be sick. For example, the rate can increase when a person is having problems with their breathing or with fever and can decrease with neurological problems or toxins. Be aware that other conditions such as pain and anxiety may also increase the respiratory rate.

Note: During the skill sessions, we will demonstrate and practice triaging patients with respiratory problems.

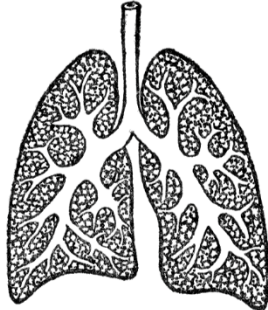
How to measure oxygen saturation (SpO₂)

A pulse oximeter measures oxygen saturation in the blood. Pulse oximetry is very easy to use, and is the best method available for detecting low oxygen in blood (**hypoxemia**).



6.2 Chronic respiratory diseases

Chronic respiratory diseases are problems that affect breathing. They include problems that affect the structures of the lung and the airways.



6.3 Asthma

Asthma is a disease of the airways in the lung. The airway becomes inflamed, irritable and narrow in response to inhaled triggers (irritants) such as:

- Pollen, mould, dust mites; environmental tobacco smoke, smoke from wood or other biomass fuel, household aerosols, chemical irritants in workplace
- Viral or bacterial infection
- Exercise
- Weather changes
- Emotions or stress

The combination of these factors lead to symptoms such as:

- shortness of breath
- wheeze, and
- cough with sputum

6.4 Chronic obstructive pulmonary disease (COPD)

COPD is a chronic lung disease that has airflow narrowing or limitation that gets worse over time. There are risk factors that can lead to a person having COPD. These are:

- Smoking tobacco
- Workplace chemicals and dust (irritants, fumes, vapours)
- Indoor/outdoor air pollution (e.g. biomass fuel used for cooking/heating indoors especially in areas with poor ventilation)
- Second hand smoke exposure

Common symptoms include:

- Chronic cough
- Breathlessness

- Increased amount of sputum
- Wheeze
- Limitations in exercise and activity over time

6.5 Patient preparation, education, and support

The key to asthma and COPD management will be patient education.

Counsel patients about their chronic condition and that self-management is essential to treatment and help them gain the skills for self-management.

See A18-A20 in Chronic Care module.

Support patients with treatment and treatment adherence

About the drugs*:

- **Reliever drugs** such as Salbutamol (inhaler) help treat symptoms quickly by opening the airway.
- Ipratropium is another inhaler medication that also helps to open the airways (bronchodilator) and also reduces mucous production. It does not work as quickly as salbutamol but lasts longer which is why it also works well with salbutamol.
- **Controller or preventer** drugs need to be taken every day to keep the condition under control. These do not work as fast as salbutamol but in the long term help with reducing symptoms. Beclometasone inhaler and prednisolone (oral) are both **controller or preventer drugs**.
- There are other **controller drugs** that may sometimes be used- long-acting beta agonist (LABA) such as formoterol or salmeterol (inhaler) or leukotriene antagonist such as montelukast (oral)

Possible side effects:

Salbutamol inhaler- feel like heart racing, shakiness

Beclomethasone inhaler-mild sore throat, hoarseness, and occasional infection- it is important to **advise** patient to use spacer and to rinse out mouth after using inhaled corticosteroid.

Systemic corticosteroid (prednisolone)- if used for a long time have risks for infections, diabetes and other problems which is why a patient who needs this often needs referral for further evaluation.

See Section 7 in Chronic Care module and A21.

Support patients with asthma self-management using 3 zones- see A22

Educate COPD patients on strategies to prevent worsening of their condition- A23