Ministry of Health
Sierra Leone

Non-Communicable Diseases:
Diagnosis and Treatment Deskguide

A guide to identifying, diagnosing and treating non-communicable diseases (NCDs)

Contents

Introduction and Acknowledgements

This desk guide is a concise 'quick reference' for uncomplicated non-communicable disease (NCD) and mental health (MH) cases for qualified clinicians, eg doctors outpatient care, Community Health Officers (CHOs) in Community Health Centres (CHCs) clinicians and mental health nurses, etc. The guide, which is mainly for adults and adolescents, includes how to identify, screen/test, refer as applicable, and provide follow up care for non-complicated NCD patients. The guide is adapted to the essential drugs list and available policies and guidelines of the Ministry of Health and Sanitation (MoHS). It should be a useful, practical and appropriate document to help manage NCDs in Sierra Leone.
The initial assessment pages are designed to be used with any adult (and in some cases, adolescents) presenting at an outpatient department or CHC. The objective is to enable effective opportunistic screening, diagnosis, treatment and follow-up care for patients with hypertension, type 2 diabetes mellitus ('Diabetes'), cardiovascular disease (CVD), common mental health conditions, epilepsy, asthma, and their underlying risk factors. The desk guide covers how to diagnose, treat and systematically monitor patients with these diseases and prevent and identify complications. It indicates when to refer patients (including possible cancer) to hospital doctor/ specialist review. After being assessed in hospital, non-complex cases should then be referred back to the nearest facility, for example, the CHC, for follow-up care. This Diagnosis and Treatment Desk Guide only includes brief lifestyle education messages. It is accompanied by a Lifestyle Desk Guide for use by the healthcare professional/ health educator. In addition, there are training modules and a facilitator's guide.

This desk guide incorporates recommendations from WHO Package of Essential Non-Communicable Disease Interventions (PEN) for Primary Health Care and the Global Guidelines for Type 2 Diabetes. Refer to the list of additional information on the last page for links to these documents.

This guide has been prepared by thoroughly reviewing current eg WHO guidelines, systematic reviews and other relevant literature and pilot tested by Professor John Walley, Dr Cath Snape and colleagues of COMDIS-HSD of the Nuffield Centre for International Health, LIHS, University of Leeds. http://comdis-hsd.leeds.ac.uk.

In Sierra Leone adaptation MoHS NCD technical working group (TWG) in January 2019. The adaptation and TWG process was led by Dr Santigie Sesay the MoHS NCD Director Dr Koroma and Mr Reynold Senesi of the MoHS/NCD and MH department. Other members of the TWG were: Mr Abu Conteh Chief CHO and CHO A Kaba of the MoHS; Dr Brima Sesay and CHO Rosaline Bangura, of Bombali district health team and hospital; Dr Paul van den Bosch and Dr Kiran Cheedella, both of VSO/RCGP; Dr Martha Lado of Kono regional hospital PIH NCD clinic; Mr Anneru chief nurse at the national Psychiatric hospital and nurse Hawanatu of GGH mental health clinic. The TWG was facilitated by John Walley of LIHS/Nuffield Leeds, with the support of the NIHR Research Unit on Health in Fragility's (RUHF) partners QMU and COMAHS. Technical details have also been reviewed and revised by Dr Gibrilla Deen (diabetes), Dr James Russell (cardiologist) and Professor Radcliffe Durodami Lisk (neurologist) medical specialists of Connaught teaching hospital Freetown.

Dr Santigie Sesay
Ministry of Health
NCD-MH department
Sierra Leone
January 2019

NCD Care Model

Although we refer to a number of different diseases as non- communicable diseases (NCDs) there are some common features that are different from acute illness.

1) Often there are few or no symptoms – so awareness and screening of 'at risk' people when they are seen for other things is key
2) Early diagnosis and treatment can reduce complications and/or improve duration and quality of life
3) Communication skills are vital as information for and engagement with the patient is crucial – their role in management is *at least* as important as the healthcare worker
4) Regular review and monitoring is essential
5) Target level is set for control (e.g. of BP) and treatment is stepped up gradually until targets are met

Good management of NCDs reduces complications and prevents early deaths. The systems and monitoring needed are similar to those for TB and HIV-ARV care.

Do HIV counselling and testing and TB symptom screening in all patients

Check blood pressure in ALL patients over 40 years, unless done in last 12 months

Check a random blood glucose if >40 years and looks over weight or high waist circumference (>104 cm in men, >88cm in women) -unless done in last 12 months

For each patient:

- Make diagnosis
- Explain disease and complications
- Agree treatment, set targets and do lifestyle planning (a two-way discussion about reducing risks)
- Start a treatment card
- Give a date for a follow-up appointment

- Principles of Follow-up for chronic disease:
  - Ask about symptoms and consider side-effects.
  - If not acutely unwell and there are no serious side effects and condition is not controlled then:
    - Lifestyle review and planning
    - Step up treatment
    - Offer drugs that are readily available in the pharmacy and affordable.
    - If possible, offer drugs to take only once per day. Start with the lowest dose.
    - Increase doses step by step to the maximum tolerated dose to achieve disease control.
    - If on maximum dosage, or the highest tolerated dose, and their condition is not controlled, then add another drug.
  - Monitor according to the disease for side effects. If present, lower the dose or change the drug.
  - Depression is more common in those with NCDs and can complicate treatment so ask if sad/unhappy or lost enjoyment of life. If this is a problem for them ask the other depression questions.

Treatment supporter:

- A treatment supporter can be very helpful to a person with NCD to ensure they take treatment correctly, attend appointments and make lifestyle changes.
- A treatment supporter is a trusted friend or family member chosen by the patient. Make sure you have patient consent before talking to anyone else about their condition.

If referring a patient

- Explain why you are referring them, give a referral note with brief details, check how they can travel.
- Ask them to return to your health centre for continuing care, bringing their treatment or discharge note.

Consultation

Before diagnosing NCDs assess current problem and treat acute illness. If the patient is seriously ill, manage
as emergency see standard treatment (Tx) guide e.g. WHO's IMAI acute care guide (see references on last page)

Serious illness

Symptoms:

- Chest pain lasting more than 30 minutes (heart attack)
- One-sided: vision loss, weakness/ numbness of the face/arm/leg (Transient Ischaemic Attack/Stroke)
- Breathing difficulty (maybe worse when lying flat) and/or ankle swelling (infection/ heart failure)

If patient looks very ill, eg has chest pain or is short of breath, examine for signs of severe illness eg as below:

- Respiratory rate >20/min (6-12 years >30/min)
- Pulse >100 bpm (6-12 years >120bpm)
- BP <90mmHg systolic (i.e. shock) or > BP >200 systolic or >120 diastolic
- Fever >39°C (102°F)
- Altered consciousness
- Glucose <4 or>20mmol/l (<72 or> 360mg/dl)

If present, give urgent treatment, reassess and arrange transfer to a hospital/ doctor

Otherwise, ask the patient about:

- the presenting problem – allow them to describe it in their own words
- other symptoms
- any concerns or issues relevant to the presenting problem including e.g. duration of symptoms, current medication, past issues.
- if symptoms are <2 weeks, ask about symptoms and signs related to diagnosis and treat acute disease
- if symptoms > 2 weeks consider chronic disease

Symptoms suggestive of cancer

Symptoms	History and examination And specifically:	Consider & Manage
Unintended weight loss	HIV, TB, Hb Blood Sugar Depression symptoms, eg 'frustration' Chest X-ray	HIV, TB Diabetes Cancer Depression
Persistent Weakness/ Tiredness	HIV, TB FBS, Hb Depression symptoms, eg 'frustration'	HIV, TB Diabetes, anaemia Depression Cancer
Abdominal		
Persistent discomfort, pain or swelling	If long standing pain and/or swelling US scan, Hb HBsAG	Cancer Chronic liver disease
Change in bowel habit especially with weight loss	Stool microscopy, Hb USS Rectal Examination	Parasitic Infections Infection Inflammatory bowel disease Cancer in older patients
Blood in stools If persistent in >45 year old	Ask symptoms of cancer Stool Microscopy Rectal Examination Hb If black stools do a Helicobacter Pylori Test	Acute infectious diarrhoea Parasitic infections Haemorrhoids (piles) Cancer if persistent in >45yrs
	Hb FBC Stool microscopy	Parasitic infections Nutritional HIV, TB, GI, Gynae etc.
Blood in Urine	Hb Urine microscopy, urine dipstick for blood, protein, white cells, nitrites Abdominal Ultrasound scan	Urinary Infection Schistosomiasis Bladder or Prostate Cancer
Breast lump, nipple retraction, axillary nodes	Clinical examination	Breast cancer (older women) Exclude abscess especially if breast feeding/ young women
Vaginal bleeding: between periods, after intercourse or after menopause	Speculum examination HIV test Pregnancy test	Cervical or uterine cancer Miscarriage/ectopic pregnancy (if positive pregnancy test) Infection

Hypertension

Check BP in every adult patient > 40 years old

Symptoms	**No symptoms in most people**. Headache and dizziness can rarely be caused by severe (Grade 3) hypertension. Consider alternative diagnosis if persistent symptoms.
Risk Factors for CVD	1. Smoking 2. Overweight 3. Excess alcohol 4. Diabetes 5. Inactivity
Take BP <140/90 normal	Take the BP. If >140/90, let them rest, position the cuff correctly, repeat. If still >140/90, say the 'pressure was higher than normal today', and give an appointment to check again in 2+ days, if still high, follow the guidelines below:
Grade 1 >140/90 - <159/99	Lifestyle planning, not drug, when grade 1 BP confirmed at second visit. Review progress on lifestyle planning at 1 month (But start medications **If** also has **diabetes** (see below)**/stroke/heart or kidney disease)**
Grade 2 >160/100 - <180/110	Lifestyle planning and start medications if grade 2 confirmed on second visit Follow up appointment **monthly** until BP controlled
Grade 3 BP>180/110	Start treatment **today** (see below) and lifestyle planning. Give appointment every **week** until BP <180/110 and then monthly until BP is lower
Refer BP >200/110	Possible malignant hypertension. If severe headache, confusion, breathless or oedema (other symptoms on p3 consultation) consider urgent referral but start treatment with a calcium channel blocker
Management	**See monthly** until BP at target (usually normal) level then 6-monthly (but grade 3 see weekly until grade 2)
Aim	Reduce blood pressure to <140/90. Consider lower target (130/80) in diabetes and in secondary prevention. Always discuss lifestyle changes to reduce BP and CVD risk
At diagnosis	*History:* * Previously told has High BP or given antihypertensives *Symptoms of CVD eg Chest pain and Breathlessness *Current medication *Examination:* *Heart disease: Pulse rate and rhythm, Heart- listen for murmurs *Heart Failure: Lungs- fine crepitation, Legs- bilateral swelling *Test:* *Blood glucose *Urine dip for protein *Complete treatment card and arrange follow up*
Consider **routine referral** or **seek advice**	• Pregnancy – immediately to CEmONC if Systolic ≥160 or Diastolic ≥110 or a danger sign • Age <40yrs - possible secondary causes eg to have kidney function tests/ultrasound • Urine dipstick +ve for proteinuria or haematuria on ≥2 occasions (rule out infection and schistosomiasis if at risk) • Examination suggests heart disease or heart failure or stroke • BP is still significantly >140/90 despite taking 3 drugs **and** lifestyle changes **REMEMBER resume care after referral as above once immediate problem dealt with**
Medication	If BP not controlled, increase dose, as required, up to the maximum. If still not down to normal, then add the drug from the next step, until the BP is normal. If patient is diabetic, start with an ACEi as step 1
Step 1	Calcium channel blocker eg Amlodipine 5mg once daily (max 10mg), or Nifedipine 20-80mg daily (only use the slow release or extended release forms). Side Effects: constipation/swollen legs. Or, if more available/ cheaper a Thiazide Diuretic eg Hydrochlorthiazide (HCTZ) 12.5mg once daily (max 25mg) or Bendroflumethiazide (BFZ) 2.5mg. Note: Thiazides may increase glucose. Can also cause Gout
Step 2	ADD the second drug, either: Thiazide or Calcium channel blocker (whichever was not used in Step 1)

Step 3	ADD 3rd drug. Angiotensin Converting Enzyme inhibitors (ACEi) eg Lisinopril 10mg, usual 20mg (max 80mg) daily or Enalapril 5mg once daily (max 20mg). Do not use ACEi in pregnancy or women of child bearing age. Stop in acute illness/sepsis (can cause Acute Kidney Failure). Side Effects: dry persistent cough, angioedema
Alternative step 3	Add a Beta-blocker eg Atenolol 50mg once daily (max 100mg) (never if asthmatic). Is especially good for patients with angina and after a Heart Attack
Pregnancy	Refer to BEmONC or CEmONC. Rule out pre-eclampsia and consider Methyldopa 250mg x 2 or 3 times daily (max 3g/daily). (**Use methyldopa for pregnant women only**)
Patient Education	• Hypertension cannot be cured, but is manageable through **life-long** lifestyle changes and, if required, medication. • Hypertension medication: Warn them about possible side effects and ask them to report any new symptoms promptly. • Treating hypertension reduces the risk of strokes heart, blood vessel, vision and kidney problems and death. • Diabetes and hypertension are linked diseases - patients with diabetes often develop hypertension and the other way around. Control of one is key to limiting complications from the other. Plan lifestyle changes • Increase physical activity • Healthy eating • **Less** salt, Maggi, mayonnaise, ketchup, oil, fried foods, sugar (eg soft or energy drinks), meat, • **More** fruit, vegetables, fish, nuts, steamed or boiled foods) • Little or no alcohol • Stop smoking • Being the correct weight • These actions can all reduce BP with less medication and reduce the risk of complications. Share the messages above with family and community • Cannot give hypertension to others, but relatives and children at increased risk.

Diabetes Type 2

Check blood sugar if >40 years and overweight or hypertensive or family history of diabetes

Symptoms	No symptoms in many people but ask about: Thirst and frequent urination (rule out urinary tract infection with a urine dipstick) Unexplained weight loss, weakness, tiredness Recurrent infections (e.g. boils or itchy vulva +/- dysuria [vaginal thrush]) Pins and needles sensation in feet
Risk Factors	Waist circumference (>104cm for men and >88cm for women) or BMI >25kg/m^2Family history of diabetes, especially if age (>40 years) Inadequate physical activity – advise to increase High alcohol intake – advise to reduce Smoking history - advise to stop Pregnancy
Complica-tions	CVD including heart attacks, stoke and death Vision problems including blindness; Kidney Problems including failure Problems with blood vessels (vascular disease) and nerves (neuropathy)
Normal	Random BS (RBS) <7.8 mmol/l (<140 mg/dl) Fasting BS (FBS) <6 mmol/l (<110 mg/dl)
Pre-diabetes	RBS 7.8-11 mmol/l (140-200mg/dl) FBS 6 -7 mmol/l (110- 125mg/dl) Or had diabetes in pregnancy
Diabetes	**RBS ≥11 mmol/l (≥200 mg/dl)** **FBS ≥ 7.0 mmol/l (>126 mg/dl)**
Urinalysis	Urinalysis should not be used for screening for diabetes
At diagnosis	➢ Two positive tests are required to make a diagnosis. If typical symptoms one test is sufficient. The second test should be a FBS on a different day ➢ Check BP and if >140/90 treat and aim for BP <130/80 ➢ Examine feet, eyes and if possible test urine for protein and ketones ➢ Check Kidney Function at diagnosis and then annually (if available) ➢ Start with Lifestyle planning, and drug treatment if FBS> 10 ➢ Complete treatment card
Follow up	➢ Follow up Pre Diabetic annually. Explain the risk of diabetes - lose weight, advice as below for diabetics ➢ Follow up after: 3 months if starting with diet and exercise 1 month if started on medication, 6 months once at target
Consider routine referral if	➢ Pregnant – see also the midwife/diabetes guideline ➢ Leg ulcers and/or infection; vision loss (retinopathy, cataract) ➢ Urine dipstick +ve: Proteinuria on ≥2 occasions ➢ Blood sugar not controlled on maximum tolerated oral medication
Medication	If FBS still not controlled after 2-4 weeks on medication, increase dose gradually to maximum, then move to next step until controlled. Take with meals.
Step 1	Metformin 500mg daily– increase in steps each week if not controlled to twice, and then three times a day, to a max 1g twice a day – caution with kidney disease.
Step 2	Add Sulphonylurea e.g. Glibenclamide 5mg once daily (to max 15mg daily)- increase gradually. Not for drivers due to risk of hypoglycaemia

Step 3	Refer
At review appoint-ments	Discuss knowledge and beliefs around diabetes and foot care Check BP and blood glucose (ask patients to come fasted, for FBS, if possible) Review annually: 1. Lifestyle 2. Feet 3. Neuropathy (Erectile Dysfunction, pins and needles/numbness feet or legs. 4. Eyes- ask about changes to vision and if so refer to eye clinic. 5.Family planning: if they use, or want Ask about correct use of medication, healthy eating and exercise Discuss side effects from medication eg if persistent diarrhoea on Metformin, change to Sulphonylurea Treatment can sometimes be stepped down if patient has hypoglycaemia or the FBG results are very low. This may happen if patients make major lifestyle changes. Send patient to the nurse educator and/or use the health educator's guide.
Foot Examination	Examine feet at diagnosis and annual review or more frequently if any problems Inspect both feet for any ulcers or deformity. If present, patient needs careful follow up. Look at footwear - advise if poorly fitting
Patient Education	- Explain diabetes is when the body cannot properly use the food we eat causing too much sugar in your blood. Give information on complications for example heart attack, stroke, blindness, leg ulcers, erectile dysfunction and when to seek urgent medical help. Give the patient lifestyle advice - exercise - healthy eating: 2 to 3 times per day as smaller portions, eg of rice, cassava, potatoes, fruit and vegetables, - little or no alcohol, - stop smoking and - lose and control weight These lifestyle changes can all reduce blood sugar, so need less medication and reduce risk of complications – see Health Educator's guide for details. - People with diabetes have a high risk of infection, including TB. If they have a cough for more than 2 weeks they should see a doctor. Fasting blood tests are important – that means no food and only water to drink overnight (for 8hrs) before the morning blood test is taken
	- Advise about **Foot Care**: - Do not walk with bare feet. Wash and dry your feet regularly. - Make sure shoes fit properly and do not hurt. - Check your feet regularly for any broken skin. If broken skin, go to the health facility to be seen, even if it is painless. - Do not cut calluses or corns – go to the clinic for treatment. - If you have numbness in your feet, be careful near fires and hot water.
Key Messages	• Diabetes is a life-long condition, but treatable and controllable with lifestyle changes and medication. **Treatment is also life-long.** • Treating diabetes reduces the risk of strokes, heart, blood vessel, vision and kidney problems and death. • Diabetes and hypertension are linked diseases – made worse by an unhealthy lifestyle. It is important to control both. • Healthy eating, increased physical activity, less alcohol and no smoking are essential • A person cannot give diabetes to others (but relatives and children are at increased risk) • Encourage patients to share the message about healthy eating and increased activity with their relatives, to reduce their risk of diabetes and other diseases.

Mental Health

If the patient looks unhappy, depressed, agitated or unkempt, consider a mental health problem. Similar symptoms e.g. tiredness can be due to a physical cause e.g. anaemia, HIV, or due to a mental health cause. Depression is more common in people with a chronic illness, e.g. HIV, TB or diabetes.

Presentation and management of common mental health conditions

Depression

Symptoms/Signs	What to ask	What to do
- Low energy, fatigue, sleep or appetite problems - Persistent sad or anxious mood/Irritability - Low interest or pleasure in activities that used to be interesting or enjoyable - Multiple symptoms with no clear physical cause (e.g. aches and pains, feeling of rapid heartbeat, numbness) - Difficulties in carrying out usual work, school, domestic or social activities	Do you feel down or depressed? Have you lost interest/pleasure in things you usually enjoy?	If **yes** ask 'depression' questions **on p9** If severe refer to mental health unit

See mhGAP, link last page

Anxiety can be linked with depression (exclude physical causes before diagnosing anxiety)

Symptoms/Signs	What to ask	What to do
- Restlessness, feeling very worried, feeling that something bad or terrible might happen, loss of focus, quick tempered - Physical symptoms- tiredness, muscle aches and tension, a feeling palpitations), shortness of breath, dry mouth, nervousness or shaking, excessive sweating, stomach ache, bowel or bladder upset, feeling sick, headache, a sensation of pins and needles	Do you have sudden episodes of anxiety? - Do you have anxiety in specific situations? eg crowds - Are you able to relax?	Assess also for depression as above as often linked Counsel patient on managing anxiety Avoid medication such as diazepam as easy to become addicted. If severe refer to mental health unit.

Self-harm/suicide– can be seen in depression

Symptoms/Signs	What to ask	What to do
- Current thoughts, plan or act of self-harm or suicide - History of thoughts, plan or act of self-harm or suicide	Do you have thoughts of death or harming yourself? If yes, ask: Do you have a plan? or attempted suicide before? Is your family aware?	Refer if active thoughts of suicide/self-harm + manage as severe depression

Psychosis

Symptoms/Signs	What to ask	What to do
- Abnormal or very disorganised behaviour - Senseless speech, abnormal or messy dressing and appearance, self-neglect - Delusions (a false firmly-held belief or suspicion) - Hallucinations (hearing voices or seeing things that are not real) - Neglecting usual work, school, home or social responsibilities - Manic symptoms: several days of being abnormally happy, energetic, too talkative, irritable, not sleeping, reckless behaviour).	Assess the way people speak. Is it incoherent or confused) Ask about any unusual or abnormal beliefs and suspicions. If present, ask them to explain more (i.e. *what do you think is the cause of this?)* Ask about hallucinations? *(Can you see or hear anything no one else can?)* **Ask family and friends about the patient's behaviour**	Counsel patient and family. Listen, be kind. Don't argue against traditional beliefs, Say daily tablets help. Refer to hospital mental health nurse.

Dementia (old people)

Symptoms/Signs	What to ask	What to do
- Family notice a change in the patient eg: getting lost, becoming more stubborn and difficult or repeating themselves - Memory decline, lack of awareness of time, place and person - Mood or behavioural problems such as appearing uninterested or irritable, easily upset or tearful - Difficulties doing home or social activities	**Ask family and friends about patient's behaviour** Ask about memory and assess their orientation (they know the time ie day, month, year, place where they are ie PHU/hospital name, and person - ie your name and position). Do they look confused?	Rule out infection (delirium) or depression. HIV test, BP, RBS Counsel patient and family. Consider referral. See mhGAP - links on last page

Alcohol use disorders

Symptoms/Signs	What to ask	What to do
- Looks drunk, smells of alcohol or hangover - Injury, eg from a fight - Insomnia, fatigue, anorexia, nausea, vomiting, indigestion, diarrhoea, headaches - Difficulties with daily activities	Screen using CAGE questions **Have** you ever felt the need to -- **C**ut down your drinking? **A**nnoyed you by criticising your drinking, or got into a fight? **G**uilty about your drinking? Need an **E**ye-opener (a drink first thing in the morning?) If is 'yes; to 2 or more, consider alcohol use disorder	Consider underlying depression or anxiety, see p12 Advise to cut down slowly– ask if willing to change Ask if family or friends are willing to support them See mhGAP – links on last page

Drug use disorders

Symptoms/Signs	What to ask	What to do
- Under influence of drugs e.g. low or extra energy, agitated/fidgeting, slurred speech - Signs of drug use (injection marks, skin	Which drugs and how often taken Depression or anxiety	Consider underlying depression or anxiety, see p8 See mhGAP - links on

infection, appearance) - Financial difficulties, crime problem - Can't do usual activities		last page

Depression

If looks unhappy, depressed, worried, or have many symptoms with no clear physical cause (eg crying spells, aches/pains, tremor, palpitations, numbness) or not talking or moving slowly; or family concern.

If eg fatigued/energy loss, also consider medical causes e.g. anaemia, HIV or other infection

Ask	How are you feeling? (Listen without interrupting and ask further probing questions) -If yes to the following 2 questions, assess symptoms and severity: -Do you feel sad, down, or depressed? -Have you lost interest/pleasure in things you usually enjoy?
Symptoms	Feeling tired all the time, having little energy Sleep problems (too much or too little/ early morning waking) Poor appetite or overeating Blaming yourself / feeling guilty Low focus/ poor concentration Moving very slowly so other people would notice, or very restless Thoughts of giving up on life or killing yourself (assess suicide risk as below) (Symptoms of anxiety may also be present)
Risk Factors	Ask about any other problems, stress or difficult life events: e.g.'have you or your family had any bad or sad news'?
Suicide Risk	If thoughts of death or suicide, assess risk by asking: - Do they have a plan about suicide? if yes, how and when? - Have they attempted suicide before? If so how, and how serious was it? - Is the family aware? **If they have a plan including how and when, they are high risk. See below.**
How to diagnose	Ask questions as above and assess severity:
Difficult Life Events/Bereave-ments	Do not routinely give anti-depressants or any other medication Give support and reassurance of normal bereavement process
Mild Depression/ Complicated Bereavement	**Less than 5 depression symptoms and duration > 2 weeks** **or after bereavement** not getting on with normal life >6 months after the loss - Counsel to counter depression - Start anti-depressant medication only if serious difficulty doing normal activities - Help them plan to address stresses eg with family, friends, work relationships. - Help them plan any previously enjoyable activities they can re-start eg to church or mosque, meeting friends etc. - Arrange follow up 2 - 4 weeks depending on severity
Major Depression	**5 or more depression symptoms and duration > 2 weeks or suicidal thoughts** - Start anti-depressant medication - Educate patient and family about depression and medication - Help them plan to address stresses and to re-start enjoyable activities (as above) - Arrange follow up - weekly initially, once improving or stable, every 2-4 weeks
Suicidal Thoughts	- As well as following actions for major depression - Provide support and discuss with the family - Ensure they are not left alone - Remove anything they could use to harm themselves - Discuss with patient and family about transfer to mental health unit/hospital

Treatment	See patient regularly until symptoms stable or resolved
Aim of treatment	Resolve symptoms, improve function and reduce suicide risk
At diagnosis	Counsel all patients – see below Ask whether this can be discussed with family and friends. In major depression it may be difficult to get consent and you need to act in patient's best interest Assess suicide risk Ensure patient has a family or other treatment supporter
Medication	Check local availability and cost Start with a low dose and gradually increase until symptoms settle. If side effects, slowly reduce dose and start new medication. Remember the **delay in onset of effect. Ask the family member to keep the tablets** until stable eg 6 weeks
First Choice:	Tricyclic antidepressants (TCAs) e.g. **Amitriptyline** TCAs are especially useful for patients having problems with sleeping TCAs are very dangerous in overdose – don't use with suicidal patients. Start Amitriptyline 50mg at night, increase by 25 - 50mg to max 150mg daily depending on response and tolerability. Sleep, aches and pains usually improve after a few days, depression takes longer. In 4 - 6 weeks review response and consider a dose increase: Side effects: common – low BP on standing (fall risk), dry mouth, constipation, difficulty urinating, dizziness, blurred vision and sedation. Rare– palpitations
Second Choice:	**Fluoxetine** (an SSRI). Is on essential drug list for hospitals Fluoxetine 20mg daily, after 4-6 weeks if no or part response increase dose by 20mg (max 60mg daily). In 4 - 6 weeks review response, consider a dose increase. Side effects: common - restlessness, nervousness, insomnia, anorexia, nausea, diarrhoea, headache, sexual dysfunction –reduce or change drug. Serious but rarely – restlessness/can't sit still, bleeding or suicidal thoughts – change drug
At review appointments	Counsel the patient – see below Discuss medication and side effects and review if patient is taking them correctly. Reassess severity and assess for suicide risk
Counselling Patient and family/ treatment supporter	Advise about **medication**: Say it usually takes a few weeks for treatment to work Potential side effects and to seek help if distressing to patient **Not to stop** medication unless on advice; as possibility of withdrawal symptoms if patient stops medication abruptly**.** Anti-depressants are not addictive If they forget a tablet **not** to take an extra dose next time
	Counsel - Allow the patient to talk about their feelings, and give supportive advice to the patient and family/treatment supporter – to help you keep going with treatment: - Explain that depression and/or anxiety is common and can happen to anybody. - Discuss beliefs about the cause of their problems. Explain this is not witchcraft. - Help them plan to manage stresses eg with family, friends, work relationships. - Ask what were previously enjoyable activities that they have stopped doing. - Ask which of these they feel they can re-start eg to church/ Friday prayers, meeting friends, walking, listening to music etc. - Agree which they feel ready to restart. Review progress/add activities at next visit. - Identify any negative thoughts about the self, future or world, and work with them to replace negative thoughts with more realistic and optimistic ones. - Encourage the patient to engage often in positive self-talk. - Ask about sleep and encourage them to have a regular bed-time - Identify things that they usually enjoy and encourage them to continue. - Encourage patient to continue with their usual social activities (eg family gatherings, outings with friends, religious activities) - Explain that continuing regular physical and social activity helps them get better.

	- Discuss eating healthy foods and regular physical exercise. - Explain about the possible thoughts of self-harm or suicide and encourage them to immediately tell a confidant and come back for help if this happens.

Epilepsy

Types and typical symptoms:

- **Epilepsy is a medical condition due to abnormal electrical activity in the brain.**
- **The main types are: a) tonic/ clonic epilepsy in which there is shaking of arms and legs frothing of the mouth, biting tongue and loss of urine; b) absence seizure where they go blank for a few seconds but don't fall. This is usually in children; c) focal (also called partial) epilepsy where the arm or leg shakes or the head twisted to one side; d) myoclonic epilepsy, with brief sudden contraction/jerking of the body or one or more limbs as if shocked by electricity.**
- **Differentiating between epilepsy and fainting, is it due to low blood sugar, or**
- **If a history of a loss of consciousness it is important to decide if the person has had a fit (seizure) or a faints (syncope), eg a temporary drop in the BP. Get a detailed history from an eyewitness if possible. A seizure in a young child with a high fever is not epilepsy.**

Symptoms	**Seizure (electrical discharge of the brain)**	**Fainting (syncope) due to temporary drop in blood pressure**
Posture at onset	- Any posture	- Usually standing
Pallor and sweating	- Uncommon	- Usually present
Onset	- Sudden / aura	- Gradual
Injury	- Common	- Rare
Convulsive jerks	- Common	- Not common
Incontinence	- Common	- Sometimes
Unconscious-ness	- For minutes	- For seconds
Recovery	- Usually slow	- Rapid
Post-episode confusion	- Common	- Rare
Precipitating factors	- Rare (flashing lights)	- Crowded places, pain, lack of food, antihypertensive drugs, health problems

- **A diagnosis of epilepsy is made if a patient has more than one seizure eg within the last 12 months.**
- **A single seizure is not classed as epilepsy (though still advise about not driving for a year)**

Exclude other causes of convulsion	e.g. a faint e.g. medical eg infection, injury, low blood sugar, overdose, alcohol withdrawal
Risk Factors epilepsy	Family History of Epilepsy Previous Head Injury, birth injuries, cerebral malaria or meningitis
Complications	Injury from falls, burns, drowning or continuous seizures (status epilepticus) which requires urgent treatment.
-	
How to diagnose	Is made on the history from the eyewitness as described in the left column of the table above
Single Seizure	This is not confirmed epilepsy and no is treatment required but warn that there is a risk of a further seizure. Advise patient not to drive for 1 year (if no further seizures)

	Ask patient to return if they have any further seizures
>1 seizure	Start medication
Treat and Refer urgently	A fit lasting longer than 5-10 minutes should be treated. Refer if more than 30 mins Give diazepam rectal by syringe (no needle) or IV

Management	Review regularly until seizures controlled
Aim	Reduce seizures and associated stigma, improve quality of life, reduce risk of complications
At diagnosis	Assess seizure frequency Exclude underlying causes – see above Educate the patient and family – see below, at each visit. Add the patient to the disease register and complete a treatment card
Refer routinely	Patient is a child. Send to district hospital epilepsy clinic. (Check child doses by weight)

Medication	Check local availability and cost. DO NOT stop suddenly – as this increases the risk of serious seizures
Step 1	Start medication – single drug – see below for options
Step 2	Increase slowly until seizures controlled (or if they have mostly stopped, and if reached the maximum tolerated dose, then this may be accepted)
Step 3	If still not controlled, change medication but **reach the effective (therapeutic) full dose of new medications before reducing old medication slowly**
Step 4	Reconsider diagnosis or refer hospital epilepsy clinic

For children dose by weight	
Phenobarbitone	All types except absence epilepsy Adults: Start on 60mg, increase monthly according to response by 30 mg (to max 120mg) as a single dose at night (avoid if possible in people on ARVs). Child: initially 5mg/kg, increase gradually eg each two weeks. Max 8mg/kg. Split to twice a day (morning and bedtime).
Phenytoin	All types except absence epilepsy. Monitor carefully as some types may have increase in seizures. Adults start at 200 mg daily at night. Increase monthly if necessary by 100mg to a max of 400mg daily) (avoid if ART or TB treatment). Child: Initially 5mg/kg daily. Increase as required usual maintenance dose 5-8mg/kg daily. Maximum 300mg daily. Split daily dose to give twice a day.
Carbamazepine	1st choice for focal epilepsy, monitor carefully as may sometimes be an increase in seizures Adults: start at 200mg twice daily – increase **slowly** by 200mg every monthly as necessary according to response (max 800mg twice a daily). Child: <1 year 100-200mg, 1-5 years: 200-400mg, 5-10 years: 400-600mg, 10-15 years: 600-800mg daily. Avoid if child or adult on HIV on ARVs or TB isoniazid.
Sodium Valproate	1st choice if on ART or TB treatment. Adults: initially 200mg twice daily, increase by 150-300mg weekly (max 2000mg daily in divided doses). **Avoid in women of child bearing age** Child: eg for absence seizures. Initially 20mg/kg daily in divided doses. Increase slowly, max 35mg/kg daily.
Caution	Women of child-bearing age: **Oral contraception** is less effective, give 2 pills a day or a 50 microgram pill, or consider alternative. Advise on risks of medication to baby if planning pregnancy. Avoid Sodium Valproate, use carbamazepine and Phenobarbitone as lower risk. On ARVs or isoniazid: use Sodium Valproate (avoid Carbamazepine, Phenytoin or Phenobarbitone).

At review appointments	Discuss medication and side effects and review if patient is taking them correctly. Ask carefully about frequency of seizures and increase dose or change drug as above In some types of epilepsy the drug may actually increase seizures - if so to change drug. Ask about (plans for) pregnancy – may need to change medication BEFORE pregnancy Ask if taking ARV or isoniazid for TB – may need to change medication If not sure, refer to the epilepsy clinic. Ask 2 screening questions for depression: Over the last few weeks, have you feeling sad, down or depressed? Have you had little interest or pleasure in doing things you used to enjoy? If they answer yes to either, refer or do a full assessment – see p12 above
Patient Education	Epilepsy is not contagious and is not due to 'spirit' possession Explain the importance of taking tablets every day - seizures may worsen if medication is stopped Epilepsy is a long-term condition but seizures can be controlled in most patients (70%) with tablets Advise them to carry a card with the diagnosis of epilepsy Do not drive, swim or cook by open fire alone unless certified seizure free for 1 year

Asthma

Symptoms	Wheeze, cough, difficulty breathing, chest tightness, particularly if: Frequent and recurrent, **or** worse at night and early in the morning Symptoms variable from day to day Worse after exercise/triggers e.g. exposure to animals, smoke or sprays If cough >2 weeks screen for TB with sputum smears
Risk Factor history	Personal or family history of hay fever, eczema or asthma (atopic disease) Smoking makes asthma worse Usually in young patient (though can also be an older adult)
How to diagnose/ Signs	Respiratory distress. Widespread wheeze heard, often worse on breathing out. If severe can be a silent chest. Symptoms improve in after inhaled Salbutamol
Management	**Review regularly until symptoms controlled**
Aim	Few symptoms, no limitation of activity, and no 'attacks' (no exacerbations)
At diagnosis	Educate patient (see below) Assess severity Measure Peak Expiratory Flow Rate (PEFR) if available, Explain treatment, including inhaler Show inhaler technique – **refer to Health Educator's Guide** Ask about smoking – strongly advise to stop Complete a treatment card
Refer routinely if	Asthma remains poorly controlled despite treatment and/or regular oral prednisolone is repeatedly required to maintain control. The diagnosis of asthma is uncertain
Medication	Check local availability and cost. Start treatment at the step most appropriate step. Increase treatment stepwise if uncontrolled, but always check using inhalers correctly If still not responding - reconsider diagnosis May step down treatment if well controlled for at least 6 months.
Step 1	Salbutamol as needed as a reliever, use inhaler if affordable, if not use oral)
Step 2	Salbutamol as needed and inhaled steroids (a preventer) if affordable eg beclomethasone 200 - 400 microgram daily as a controller, if affordable
Step 3	Increase dose Steroid inhaler 400 – 1000 microgram daily, continue Salbutamol
Step 4	Add low dose theophylline, continue other treatment
Step 5	**Refer,** while continuing step 4 treatment
Well controlled asthma - all of these features are OK:	Minimal limitation of daily activities (daytime symptoms 2 times a week or less) Needing Salbutamol no more than 3 times a week to control symptoms Night time asthma symptoms two times per month or less No severe attacks (i.e. none needing oral steroids or being in hospital)
Mild asthma attack	Increase the puffs and frequency of the inhalers, until improved, and go back to previous dose.
Acute more severe asthma attack	Add oral prednisolone child 1-2mg/kg daily adults 40mg daily (or dexamethasone 0.6mg/kg daily all age groups) for 3 - 5 days (max), Amoxicillin and Salbutamol, see step treatment above. Do not use steroids long term (more than one week)
Refer urgently if severe/ continues	To hospital, continue using inhaler etc as line above and oxygen if available.

At review appointments	Ask about any new symptoms (side effects?) or any attacks Assess severity asking the 3 questions, have you had: - difficult sleep due to asthma (including cough)?, how often? - your usual asthma symptoms during the day? If so how often? - asthma interfering with your usual activities e.g. work/school? Ask about / any problem taking of their treatment Ask if smoking, advise and support to stop See them use their inhaler and if not show how – see Health Educator's Guide Listen to their chest and assess wheeze Assess need to step up treatment if asthma uncontrolled Record symptoms and signs on treatment card and/or in the patient's notebook.
Patient Education	That asthma is not infectious so cannot be passed from one person to another. It is a narrowing of the airways and the reliever opens them up. Smoking makes asthma much worse – advise to stop. Explain the symptoms of controlled asthma and asthma attacks (as above) If worse to increase the Salbutamol and other inhaler - if symptoms not controlled or persist to attend a health facility. **To seek urgent care if** unable to speak in sentences or very short of breath. Asthma attacks can be fatal. If they have exercise-induced asthma, to take Salbutamol before exercise Avoid things that can trigger their asthma e.g. animal fur, smoke - eliminate them Explain importance of coming for review appointments, give the date.

See the Health Educator's guide for how to make a spacer – which is useful for younger children to use an inhaler

Abbreviations

ART – Anti-Retroviral Treatment
ACEi – Angiotensin Converting Enzyme inhibitor
BP – Blood Pressure
bpm – beats per minute
CCB – Calcium Channel Blocker
CVD – Cardiovascular Disease
FBS – Fasting Blood Sugar
Hb – Haemoglobin
HIV – Human Immunodeficiency Virus
IMAI –Integrated Management of Adult and Adolescent Illness (WHO guide)
IV – Intravenous
MoH –Ministry of Health
NCD - Non-Communicable Disease
NG – Nasogastric
OD – Once Daily
ORS – Oral Rehydration Solution
p – page (number)
PEFR – Peak Expiratory Flow Rate
PHC – Primary Health Centre
RBS – Random Blood Sugar
TB – Tuberculosis
Tx – Treatment
WHO – World Health Organization

Additional Information and References

Common Illnesses
WHO IMAI acute care http://www.who.int/hiv/pub/imai/imai2011/en/
WHO District Clinician Manual https://www.who.int/hiv/pub/imai/imai2011/en/

Cardiovascular Disease
WHO CVD-risk management package for low- and medium-resource settings (2002)
http://www.who.int/cardiovascular_diseases/resources/pub0401/en/

Mental Health
WHO mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings. Version 2.0 (2016)
http://www.who.int/mental_health/publications/mhGAP_intervention_guide/en/

Medication
Essential Medicines List Sierra Leone.

This clinical deskguide and tools have been adapted, prepared technical working group of the MoHS NCD-MH department, and are the responsibility of the MoHS/ NCD-MH.

The original of this clinical deskguide and related tools were researched and developed by Professor John Walley and colleagues of the UKaid DfID funded COMDIS-HSD Leeds programme.

The pilot and adaptation in Bombali district with the support of the DfID funded VSO-RCGP and the NIHR Research Unit on Health in Fragility's (RUHF) partners QMU and COMAHS.