Community Based Model for Lung Health

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Package of integrated care provided by community health worker (CHW) for lung health

1. Education and awareness regarding symptoms of TB and lung disease
2. Prevention education
3. Screening and diagnosis
4. Referral
5. Adherence support
1. Education and awareness on symptoms and stigma

- **TB**
  - Symptoms of TB (cough, fever, night sweats, weight loss)

- **Chronic Lung Conditions**
  - Coughing is not normal and needs to be investigated
  - Coughing blood or blood in sputum is a danger sign
  - Causes of cough
    - Environmental toxins (smoke, silent smoking dust)
    - Allergies (pollen, animals)
    - Disease (TB, asthma, COPD, heart failure)
    - Medications (medications that may cause cough as side effect eg, ACE inhibitors as anti-hypertensives)
  - Shortness of breath without exertion is not normal (sign of lung disease)
  - Wheezing (describe in local language – noisy, whistling) is not normal
  - Chest pain is not normal (may be a sign of lung or heart disease)
  - Exposure to smoking increases risk of lung cancer, TB, other lung disease

- **Stigma mitigation**
  - TB is curable, you can develop TB with or without HIV, know your HIV status, the chance of transmission is decreased when people take treatment for TB or other conditions, cough may be caused by TB or other conditions (asthma, COPD)
2. Prevention education

• TB
  • Cover cough (cough hygiene)
  • Open windows (improve ventilation)
  • Sleep in separate room where possible if coughing from infectious cause (eg, TB, flu, pneumonia)

• Other chronic lung conditions
  • Stop smoking
  • Avoid exposure to smoke, dust, fumes
  • Decrease in-door smoke (kerosene stoves)
3. Screening and diagnosis

- **TB symptoms that require referral to clinic**
  - Active case finding in home of index case - screen for TB symptoms (cough, fever, night sweats, weight loss)
  - Collect sputum and send to clinic or refer

- **Other chronic lung conditions that need referral to clinic - add these questions to screening tool:**
  - Shortness of breath (what triggers it)
  - Wheezing (noisy or whistling breathing)
  - Coughing blood

- **Other questions that could lead to referral (support groups)**
  - Is client smoking?
  - Is client taking medicine? – if yes, for what reason, what medicines and is client adhering to treatment?
  - Mental health screen (symptoms of depression)
4. Referral

• When to refer:
  • If not able to collect sputum, refer
  • If sputum is collected, check result:
    • TB - if sputum specimen is positive then refer to facility for TB treatment
    • Chronic lung conditions - if sputum is negative and still coughing then refer to clinic for investigation

• Send referral form with client to clinic
• Clinic provides feedback to community health worker
• CHW provides active ongoing follow up for referred clients
5. Adherence support

- Provide adherence support for TB treatment
- Educate asthma patients on how to use anti-asthmatics, proper use of inhalers and spacers
- Provide adherence support for other chronic medications
- Motivate clients about the importance of taking treatment
- Conduct pill counts
- Educate about side effects
- Discourage alcohol use but continue taking TB medications regardless
- Psychosocial support
Human resources

• In community
  • Community health workers (CHW) - paid and integrated into the health system – 1 CHW responsible for geographic area with x households (eg, if one HH per hour with travel between then 8/day per 40/week – different ratios in urban vs rural – context specific)
  • Community-based Supervisors – one per 10 CHW (context specific)

• In facility
  • Facility-based Community Coordinator - Links the facility to the community, accepts referral forms and fast tracks consultations, responsible for recall lists
  • Data Capturer – enters and summarises data
Other resources

- Payment for all cadres of human resources
- Sustainability plan
- Printing data collection tools – screening register, referral forms, lab request forms
- Equipment
  - Computer at facility with 3G connection
  - Mobile phones for mHealth data collection
- Supplies
  - Sputum containers
  - Cooler boxes
  - Gloves
  - N95 respirators
  - Carrier bags
Monitoring and evaluation – Process indicators

• Community:
  • Number of people screened for lung conditions
    • Number with TB symptoms
    • Number with other symptoms (SOB, wheeze, coughing)
  • Number of sputum collected
  • Sputum results
  • Number referred
  • Number diagnosed with TB or other lung conditions

• Facility:
  • Number started on treatment for TB or other lung conditions
Key Indicators – Case finding

1. Proportion of new patients with TB diagnosed and notified who were referred by CHW
   - Numerator: Number of new patients with TB diagnosed and notified who were referred by CHW
   - Denominator: Number of all new TB patients diagnosed and notified

2. Proportion of new patients with chronic lung disease diagnosed and notified who were referred by CHW
   - Numerator: Number of new patients with chronic lung disease diagnosed and notified who were referred by CHW
   - Denominator: Number of all new patients with chronic lung disease diagnosed and notified
Key Indicators – Adherence

1. Proportion of new TB patients successfully treated who received adherence support from CHW among all TB patients who received adherence support from CHW
   • Numerator: Number of new patients successfully treated for TB who received adherence support from a CHW
   • Denominator: Number of all new TB patients who received adherence support from CHW

2. Possible indicator: Proportion of chronic lung disease patients who received adherence support from CHW with symptoms controlled among all chronic lung disease patients who received adherence support from CHW
   • Numerator: Number of patients with chronic lung disease receiving adherence with symptoms controlled
   • Denominator: Number of patients on treatment for chronic lung disease who received adherence support from CHW

• NB: Uncontrolled symptoms may be a result of incorrect clinical management which is the responsibility of facility staff and not CHWs
Process to implement the model

• Situation analysis
  • Map households, community workers, clinics
  • Review burden of disease (clinic records, surveys)
  • Identify stakeholders – what existing community workers are addressing TB or NCD (government and NGO/CBO/FBO) – both should integrate

• Enabling environment
  • Community consultation - introduce model to stakeholders, revise model based on inputs received

• Guidelines and tools
  • Develop guidelines
  • Develop standardised training curriculum – lung health section that includes TB and other chronic lung conditions
  • Adapt screening tool to include questions for TB and NCDs

• Capacity Building
  • Train CHWs
  • Sensitise community about implementation of the model
  • Sensitise and train facility health workers on the model and on diagnostic algorithm including appropriate diagnostic tests and referral (eg, for CT scan, MRI, lung biopsy)