

Appendix 1: Summary of healthcare worker cadres and their role

Qualification	Definition
Health Surveillance Assistants	Community level workers with 6 weeks of initial health pre-service training. Generally, provide health promotion and preventive health care through door to door or outreach clinics. Diagnose and treat some illness as part of iCCM in more remote/underserved areas ¹ .
Hospital Attendant	Workers who perform routine patient personal care as directed by more senior health personnel. It includes orderlies and nursing aides ² .
Medical Assistants	Two years of clinical training ¹ to gain a certificate in clinical medicine. Perform clinical duties (except for surgical procedures) ³ .
Clinical Officer	Mid-level practitioners who receive 3-4 years of training and often manage health facilities and fill the role of doctors due to workforce shortages ^{1,4}

1. Makwero M. Delivery of primary health care in Malawi. *African Journal of Primary Health Care & Family Medicine*. 2018;10(1)
2. Malawi Health Workforce Observatory. *Human Resources for Health Country Profile Malawi*,. 2010.
3. Muula A. Case for Clinical Officers and Medical Assistants in Malawi. *Croatian Medical Journal*. 2009;50(1):77-78.
4. Jiskoot P. On-the-job training of clinical officers in Malawi. *Malawi Medical Journal*. 2008;20(3):74-77.

Appendix 2: Healthcare worker focus group discussion topic guide

1. Current IMCI

- When did you last have IMCI training? Can you describe the training?
- Can you describe what IMCI is?
- Do you think you implement IMCI in your setting?
- Are there any barriers you face in implementing IMCI?
- Are there any benefits you think of implementing IMCI?

2. Current emergency treatment

- Can you give a recent example of child you saw, that you would describe as an emergency?
 - o Probe: do others recognise this example, ask for multiple different ones, you can give an example
- Can you describe what you did with this child?
 - o Probe: would everyone do the same, what would they do different
- What would you have liked to do in this situation?
- How did you feel about your management of this case?
- How often do you see children like this?
- Do you use any tools or algorithms (guidelines) when assessing emergency cases?
- When managing emergency cases, how do you work? Is it alone, or in a team? Who is part of the team?

3. Current referral procedure

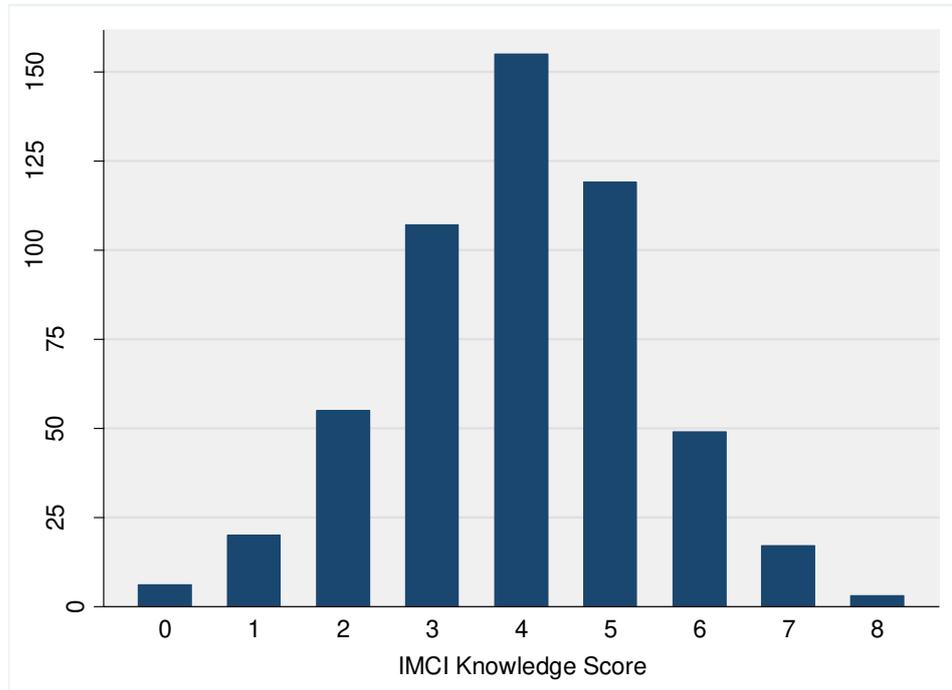
- How often do you refer a child to the hospital? For example, this week how many children has everyone referred?
- Can you describe the process of referral?
 - o Probe: documentation, explaining to the caregiver, organising transport
- Do all caregivers complete the referral?
- Are there any barriers you face in referring children?
- Are there any benefits to referring children?

4. ETAT awareness

- How do you decide which order to see patients in your clinic?
- Have you heard of ETAT? Can you describe ETAT?
- Have you ever had training in ETAT? What about other types of triaging?

5. ETAT preparedness

- What steps would need to happen for you implement ETAT?
- Do you have the equipment you need? Can you give examples?
- Do you have the staff you need?
- Are there any barriers to implementing ETAT? And barriers to adequate management of severely ill children?
- Are there any benefits to implementing ETAT in your setting?

Appendix 3: Summary of healthcare worker IMCI knowledge scores, with 10 being the maximum score

Appendix 4: Healthcare provider IMCI training and knowledge survey

1.1 Have you ever had IMCI training?	Yes / No	If YES, go to 1.4
1.2 Have you ever been given an orientation or briefing on IMCI?	Yes / No	If NO, go to 1.9
1.3 Who gave you this orientation/ briefing?	1. Facility in-charge 2. Other facility staff 3. DHMT representative 4. Other	Go to 1.9
1.4 When was your first training?	_____ year	
1.5 Who provided this first training?	1. MoH/DHMT 2. NGO 3. Research project 4. During school/training 5. Other	
1.6 Have you had a refresher training or active mentorship since?	Y / N	If NO, go to 1.9
1.7 When was the refresher?	_____ year	
1.8 Who provided this refresher training?	1. MoH / DHTM 2. NGO 3. Research project 4. During school/training 5. Other	Select all that apply
1.9 What is a child's classification if he is 10 months old, has had a cough that lasted two days, has a breathing rate of 46 breaths per minute and chest indrawing? ¹	1. Cough or cold 2. Pneumonia 3. Severe pneumonia 4. Very severe febrile disease 5. Don't know	Select one
1.10 What are the four main symptoms for which every sick child should be checked?	1. Malnutrition, cough, vitamin A, ear problems 2. Anemia, fever, diarrhea, ear problem 3. Cough, diarrhea, malnutrition, ear problem 4. Cough, diarrhea, fever, ear problem 5. Don't know	Select the best answer
1.11 For each of the following cases, select Yes if urgent referral is needed or select No if urgent referral is not needed.		
1.11a A 6-month-old boy does not have general danger signs. He is classified with: MASTOIDITIS and NO ANEMIA AND NOT VERY LOW WEIGHT	1. Yes 2. No 3. Don't know	
1.11b A 7-month-old girl does not have general danger signs. She is classified with: COUGH and DIARRHEA	1. Yes 2. No 3. Don't know	

1.11c A 9-month-old boy is lethargic. He is classified with: DIARRHEA and WITH SEVERE DEHYDRATION	<ol style="list-style-type: none"> 1. Yes 2. No 3. Don't know 	
1.11d A 2-year-old girl does not have general danger signs. She is classified with: DIARRHEA and SEVERE DEHYDRATION and SEVERE MALNUTRITION	<ol style="list-style-type: none"> 1. Yes 2. No 3. Don't know 	
1.12 If a child has any of the four general danger signs, you should urgently refer him to hospital for treatment, These signs are:	<ol style="list-style-type: none"> 1. Unable to drink/feed 2. Severe cough 3. Convulsions 4. Vomiting everything 5. Lethargy / unconsciousness 6. Bloody stools 7. Don't know 	Select four from the list
1.13 According to IMCI, a mother of a sick child should be counselled about what topics:	<ol style="list-style-type: none"> 1. Importance of fluids and feeding 2. When to return to the clinic immediately 3. Her own health 4. Immunisation 5. When to return for a follow-up visit 6. The treatments being given to the child 7. Family planning 8. Don't know 	Select all that apply
1.14 What are two signs that are used to classify severe malnutrition	<ol style="list-style-type: none"> 1. Small arm circumference 2. Visible severe wasting 3. Oedema of both feet 4. Severe dehydration 5. Don't know 	Select two from the list
1.15 To classify the dehydration status of a child with diarrhoea you will look:	<ol style="list-style-type: none"> 1. At the general condition 2. For sunken eyes 3. For oedema of both feet 4. If the child is drinking eagerly 5. For palmar pallor 6. For a swollen abdomen 7. Don't know 	Select all that apply