> Answers: Using Health Information

Module 3: Part 1 – Consultation and Diagnosis

Q1

You are a clinical officer in a busy OPD. During the day the following patients come to see you (refer to the Patient List overleaf).

(a) Using the Case Definitions and Guidelines provided, record each consultation in the tally sheet provided.
See Patient List

(b) What did you notice whilst filling in these sheets? Was it easy to agree on where the tallies should go with the rest of the group?
Discuss whether participants have different approaches to classifying new and revisit. Also refer to the use different case definitions.
There is often a lack of consensus on how to tally patients who present with multiple diagnoses during the same visit. Especially cases where multiple diagnoses meet both new and revisit criteria. Refer to Training Manual – Module 3 for guidance on how to record such cases.

Q2

You move on to prepare the Morbidity Report at the end of the week (refer to Table 1). The total camp population is 62, 569.

(a) Refer to the consultation data in Table 1. This month you have had five clinical officers working full-time in your OPD, which was open for a total of 20 working days.

Using the Standard and Indicator Guide, calculate the following indicators:

i. Health Utilisation Rate *(3092 + 2942 / 62569 *12) = 1.2 visits/ refugee /year*
ii. Number of consultations per clinician per day *(6936 /5 /20) = 69 cons/ clinician /day*
iii. Proportional attendance by Nationals *(186 / 6936 *100) = 3%*

(b) What do these figures mean? What could explain your results?
Utilisation rate is within acceptable standard of 1 - 4 visits / refugee / year.
Consultations per clinician exceeds standard of 50 cons /clinician/ day.
No standard for proportional attendance by Nationals. To be derived based on analysis of empirical data.
A high consultation rate, in combination with an appropriate health utilisation rate, is likely to be explained by under-staffing in the clinics.

Table 1

Consultations	Refugee		National
	Male	Female	
New	3092	2942	132
Revisit	306	410	54

Patient List

1. A 4 year old refugee girl. She has symptoms of fever, headache and muscle pain. You see that she had a positive malaria test and was treated successfully at the clinic 10 days ago.
New visit refugee female; < 5 malaria (suspected)
*(**NOTE**: Over 1 week has elapsed therefore classified as New visit again)*

2. A 13 year old national boy with sudden onset weakness in his lower left leg. He has no other history of medical problems.
New visit national male; > 5 AFP / suspected polio.
*(**NOTE**: single case has exceeded alert threshold. **ACTION**: submit outbreak alert form, report to supervisor, initiate prompt investigation and response)*

3. A 60 year old national man. He was diagnosed with TB in 2002 and has come in with blood stained sputum, and complaining of weight loss in the last 3 months
New visit national male; > 5 tuberculosis
*(**NOTE:** This is a suspected case. Both suspected and confirmed TB reported in same case definition)*

4. A 6 year old refugee girl with sudden onset watery diarrhoea. She is very dehydrated with sunken eyelids. She appears drowsy.
New visit refugee female; > 5 watery diarrhoea
*(**NOTE:** Suspected cholera according to case definition)*

5. A 21 year old primagravida refugee. She is in her first trimester and has been feeling increasingly lethargic and short of breath. Her laboratory result shows a Hb of 5.8 g/dl.
New visit refugee female; > 5 anaemia

6. A 3 month refugee boy with a fast respiratory rate of 60 per minute. This is the first time the mother has brought him to OPD.
New visit refugee male; < 5 LRTI
*(**NOTE:** it is a pneumonia as > 50 bpm)*

7. A 23 year old national man. This is his first visit to OPD. He has an itchy rash between his toes and fingers. He also tells you that he has recently started to have discharge and discomfort on urination.
*New visit national male; > 5 Skin **and** STI (has two diagnoses)*
***ALSO** report STI as > 18 National Urethral Discharge Syndrome on reverse of form*
*(**NOTE**: partner tracing reported when treatment is completed. Figures for cases/contacts do not necessarily correlate during any one month. Therefore need to compare ratio over long period of time - e.g. one year)*

8. A 6 year old national girl with a history of fever and chills. She tested positive for malaria parasites 5 days ago.
Revisit national female; No diagnosis recorded
*(**NOTE**: Careful. Less than 1 week elapsed since first presentation so to be considered revisit)*

9. A 60 year old refugee man with bloating, loss of appetite and burning pain immediately after eating. He reported similar symptoms 4 months ago and felt better until recently.
New visit refugee male; > 5 gastritis diagnosis
*(**NOTE**: Not written in surveillance list. Unless this is specified as a cause in the 'free cells' it has to go into "Other" category).*

10. A 3 month old refugee boy is rushed in by his parents. A pot of boiling water was accidentally knocked off the table and onto the floor where he was playing. He has received superficial burns on his upper arms and body.
New visit refugee male; < 5 injury
(***NOTE**: Burns considered as injury in case definition)*

11. A 45 year old refugee woman, complaining of heavy periods and pain during her menstruation. She has not sought medical help for this problem before.
New visit refugee female; > 5 gynaecological problem
*(**NOTE**: Not written in surveillance list. Unless this is specified as a cause in the 'free cells' it has to go into "Other" category)*

12. A 6 year old national boy with a respiratory rate of 40 breaths per minute and a productive cough. You see that he was treated as an outpatient for pneumonia 5 days ago.
Revisit national male; No diagnosis recorded.

13. A 4 year old refugee boy is drowsy and unresponsive. The mother is unable to give a good history and says he suddenly deteriorated this morning. You can hear an audible wheeze, or stridor, on inspiration.
New visit refugee male; < 5 ARI
*(**NOTE**: presence of stridor is cardinal sign of severe pneumonia)*

14. A 55 year old male refugee arrives in the clinic very short of breath. He has an audible wheeze and a history of a productive cough, particularly during the winter months. He has not been for medical help before, but has noticed things getting a lot worse recently. He has been a regular smoker since he was 17.
New visit refugee male; > 5 "other" column
*(**NOTE**: likely diagnosis Bronchitis / COPD. Unless this is specified as a cause in the 'free cells' it has to go into "Other" category)*

Q3

The camp population is 62, 569; the under 5 population is 12, 513.

(a) Refer to the cause-specific data in Table 2. Using the Standard and Indicators reference guide, calculate the following indicators according to specified age-group:

   i. Incidence rate and Proportional Morbidity due to malaria (suspected) (U5)

Incidence = (2143 / 12513 *1000) = 171.2/1000/month;
%Morb = (2143 / 3419 *100) = 63%
    ii.   Incidence rate and Proportional Morbidity due to URTI (Crude)
Incidence = (1608 / 62569 *1000) = 25.7/1000/month;
%Morb = (1608 / 6105 *100) = 26%

(b) Are any of these figures of concern? Where would you look to try and explain them? What would your next steps be?
High burden of malaria among U5s. Need to see if translated in high case fatality rates. Also investigate further the reasons for high number of cases (e.g. assess malaria transmission risk factors / community health education / coverage of ITN distribution / case management practices for malaria)

(c) Which of the above indicators could you calculate for the host population? Give an explanation for your answer.
Unable to calculate host incidence due to lack of accurate population denominator. Proportional mortality can be calculated as this does not require a target population figure.

Table 2

Diagnosis	Refugee				National	
	< 5		≥ 5		< 5	≥ 5
	Male	Female	Male	Female		
1. * Malaria (suspected)	1136	1007	726	1088	101	40
3. URTI	399	464	317	428	30	15
8. * Watery diarrhoea	208	164	48	57	16	5
9. * Bloody diarrhoea	26	15	14	8	1	1
Totals	1769	1650	1105	1581	148	61

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Module 3: Part 2 – Outbreak Alert and Response

Q4

You are the clinical officer in-charge of a health clinic. It is the end of the reporting week, and you are busy compiling the statistics for the Morbidity Report.

(a) Complete the missing Totals columns in Table 3.
See Table 3

(b) Does the number of malaria cases reported this month worry you? If not, what number of malaria cases would prompt you to act?
Reported number of cases = 350
Average number of cases in past 3 weeks = (265 + 254 + 283) / 3 = 268
1.5 times baseline > 401 (figure above which an alert would be triggered). Therefore, 350 cases is within limits and no alert should be raised.

(c) Are any of the other weekly disease figures of concern? Which? And what would you do next?
Bloody diarrhoea total = 6, which is > 5 and exceeds alert threshold
***ACTION**: need to complete outbreak alert form, report to supervisor, and undertake active case finding and outbreak verification*

(d) Think of other ways in which could you present the data given in this weekly report. Discuss how this might be useful for clinical officers in the camps.
Plot baseline on a "cases-over-time" graph (or epidemiological curve) to permit monitoring and rapid identification of when alert thresholds are surpassed

Table 3

Diagnosis	Refugee					
	< 5		Total	≥ 5		Total
	Male	Female	< 5	Male	Female	Crude
1. * Malaria (suspected)	60	58	*118*	79	54	*251*
2. * Malaria (confirmed)	36	24	*60*	22	17	*99*
3. URTI	12	18	*30*	5	8	*43*
4. LRTI	7	8	*15*	4	5	*24*
9. * Bloody Diarrhoea	2	3	*5*	1	0	*6*

You have information that the number of malaria cases in the past 3 weeks is as follows:

1 week ago	265 cases
2 weeks ago	254 cases
3 weeks ago	283 cases