Module 3
Morbidity

Part 1 - Consultation, Diagnosis and Sexually Transmitted Infection (STI)

CONTENTS

ILLUSTRATED GUIDES

Consultation, Diagnosis and Sexually Transmitted Infection (STI)

3.1 WHAT ARE THE TOOLS USED FOR DATA COLLECTION?

The data collection tools used in the out-patient department are shown in the box below. They are classified as follows:

Primary Tools

Primary data sources are essential to routine monitoring within the HIS and are prerequisite to the calculation of indicators. They form the basis of the guidance and training within this manual, and are described in detail in Illustrated Guides at the end of the module.

Secondary Tools

Secondary data sources have important functions within the HIS but are not directly used to calculate indicators. They play vital roles in informing clinical decision-making and promoting service quality and performance. They are described in information boxes in the supporting text.

> Data collection and monitoring tools

Out-Patient Department

Primary Tools
1. OPD Tally Sheet
2. Morbidity Register*
3. Outbreak Alert Form
4. Morbidity Report

Secondary Tools
1. Individual Patient Records

* Morbidity Registers are not used as a direct source in weekly reporting, but are classified as a primary tool due to their role as a reference for line listing data in the event of a disease outbreak (see Part 2).

3.2   WHO IS RESPONSIBLE FOR COLLECTING THE DATA?

Clinical officers are responsible for keeping records of each outpatient consultation. The primary source of data collection is the daily tally sheet. The role of registers and individual patient records in out-patient services is discussed below (see 3.3 What data should be collected and how?).

It is the responsibility of each clinical officer to decide how many tally sheets need to be used during the course of a week. More than one tally sheet may be filled, particularly if the health facility sees a large number of patients each day. However, no single tally sheet should last more than one week.

The clinical officer in-charge of each health facility is responsible for compiling the Morbidity Report at the end of the week. This should begin with the gathering of tally sheets that have been used by clinical officers, ensuring that forms are submitted on time and corresponding to the reporting period in question.

The Weekly Morbidity Report should be completed by transferring summed totals from the tally sheets into the standardised reporting form, and submitting to the Health Manager in each health facility (see 3.4 How and When should the data be reported?). The role of clinical officers in outbreak detection and response is discussed in detail in Part 2 of this module.

3.3   WHAT DATA SHOULD BE COLLECTED AND HOW?

Each out-patient department should report age, sex, and cause-specific data for each consultation. Information should be recorded systematically, using data sources and guidance that is standardised between health agencies.

3.3.1   OPD Tally Sheet

The principal source of routine monitoring data in the out-patient department is the daily tally sheet (see Illustrated Guide to OPD Tally Sheet).

> Consultation

Before any record is made, the clinical officer must first determine whether the patient is seeking treatment for a new or pre-existing health problem. This distinction is critical to the correct calculation and interpretation of indicators at the end of each week or month.

The criteria used to define 'New Visit' or 'Revisit' should be adapted within each country and stated in clear, written guidelines that are available to all clinical officers (see Country Considerations Box). Only one type of visit should be tallied for each consultation, according to the status of the patient (refugee or national).

> Case Definitions

The diagnosis should be tallied in a separate section of the tally sheet independently of consultation-type. To guarantee reliable and accurate reporting it is essential that the reporting of each diagnosis follows a case definition.

A case definition is a set of standard criteria for deciding whether a person has a particular disease. It states clear and objective criteria that must be met before a diagnosis is reported (see Country Considerations Box). No diagnosis should be recorded unless it meets the case definition.

> Country Considerations

What are the definitions of 'New visit' and 'Revisit'?

All clinical staff must be able to determine whether or not a patient is presenting with a new health problem ('New visit') or is seeking treatment for a pre-existing health problem ('Revisit').

The definitions of these terms should be specified for each disease and health event under surveillance, and made available to all staff at the time of consultation to assist decision-making and guarantee consistent recording of information in the daily tally sheets.

The generic definitions of 'New Visit' and 'Revisit' are shown in Table 1. These should be interpreted in combination with more specific criteria that define time-bound parameters for when a patient with a past history can be considered a 'New visit' again.

Table 2 lists some common diagnoses and their accepted time criteria. These parameters should be adapted for each country, and standardised among all health agencies.

Table 1. Definitions of "New Visit" and "Re-visit"

New visit	A patient with no previous history of the diagnosis; or A patient with a history of the diagnosis and in whom a minimum period of time has elapsed since the most recent diagnosis was made (see Table 2)
Revisit	A patient with a history of the diagnosis and in whom the minimum period of time has not yet elapsed since the most recent diagnosis was made (see Table 2)

Table 2. Time that should to elapse before a patient with a history of a diagnosis can be considered a "new" visit

At least 1 week	At least 1 month	At least 1 year	Lifelong*
Malaria	Skin disease	Vitamin A def.	Measles
URTI, LRTI	Malnutrition	Tuberculosis	Polio
Diarrhoea	Anaemia	Meningitis	Hypertension
Eye disease	STI		Diabetes
Intestinal worms	Gastritis		HIV/AIDS
	Dental conditions		Leprosy

* A patient can never again be termed a "New Visit" for problems in this category, if a diagnosis has previously been made

> Country Considerations

Which diseases and health events are under surveillance?

It is not possible to monitor everything to the same level of detail in an HIS. Each country must identify the priority diseases and health events that present the most significant threat to the health of the refugee and host populations.

In addition to the core surveillance list, the HIS permits five diseases or health events to be specified and written into the daily tally sheets and weekly reporting forms. The selection process must be done in coordination with UNHCR, Ministries of Health, and health implementing partners, and should take into account the following factors:

> Does it result in high disease impact?

> Does it have a significant epidemic potential?

> Is it a specific target of a national, regional, or international control programme?

> Will the information collected lead to public health action?

All health conditions selected for inclusion in the surveillance list should be assigned a case definition, and each should be mutually exclusive of one another.

Every disease and health event under surveillance must have a corresponding case definition and all agencies reporting to the surveillance system, regardless of affiliation, must use the same case definitions so that there is consistency in reporting. The decision on which diseases and health events are placed under surveillance should be taken following country-level technical assessments and based upon the public health priorities within each location (see Country Considerations Box).

To guarantee consistent application of case definition criteria, clinical officers must be equipped to make a complete and accurate examination of each patient. All clinical officers should have access to a minimum set of medical equipment: including a stethoscope, thermometer, blood pressure gauge, and tongue depressor.

> Diagnosis

Only new visits should be reported in the diagnosis section of the tally sheet; repeat visits for the same problem should not be recorded. If two or more diagnoses qualify under 'New Visit' criteria during the same consultation, then each should be recorded in the tally sheet. However, only the single 'New Visit' should be recorded.

If a patient has a mixed presentation, for both new and existing problems, the consultation should be recorded as 'New Visit'. Only the new diagnosis should be logged; the old diagnosis should not be entered.

The daily tally sheet allows up to five diseases or health events to be specified and written in 'free-cells' in the morbidity list. Strong coordination is required between Health agencies to ensure that the same causes of morbidity are monitored across different camps. This will help safeguard the consistency of information within each country operation.

> Country Considerations

What are the case definitions?

Case definitions are an essential tool to any surveillance system. They guarantee consistency in reporting and ensure that accurate and comparable morbidity data is collected and reported by all health partners.

Definitions should be simple, clear and adapted to available diagnostic means. They should be adhered to by all agencies, and used by staff in all reporting facilities (including OPD, IPD and laboratory). The case definitions of the Ministry of Health should be adopted where available. In their absence, standard WHO case definitions can be used but should be adapted according to the local context.

Case definitions considered in the HIS are designed for surveillance purposes only. A surveillance case definition is not to be used for the management of patients and is not an indication of intention to treat.

Surveillance case definitions should indicate, if appropriate, when a case is suspect, probable or confirmed (see Table 1).

Table 1. Definitions of "New Visit" and "Re-visit"

Suspected case	Clinical signs and symptoms compatible with the disease in question but no laboratory evidence of infection.
Confirmed case	Definite laboratory evidence of current or recent infection, whether or not clinical signs or symptoms are or have been present.
Syndromic case	Clinical signs and symptoms due to various or multiple causative organisms. Demonstration of aetiological agent is irrelevant for adequate case management or public health action.
Probable case	Compatible signs and symptoms and additional epidemiological or laboratory evidence for the disease in question.

NOTE
Some case definitions in the HIS may include both confirmed and suspected cases, and should be clearly marked where it occurs.
Some case definitions may not require laboratory evidence to be classified as confirmed, as they can be diagnosed on clinical grounds alone. In such cases, the definition should be classified as Confirmed (Clinical).

> Outbreak Alert

Diseases with outbreak potential are marked in the surveillance list with a single asterisk (*). All diseases of outbreak potential should be assigned a corresponding alert threshold, which defines the basis upon which an outbreak should be reported. As for all conditions under surveillance, the decision on which diseases are selected should be based upon epidemiological priorities in each country (see Country Considerations Box). The thresholds alert should be visible and easily-referenced by all clinical officers.

The alert thresholds are printed in three locations within the HIS:

1. On the reverse of each daily tally sheet;
2. On the reverse of each weekly Morbidity Report form; and
3. Next to the corresponding case definition.

For more details on the use and application of alert thresholds in the HIS see Module 3: Part 2 - Outbreak Alert and Response.

> Sexually Transmitted Infection (STI)

Syndromic STIs are marked with a double asterisk (**) in the surveillance list. This indicates that each case should be recorded TWICE in the daily OPD Tally Sheet:

1. Firstly as a non-specific diagnosis on the front of the form;
2. Secondly as a syndrome-specific diagnosis on the reverse of the form.

The recording of data on the reverse of the tally sheet allows greater case detail to be reported. In addition to the syndrome-specific diagnosis, this includes age breakdown according to < 18 and ≥ 18 years, and information regarding partner tracing and treatment. Partner tracing involves actively following-up contacts of STI cases by community health workers, and providing presumptive STI treatment. Details of the numbers of partners treated, and for which corresponding syndrome, should be tallied from community health department records.

> Secondary Tools

Individual Patient Records

The OPD tally sheet is a useful tool for condensing the large volumes of consultation and diagnosis information that are gathered each day in the out-patient clinic. This summarised data source helps to facilitate rapid reporting of information at the end of each week, but is to be used solely for monitoring purposes.

Detailed patient records must also be maintained alongside the tally sheets, to inform clinical decision-making and case management. All clinical notes should be written legibly, in long-hand, and the date, time and name of the reviewing officer clearly identified next to each entry.

The management of individual patient records will vary between health agencies, but are mainly categorised into two major types:

1. Patient-based systems, where individual clinical records are kept by the patient and brought to the health centre at each visit;

2. Centre-based systems, where individual clinical records are stored centrally at the health centre and retrieved at the time of consultation.

The total number of STIs reported on the front of the tally sheet, and in the syndrome-specific table on the reverse should be the same. Due to the length of time needed to identify and trace each partner, the treatment of contacts will not necessarily correlate with the same week in which the original case was diagnosed. Therefore, the number of syndromic STIs diagnosed, and the number of contacts treated, may or may not be the same.

> SGBV-related injury

Injuries are marked with a triple asterisk (***) in the surveillance list. This is to denote that any case of SGBV-related trauma which is treated in a health facility should be recorded within this category. This fact should also be reflected in the case definition of injury.

According to the country protocol on the clinical management of SGBV survivors, an SGBV incident report should be completed for such cases and appropriate case management, counselling and referral services provided.

3.3.2 Morbidity Register and Patient Records

The daily OPD Tally Sheet is a useful tool for condensing large volumes of consultation and diagnosis data and for facilitating the reporting of statistics within the Weekly Report. However, it does not replace the need to maintain detailed history and examination notes. These should be

written legibly, in long-hand, in the individual patient records that are maintained by each health agency (see Secondary Tools: Patient Notes).

A summary of case-based information from each consultation should also be logged in a Morbidity Register. One register book should be kept in each consultation room within the health facility and should record information on the identity of the patient, presenting signs and symptoms, diagnosis and treatment, and necessary follow-up / admission (see Illustrated Guide to Morbidity Register). Although the register is not used as a data source for weekly reporting, it has a number of other important functions:

1. Clinical Guide

The fixed column headings in the register help to guide clinical officers during each consultation. They prompt full and complete recording of details for each patient, in the same way, every time.

2. Outbreak Alert

The case-based information collected in the register plays a crucial role in tracing individuals in the event of an outbreak. It is an important reference for the completion of the line listing section in the Outbreak Alert Form (see Illustrated Guide to Outbreak Alert Form).

3. Quality of Care

The centralised summary of case-information within each register acts as a useful monitoring and evaluation tool. Health Managers should periodically audit the registers, to review diagnosis and prescription practices in each OPD and certify adherence to Standard Treatment Guidelines.

An Illustrated Guide to the OPD Tally Sheet and the Morbidity Register, and an explanation of the information that should be recorded in each, is given at the end of the module.

3.4   HOW AND WHEN SHOULD THE DATA BE REPORTED?

At the end of each week the daily Tally Sheets used by each clinical officer should be collected by the clinical officer in-charge and compiled into the Weekly Morbidity Report.

The dates of each reporting week are shown in the Reporting Calendar. It is important that all staff are aware of these dates, and that copies the calendar are distributed to all OPD clinics.

3.4.1   Converting tallies to numbers

Prior to submission of the tally sheets at the end of the week, each clinical officer should convert the tallies into numerical figures. These numbers should be entered clearly into the black Number Boxes in the bottom right-hand corner of each Tally Box (see Illustrated Guide to OPD Tally Sheet).

The system should include zero reporting. This means that each facility should report for each disease in each reporting period, even if it is to report zero cases. This avoids the confusion of equating 'no report' with 'no cases'.

The clinical officer in-change should verify that a random sample of 10 – 20 tallies in the daily forms have accurately been converted into numbers.

3.4.2   Weekly Report

Using a calculator, the figures in the number boxes in each tally sheet should be added and the weekly total transferred into the corresponding field in the Morbidity Report (see Illustrated Guide to Morbidity Report).

Consultation data is disaggregated by status (refugee or national) and sex (for refugees only. Diagnosis data is disaggregated by cause, age, sex, and status (refugee or national). The grey totals columns in the weekly report should be filled to provide the total of number cause-specific diagnoses that were reported during the week.

The names of the diseases or health events specified 'free-cells' on the weekly reporting form should be consistent with those written on the daily tally sheets. Health agencies should coordinate closely to ensure that the same causes of morbidity are monitored across different camps (see Section 3.3.1 OPD Tally Sheet).

3.4.3 Outbreak Alert

The important role of the HIS in outbreak detection and response makes it is essential for a weekly report to be compiled in every out-patient department. As alert thresholds are determined for the catchment population of each health unit, this makes facility-based reporting is essential to ensure that they are interpreted accurately and without delay, based on appropriated disaggregated information.

For more details on the monitoring of alert thresholds, and the action to be taken if any are exceeded in any particular week, see Part 2 of the module.

3.4.4 Additional Data

In addition to information that is transferred directly from the tally sheets, two other pieces of information should be reported routinely in each Morbidity Report.

> Number of full-time clinicians is the average number of clinical officers available to hold consultations on each day of the reporting week. This figure can be a fraction of a whole number if appropriate (e.g. an individual who worked part-time for 50% of the week would be counted as 0.5 clinical officers).

> Number of full days on which the health facility was functioning refers to the number of complete working days during the reporting week, on which a full range of outpatient services and staffing were available. In many cases, this does not include weekends or holidays. As for the number of full-time clinicians, the number of full days can be a fraction of a whole number if necessary.

3.4.5 Monthly Report

At the end of each week the paper-based report forms can be directly entered into the computer. The database will then automatically combine these into a monthly report composed of 4 or 5 weekly reports, depending on the reporting calendar. More information on data management and is given in Part 3 of the manual.

3.5   HOW SHOULD THE DATA BE INTERPRETED AND USED?

The indicators for morbidity, consultation and sexually transmitted disease are shown below. Each is classified according the five core objectives of the HIS. A summary of each indicator, including formulae, units of expression, and the corresponding standard (where available) is given in the Standard and Indicator Guide.

It is essential that staff are familiar with how these indicators are calculated, and understand how they should be used to evaluate programme performance and to inform public health decision-making. A group exercise on how to calculate and interpret the indicators, using sample data, is given on the CD-ROM which accompanies this manual.

> Indicator Summary

Consultation

III-34

Objective	Indicator	Source
3. Evaluate the effectiveness of interventions and service coverage	Health facility utilisation rate	UNHCR
	Proportion of consultations to nationals	HIS
4. Ensure that resources are correctly targeted to the areas and groups of greatest need	Consultations per clinician per day	UNHCR

> Indicator Summary

Morbidity

Objective	Indicator	Source
2. Monitor trends in health status and continually address health care priorities	Incidence rate*	SPHERE
	Proportional morbidity*	SPHERE

* disaggregated by under 5 and over 5

> Indicator Summary

Sexually Transmitted Infection (STI)

Objective	Indicator	Source
2. Monitor trends in health status and continually address health care priorities	Incidence of male Urethral Discharge Syndrome (UDS)	HIS
	Incidence of Genital Ulcer Disease (GUD)	HIS
3. Evaluate the effectiveness of interventions and service coverage	Proportion of syndromic STI cases among nationals	HIS
4. Ensure that resources are correctly targeted to the areas and groups of greatest need	Proportion of syndromic STI cases among under 18s	HIS
5. Evaluate the quality of health interventions	Ratio of contacts treated: syndromic STI cases	HIS

> Illustrated Guide to OPD Tally Sheet (FRONT)

A

Health Information System

Location _____   Name of Staff Member _____

Health Centre _____   Date (s) ___ / ___ / _____ to ___ / ___ / _____

This tally sheet records: **Refugee / National data**   (select appropriate)

NEW VISITS

Male	Female

Area Enlarged

RE-VISITS

Male	Female

OPD TALLY_EN_090109

DIAGNOSIS Record New Visits ONLY	< 5 Male	< 5 Female	≥ 5 Male	≥ 5 Female
1. * Malaria (suspected)				
2. * Malaria (confirmed)				
3. URTI				
4. LRTI				
5. Skin disease				
6. Eye disease				
7. Dental conditions				
8. Intestinal Worms				
9. * Watery diarrhoea				
10. * Bloody diarrhoea				
11. Tuberculosis				
12. * AFP / Polio				
13. * Measles				
14. * Meningitis				
15. HIV/AIDS				
16. ** STI (non HIV/AIDS)				
17. Acute malnutrition				
18. Anaemia				
19. Chronic disease				
20. Mental illness				
21. *** Injuries				
22.				
23.				
24.				
25.				
26.				
27. Other				

3.0 Morbidity

B

NEW VISITS

Male	Female

Area Enlarged

C

D

DIAGNOSIS Record New Visits ONLY	Male	< 5	Male
1. * Malaria (suspected)			
2. * Malaria (confirmed)			
3. URTI			
4. LRTI			
5. Skin disease			
6. Eye disease			

A HEADER:

Dates:
> Fill date(s) corresponding to when the tally sheet was used (dd/mm/yy TO dd/mm/yy)

Name of Clinical Officer:
> Print name of Clinical Officer responsible for filling the tally sheet

Location:
> Print name of camp or district

Health Centre:
> Print OPD name or number

This tally sheet records:
> Circle Refugee or National to detemine the type of beneficiary data collected in the sheet. A different tally sheet will need to be filled for refugees and nationals.

NOTES

It is the responsibility of each Clinical Officer to know how to use each tally sheet. The Clinical Officer in-charge should provide on-the-job support and supervision each week.

A new sheet should be used if any one of the tally sections is filled. No single tally sheet should be used for more than one reporting week.

B CONSULTATION:

Strike a tally corresponding to:

> Type of visit (New / Revisit);

> Status (Refugee / National);

> Age (< 5 / $\geq$ 5);

> Sex (Male / Female)

NOTES

Refer to guidelines for definitions of New Visit and Revisit.

Only ONE tally should be entered for each visit in the consultation section.

A patient with a 'mixed' presentation (i.e. diagnoses that fulfil New and Revisit criteria) should be tallied as a NEW visit.

C DIAGNOSIS:

Strike a tally corresponding to:

> Diagnosis (Cause-specific)

> Status (Refugee / National);

> Sex (Male / Female)

> Age (< 5 / $\geq$ 5)

NOTES

Record diagnosis for NEW VISITS, which meet the criteria specified in the Case Definition, only.

Numbers 22 - 26 are 'free-cells' which permit additional causes of morbidity to be added to the list and monitored. These should be agreed upon close coordination with other health agencies to guarantee the consistency and comparability of information within each country operation.

D NUMBER BOXES:

Before submitting the tally sheet at the end of the week, count the number of tallies in each box and convert to a number.

> Write number clearly in the black square in the bottom right hand corner of each tally box

NOTES

It is the responsibility of the clinical officer named on the form to convert tallies to numbers PRIOR to submission at the end of the week.

The clinical officer in-charge should check a random sample of 10 - 20 tally conversions for accuracy at the end of each week.

> Illustrated Guide to OPD Tally Sheet (REVERSE)

Also record STI case information in table below:

SYNDROMIC DIAGNOSIS	< 18 Male	< 18 Female	≥ 18 Male	≥ 18 Female	Contacts Treated
Urethral Discharge Syndrome (UDS)	00000 00000 00000	░░░░░░	00000 00000 00000	░░░░░░	00000 00000
Vaginal Discharge Syndrome (VDS)	░░░░░░	00000 00000 00000	░░░░░░	00000 00000 00000	00000 00000
Gential Ulcer Disease (GUS)	00000 00000 00000	00000 00000 00000	00000 00000 00000	00000 00000 00000	00000 00000
Pelvic Inflammatory Disease (PID)	░░░░░░	00000 00000 00000	░░░░░░	00000 00000 00000	00000 00000
Opthalmia Neonatorum	00000 00000 00000	00000 00000 00000	░░░░░░	░░░░░░	
	00000 00000 00000	00000 00000 00000	░░░░░░	░░░░░░	
Others	00000 00000 00000	00000 00000 00000	00000 00000 00000	00000 00000 00000	00000 00000

Transmitted Infection (STI)

Area Enlarged

G

Weekly Alert Thresholds for each Health Facility:

Malaria	1.5 times the baseline[†]
Watery Diarrhoea	1.5 times the baseline[†]
Suspected Cholera	1 case
Bloody Diarrhoea	5 cases
Acute Flaccid Paralysis / Polio	1 case
Measles	1 case
Meningitis	5 cases or 1.5 times the baseline[†]

If weekly thresholds are exceeded:

1. Report to clinic supervisor

2. Complete Outbreak Alert Form

[†] Baseline = average weekly number of cases of the disease calculated over the past 3 weeks

* Disease with outbreak potential. If weekly alert threshold is exceeded report immediately to supervisor . ** Also record syndromic diagnosis; < 18 / ≥ 18 age group; and treatment of contacts in the STI table above.
*** Includes SGBV; complete incident report form for all cases

E

SYNDROMIC DIAGNOSIS	< 18 Male	< 18 Female	≥ 18 Male	≥ 18 Female
Urethral Discharge Syndrome (UDS)	00000 00000 00000	░░░░░░	00000 0000 **F** 0	░░░░░░
Vaginal Discharge Syndrome (VDS)	░░░░░░	00000 00000 00000	░░░░░░	00000 00000
Gential Ulcer Disease (GUS)	00000 00000 00000	00000 00000 00000	00000 00000 00000	00000 00000
Pelvic Inflammatory Disease (PID)	░░░░░░	00000 00000 00000	░░░░░░	00000 00000
Opthalmia Neonatorum	00000 00000 00000	00000 00000 00000	░░░░░░	
	00000 00000 00000	00000 00000 00000	░░░░░░	

Transmitted Infection (STI)

Area Enlarged

E SYNDROMIC STI:

Each NEW STI case should be recorded twice in the Daily OPD Tally Sheet.

FIRST in the diagnosis section on the front of the tally sheet, and SECOND in the Syndromic Diagnosis section on the reverse of the sheet.

Strike a tally corresponding to:

> Diagnosis (Syndrome-specific);

> Status (Refugee / National);

> Sex (Male / Female)

> Age (< 18 / ≥ 18)

> Contacts Treated

NOTES

It is the responsibility of the Clinical Officer named on the form to ensure that all cases of STI are properly recorded.

Partner treatment should be tallied when details are made available from community health worker records. This may or may not correlate with the reporting week in which the original case was diagnosed.

The total number of STIs reported on the front of the tally sheet, and in the syndrome-specific table on the reverse, should be the same.

The number of syndromic STIs diagnosed and the number of contacts treated may or may not be the same.

F NUMBER BOXES:

Before submitting the tally sheet at the end of the week, count the number of tallies in each box and convert to a number.

> Write number clearly in the black square in the bottom right hand corner of each tally box

NOTES

It is the responsibility of the clinical officer named on the form to convert tallies to numbers PRIOR to submission at the end of the week.

The clinical officer in-charge should check a random sample of 10 - 20 tally conversions for accuracy at the end of each week.

G WEEKLY ALERT THRESHOLDS:

Each disease of outbreak potential has a corresponding alert threshold listed in this table.

Clinical officers should be aware of the thresholds, and review each time a relevant diagnosis is recorded in the form.

If a weekly disease threshold is exceeded, immediate action must be taken to:

> Report to the clinic supervisor

> Complete an Outbreak Alert Form

NOTES

The alert threshold for some diseases are be as low as ONE case of disease and should be closely monitored by the clinical officers each day.

The clinical officer in-charge should monitor alert thresholds per health facility at the end of each reporting week.

A graph of cases-over-time should be plotted to assist visual monitoring of alert thresholds that refer to a baseline number of cases over preceding weeks.

> Illustrated Guide to Morbidity Register

A							B			
OPD No.	Name	Age	Sex (M / F)	Status (Ref / Nat)	Address		Date of visit	New or Re-visit *	Temp. (°C)	Weight (kg)

A   REGISTRATION:

OPD No.:
> Enter sequence number in register

Name:
> Print name of patient

Age:
> Enter age (in years)

Sex:
> Enter male (M) / Female (F)

Status:
> Classify as Refugee (Ref) / National (Nat)

Address:
> Enter Camp Address (Refugee) / Nearest Village (National)

NOTES

It is the responsibility of the Clinical Officer to record information neatly and legibly, alongside the OPD tally sheet and individual patient records.

One register book should be available in each OPD consultation room.

B   VISIT DETAILS:

Date of visit:
> Enter date (dd/mm/yy)

New or Revisit:
> Classify as New / Revisit (refer to guidelines)

Temp:
> Enter temperature (in °C)

Weight:
> Enter weight (in kg)

NOTES

Classification of New and Revisit should meet criteria specified in guidelines.

Temperature should be recorded for all patients using a thermometer.

Weight measurements are important for children under five, to ensure accurate calculation of drug dosage requirements (per kg).

This does not need to be routinely measured for adults, but is particularly important if relevant to the reason of consultation (e.g. TB, HIV/AIDS, malnutrition). In such cases BMI should also be calculated.

C

Presenting signs and symptoms	Past history of anti-malarial use †	RDT or Lab. results	Diagnosis	Treatment ‡	Admit (Y / N)

C CASE MANAGEMENT:

Presenting signs and symptoms:
> Enter annotated list of most significant symptoms (from history) and signs (from examination)

Past history of anti-malarial use:
> For malaria patients who are revisiting for same infection, enter abbreviations to indicate name, dose and duration of prior anti-malarial use

RDT / Lab results:
> Enter result of rapid diagnostic test or other relevant laboratory investigation results as requested

Diagnosis:
> Enter diagnosis. Case definition criteria should be used for reporting purposes only, and not to guide clinical management or treatment.

If more than one diagnosis is made, use a separate row to record each

Treatment:
> Enter annotated treatment given. Only include treatment relevant to the diagnosis. For prescribed drugs, enter name, dose and duration.

Admit:
> Enter Yes (Y) or No (N) to indicate whether admission to IPD ward was required

NOTES

The OPD Register should include a ANNOTATED case information only. Detailed records of history, examination and clinical management should entered in patient notes.

The OPD Registers are NOT used for direct reporting of consultation or morbidity data, but serve other important functions:

1. Clinical Guide
The fixed column headings in the register help to guide clinical officers during each consultation. They prompt full and complete recording of details for each patient, in the same way, every time.

2. Outbreak Alert
The case-based information collected in the register can play a crucial role in tracing individuals in the event of an outbreak. It is an important reference for the completion of the line listing section within the Outbreak Alert Form (see Illustrated Guide to Outbreak Alert Form).

3. Quality of Care
The centralised summary of case-information within each register facilitates acts as a useful monitoring and evaluation tool. Health Managers should periodically audit the books, to review diagnosis and prescription practices in each OPD.

Module 3
Morbidity

Part 2 - Outbreak Alert and Response

CONTENTS

ILLUSTRATED GUIDES

Outbreak Alert and Response

3.6   WHAT ARE THE TOOLS USED FOR DATA COLLECTION?

Outbreak alert and response data is collected using the same tools as regular morbidity data (see Part 1). The major difference is that this data then enters an early warning mechanism within the HIS and undergoes a further level of analysis and review at the facility-level, prior to being compiled in the regular weekly report.

3.7   WHO IS RESPONSIBLE FOR COLLECTING THE DATA?

To ensure rapid detection of an outbreak it is necessary to set up an early warning mechanism within the HIS. This is based upon the recognition and immediate reporting of priority diseases/syndromes with epidemic potential by clinical staff.

It is the responsibility of each clinical officer to know which diseases under surveillance in each camp have outbreak potential. Clinical staff should know where the corresponding alert thresholds are written in the information system, understand how they should be used, and know what actions to take if they are exceeded. Health agencies have an obligation to provide necessary on-the-job supervision and ensure this knowledge is up-to-date.

Disease with low alert thresholds require action to be taken if the thresholds are exceeded on any particular day (e.g. suspected polio, measles). These should be reported as soon as cases are seen by a clinical officer. Other diseases of outbreak potential have thresholds defined as an increase in the number of cases reported above a baseline in each health-facility (e.g. malaria). It is the responsibility of the clinical officer in-charge to monitor these alert thresholds at the end of each reporting week.

The triggering of an outbreak alert should prompt immediate action to fill an outbreak alert form and report the event to a supervisor (see below).

3.8   WHAT DATA SHOULD BE COLLECTED AND HOW?

Each disease of outbreak potential in the HIS is marked with a single asterisk (*) to indicate that it has been assigned a corresponding alert threshold. An alert threshold consists of a defined number of cases of disease which, if exceeded, should lead to immediate action to be taken. It is the basis

on which decision to report an outbreak is made.

Alert thresholds are determined for the catchment population of each health-facility and are based upon the number of reported cases each week. Facility-based reporting is therefore essential to ensure that these thresholds are accurately interpreted, based on appropriated disaggregated information.

The thresholds should be based upon country-specific epidemiological data, where available, and standardised among all health partners. Where country-specific data is missing internationally recommended definitions should be adopted (see Country Considerations Box). The alert thresholds should be clearly visible and easily referenced by clinical staff during consultations and during the compilation of weekly statistics.

Alert thresholds are printed in three locations within the HIS:
1. On the reverse of each daily tally sheet;
2. On the reverse of each Morbidity Report form; and
3. Next to the corresponding case definition.

The actions to be taken if an alert threshold is exceeded during a reported week are described below.

3.9   HOW AND WHEN SHOULD THE DATA BE REPORTED?

3.9.1 Outbreak Detection
The procedure for compiling a weekly report from the daily tally sheets is described above in Part 1. The alert thresholds should be known and regularly referenced for each disease marked with a single asterisk (*) in the surveillance list.

Some alert thresholds require detection of an increase in the number of cases above a baseline, or average number of cases, calculated over preceding weeks. To promote predictable and timely intervention as soon as these thresholds are exceeded, the number of reported cases should be plotted in a graph at the end of each week. This graph is known as an epidemiological curve and uses "Number of Cases" on the vertical axis and time in "Weeks" on the horizontal axis.

> Country Considerations

What are the alert thresholds for diseases of outbreak potential?

The potential of a disease to cause an outbreak is significant in determining whether or not it should be under surveillance (other factors that influence the selection process of diseases and health events within the surveillance system are discussed in Part 1).

The term alert threshold (also known as 'epidemic threshold') refers to the level of disease above which an urgent response is required. The threshold is specific to each disease and depends on the infectiousness, other determinants of transmission and local endemicity levels.

For certain diseases, such as polio and measles, one case is sufficient to initiate a response. For other diseases, such as malaria, establishing a threshold requires the collection of incidence data over time to determine an acceptable 'baseline'. The baseline figure is specific to the epidemiology of the disease in question, and should ideally be determined using country-specific data over months or years. In practice this is rarely feasible, and in most refugee settings baseline data are calculated over a number of preceding weeks to determine the alert threshold. Plotting disease trends in simple 'case-over-time graphs' can greatly assist staff to monitor such average baselines.

Alert thresholds should be set for each disease of outbreak potential in the surveillance list, and standardised among all health partners. They should strictly applied in combination with case definitions (refer to Country Considerations Box), and lead to rapid action based upon pre-agreed guidelines.

The system should include zero reporting. Each site should report for each reporting period, even if it means reporting zero cases. This avoids the confusion of equating "no report" with "no cases".

Table 1. Sample Alert Thresholds

Malaria	1.5 times the baseline*
Watery diarrhoea	1.5 times the baseline*
Suspected cholera	1 case
Bloody diarrhoea	5 cases
Acute Flaccid Paralysis / Polio	1 case
Measles	1 case
Meningitis	5 cases or 1.5 times the baseline*
Other communicable diseases	1.5 times the baseline*

* baseline = average weekly number of cases the disease calculated over the past 3 weeks

Trends in morbidity should be observed over time and monitored for any rapid or unusual increases that could signal instability and/or possible outbreaks. New data should be used to update baseline information regularly in the graphs (e.g. for malaria and meningitis) to observe if alert thresholds are exceeded. At the end of the week, the weekly forms should be compiled into a Morbidity Report for each health facility and sent to the Health Coordinator.

3.9.2   Outbreak Response

The triggering of an outbreak alert should lead to a number of pre-determined actions that are familiar to all clinical officers and facility supervisors. All suspected outbreaks should be reported and followed by a complete and timely response.

The first priority is to immediately notify the supervisor within each facility (Clinical Officer in-charge) and each camp (Health Manager). An Outbreak Alert Form should also be completed, and copies submitted to the Health Coordinator of the health agency and to UNHCR (see Illustrated Guide to Outbreak Alert Form).

The Outbreak Alert Form is used to record case-based data for each suspected case: including basic identifying information, major symptoms and signs, current clinical status and details of laboratory testing. This information permits rapid tracing and follow-up of cases and contacts, and is critical to the process of outbreak verification.

The form should be completed using summarised patient information from the Morbidity Registers (see Illustrated Guide to Morbidity Register). For certain diseases, such as malaria, the alert thresholds are based on increases in the number of cases above a historical baseline. In highly endemic areas, this figure will be very high and a full line listing of cases is not necessary.

More general information should be collected in these cases, based on reviews of register entries from the previous week. For example, these summaries should specify:

- age categories who are most at risk (< 5, ≥ 5)
- severity of disease and fatality rates
- areas of camp most at risk, or where clustering of cases if observed* (e.g. certain zones / blocks within camp addresses)
- number of laboratory confirmed cases

* Information on unusual patterns or clusters of disease that are observed should be reported routinely at the end of each week, and does not rely on specific alert thresholds

This information can rapidly identify priorities during an outbreak investigation, and can help to direct prevention and control strategies.

3.9.3   Weekly and Monthly Reports

At the end of each week the number of Outbreak Alerts and the number of Outbreak Investigations should be entered into the Morbidity Report for the entire camp.

At the end of each week the paper-based report forms can then be directly entered into the computer. The database will then automatically combine these into a monthly report composed of 4 or 5 weekly reports, depending on the reporting calendar. More information on data management and is given in Part 3 of the manual.

3.10 HOW SHOULD THE DATA BE INTERPRETED AND USED?

3.10.1 Outbreak Investigation and Confirmation

Every suspected outbreak should be fully investigated and verified, through active tracing and laboratory confirmation of all cases and contacts. The line listing of case-based data within the Outbreak Alert Form is essential to this process. It should be used to identify the names and addresses of cases and their contacts, and facilitate active community tracing and the collection of clinical specimens for laboratory confirmation.

Evidence of clustering of suspected cases should also be ascertained, through analysis of the spatial distribution of cases within the Outbreak Alert Form. This information can help determine the patterns of epidemic spread and estimate the potential for further transmission to high risk groups and high risk areas.

3.10.2 Outbreak Control

Confirmation on an outbreak should lead to the convening of an outbreak control team, with membership of UNHCR, implementing partners, Ministry of Health and other UN agencies. This should be in active coordination with other relevant sectors (e.g. water and sanitation, veterinary experts) as appropriate.

The HIS also has an important role to play during outbreak control. The early warning mechanism should be heightened at these times to ensure that suspected cases continue to be identified and referred for appropriate case management. This should be achieved through the activation

of enhanced surveillance measures, using specially adapted outbreak case definitions and case-reporting forms.

After the outbreak, specific issues related to the timeliness of detection and response should form an integral part of the overall evaluation. Recommendations should lead to improve early-warning system and improved performance in future outbreaks.

3.10.3 Standards and Indicators

The number of outbreaks reported and investigated during the reporting period should be entered into each report. The indicator used to monitor the performance of the early warning mechanism is shown below. An outbreak alert and response training scenario is given in the CD-ROM that accompanies this manual.

> Indicator Summary

Outbreak Alert and Response

Objective	Indicator	Source
1. Rapidly detect and respond to health problems and epidemics	Proportion of reported outbreaks investigated within 48 hours	HIS

> Illustrated Guide to Outbreak Alert Form (FRONT)

Health Information System

A

3.0   Outbreak Alert Form

Organisation: _____

Location: _____

Name of Reporting Officer _____   Date: _____ / _____ / _____

B

Suspected Disease / Syndrome
(Tick ONE box only)

❑   Malaria

❑   Watery diarrhoea

❑   Cholera

❑   Bloody diarrhoea

❑   Polio (Acute Flaccid Paralysis)

❑   Measles

❑   Meningitis

❑   Fever of Unknown Origin

C

Symptoms and Signs
(You can tick several boxes)

❑   Watery or loose stool

❑   Visible blood in stool

❑   Acute paralysis or weakness

❑   Fever

❑   Rash

❑   Cough

❑   Vomiting

❑   Neck stiffness

❑   Other (describe below)

Total number of cases reported
(refer to weekly thresholds):

D

Other signs and symptoms:

_____

_____

_____

_____

Also complete a line listing of all suspected cases (see table on reverse)

OUTBRK FORM_EN_090109

A   HEADER:

Name of Organisation:
> Print of health implementing partner

Name of Camp & Unit:
> Print of Camp and Reporting Unit

Date:
> Enter date (dd/mm/yy)

Name of reporting officer:
> Print of Clinical Officer completing report

NOTES

An outbreak alert form should be filled immediately upon the triggering of an alert threshold.

Depending on the threshold, this event could be during any particular day, or at the end of the week based on compilation of the statistical report.

One form should be used to report each suspected disease / syndrome outbreak.

B   SUSPECTED DISEASE/SYNDROME:

Tick ONE box corresponding to the disease / syndrome reported in the form.

> Enter the number of reported cases in the black box provided.

C   SYMPTOMS AND SIGNS:

Tick box(es) corresponding to the signs and symptoms that were present in the reported cases.

More than one box can be ticked, if required.

D   OTHER SIGNS AND SYMPTOMS:

> Describe any additional signs or symptoms that were present in reported cases but not listed in Part C above.

> Illustrated Guide to Outbreak Alert Form (REVERSE)

III-52

Line listing (continue on separate sheet if needed)

Serial No.	Age	Sex (M / F)	Address	Date of onset	Lab. specimen taken (Y / N)	Treatment given	Outcome (I / R / D)*	Final Classification (S / C)**

* Outcome:
  I = currently ill
  R = recovering or recovered
  D = died

** Final Classification:
  S = suspected case with clinical diagnosis
  C = confirmed case with laboratory diagnosis

E

E LINE LISTING:

Serial Number:
> Enter sequence number of each suspected case in the line listing

Age:
> Enter age (years)

Sex:
> Enter Male (M) / Female (F)

Address:
> Enter camp address (Refugee) / Nearest Village (National)

Date of onset
> Enter date symptoms started (dd/mm/yy)

Lab. specimen taken
> Enter Yes (Y) / No (N) to indicate if samples have been sent for laboratory confirmation

Treatment given
> Enter annotated list of treatment provided

Outcome
> Classify present status of suspected case, using key provided: Currently Ill (I) / Recovered or recovering (R) / Died (D)

Final Classification
> Classify status using key provided: Suspected case with clinical diagnosis (S) / Confirmed case with laboratory diagnosis (C)

NOTES

Enter case-based data using Daily OPD Registers.

For certain diseases, such as malaria, the alert thresholds are high and are defined as an increase above an average baseline. This figure can be very high, and a line listing of individual cases is therefore time consuming and unhelpful

More general information should be collected in such cases. For example:

> age categories who are most at risk (< 5, > 5)

> clustering of cases within geographical locations in the camps (e.g. certain zones / blocks within camp addresses)

> number of laboratory confirmed cases

> severity of disease and fatality rates

Despite the lack of individual names and addresses this information can rapidly identify priorities during an outbreak investigation, and can help to direct prevention and control strategies.

> Illustrated Guide to Morbidity Report (FRONT)

Health Information System
Reporting Form

A

Organisation: _____

Location: _____

Reporting period: _____

3.0 Morbidity

B

3.1 Consultation

	Refugee		National		
	M	F	M	F	
New Visits					
Revisits					

Number of full-time trained clinicians §	
Number of full days OPD functioning	

§ enter average number holding OPD consultations on each day of the reporting period

C

3.2 Morbidity

	Refugee					National				
	< 5		≥ 5		Total	< 5		≥ 5		Total
	M	F	M	F		M	F	M	F	
1. * Malaria (suspected)										
2. * Malaria (confirmed)										
3. URTI										
4. LRTI										
5. Skin disease										
6. Eye disease										
7. Dental conditions										
8. Intestinal worms										
9. * Watery diarrhoea										
10. * Bloody diarrhoea										
11. Tuberculosis										
12. * AFP / Polio										
13. * Measles										
14. * Meningitis										
15. HIV/AIDS										
16. ** STI (non-HIV/AIDS)										
17. Acute malnutrition										
18. Anaemia										
19. Chronic disease										
20. Mental illness										
21. *** Injuries										
22.										
23.										
24.										
25.										
26.										
27. Other										
Total										

*   Disease with outbreak potential. Refer to weekly alert thresholds (see reverse)

**   Also enter information on syndromic diagnosis; < 18 / ≥ 18 age group; and treatment of contacts in STI table (see reverse)

***   Includes SGBV. Ensure incident report form has been completed each case

MORBIDITY RP_EN_090109

A   HEADER:

Organisation:
Print name of health implementing partner

Location:
Print name of Camp and Reporting Unit

Reporting period:
Enter number of week and month (e.g. Week 1
March)

NOTES

The dates of the reporting weeks are shown in the Reporting
Calendar. It is important for all staff to be aware of these
dates, and for copies of the calendar to be distributed to all
departments in each health facility.

The Clinical Officer in-charge is responsible for coordinating the
complete and timely submission of all sections contributing to
the weekly report.

B   CONSULTATION:

Complete Table 3.1, with the sum total of the black
number boxes in the Daily OPD Tally Sheets .

Also enter the following data for calculation of
monthly indicators:

> Number of full-time trained clinicians

> Number of full days OPD functioning

NOTES

Number of full-time clinicians is the average number who held
consultations on each day during the week. In some cases, this
figure can be a fraction.

Number of full days does not include weekends, if full range
of consultation services and full number of clinical officers are
not available at these times. This figure can also be a fraction if
appropriate.

C   DIAGNOSIS:

Complete Table 3.2, with the sum total of the black
number boxes in the Daily OPD Tally Sheets .

Using a calculator, complete grey columns to give
number of cause-specific diagnoses:

> Under Five (<5) (Refugee only)

> Crude (< 5 and ≥5) (Refugee / National)

For diseases marked with a single asterisk (*)
compare the weekly number of cases with the alert
thresholds on the reverse of the form.

Using a calculator, complete grey row at bottom of
sheet to give total number of diagnoses:

> Under Five (<5) (Refugee only)

> Crude (< 5 and ≥5) (Refugee / National)

NOTES

All diagnoses should meet case definitions and refer to New
Visits only.

A calculator should be used at all times during aggregation of
totals.

Alert thresholds given on the reverse of the form should be
monitored and appropriate action taken if exceeded in any one
week.

Numbers 22 - 26 are 'free-cells' which permit additional causes
of morbidity to be added to the list and monitored. The names
should be consistent with those written on the daily tally sheets.
Health agencies should coordinate closely to ensure that the
same causes of morbidity are monitored across different camps

> Illustrated Guide to Morbidity Report (REVERSE)

D

3.3 Outbreak Alert and Response

Number of outbreaks reported	
Number of reported outbreaks investigated within 48 hours	

E

3.4 Sexually Transmitted Infection (STI)

	Refugee				Contacts Treated	National				Contacts Treated
	< 18		≥ 18			< 18		≥ 18		
	M	F	M	F		M	F	M	F	
Urethral Discharge Syndrome (UDS)										
Vaginal Discharge Syndrome (VDS)										
Genital Ulcer Disease (GUD)										
Pelvic Inflammatory Disease (PID)										
Opthalmia Neonatorum										
Congenital syphilis										
Others										
Total										

F

Weekly Alert Thresholds for each Health Facility:
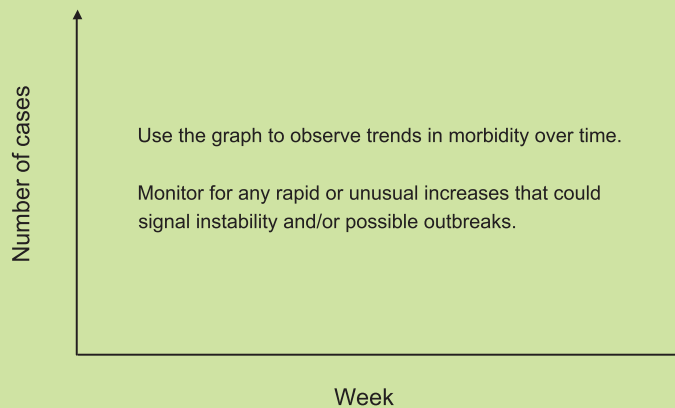
Malaria	1.5 times the baseline*
Watery Diarrhoea	1.5 times the baseline*
Suspected Cholera	1 case
Bloody Diarrhoea	5 cases
Acute Flaccid Paralysis / Polio	1 case
Measles	1 case
Meningitis	5 cases or 1.5 times the baseline*

If weekly thresholds are exceeded:

1. Report to Health Coordinator

2. Complete Outbreak Alert Form

*Baseline = average weekly number of cases of the disease calculated over the past 3 weeks.

Also present weekly data in a graph (see below). This should include the most commonly reported diseases and those with outbreak potential.

Number of cases

Use the graph to observe trends in morbidity over time.

Monitor for any rapid or unusual increases that could signal instability and/or possible outbreaks.

Week

D OUTBREAK ALERT AND RESPONSE:

Complete Table 3.3, with the number of outbreaks reported and the number that were investigated within 48 hours.

NOTES

Attached outbreak alert forms with the weekly reporting form, including any investigation reports that were undertaken.

E SYNDROMIC STI:

Complete Table 3.4, with the sum total of the black number boxes in the Daily OPD Tally Sheets.

Also enter the number of contacts of STI cases during the week.

NOTES

The total number of STIs reported on the front of the tally sheet, and in the syndrome-specific table on the reverse, should be the same.

The number of syndromic STIs diagnosed and the number of contacts treated may or may not be the same.

F WEEKLY ALERT THRESHOLDS:

The table contains the alert thresholds for each disease marked within a single asterisk (*) on the front of the form.

They should be regularly referred to as cases are reported.

If exceeded, immediate action should be taken to report the suspected outbreak and complete an Outbreak Alert Form.

NOTES

Clinical officers are responsible for measuring daily alert thresholds.

The clinical officer in-charge, who compiles the weekly report, should monitor thresholds that require calculate of the increase above a baseline number of cases over the preceding weeks.

A graph should be plotted to visualise disease trends and track the moving averages of alert thresholds each week.