# SARAWAK STATE HEALTH DEPARTMENT
## EPIDEMIOLOGICAL NEWS

**VOLUME 15/FOLIO 11/ November, 2007**


# MEASLES

## 1. General

### 1.1 The Disease

Measles is highly infectious disease caused by a virus in the paramyxovirus family. The disease spread by airborne droplets, close personal contact or direct contact with nasal or throat secretion of infected persons.

The incubation period is usually 10 to 12 days but may range up to 21 days. The first sign of infection is high fever. During this initial stage, patient may develop coryza, cough, red and watery eyes (conjunctivitis) and white spot inside the cheek known as koplik's spot. After several days (2-4 days), a rash develops, usually started on the face and upper neck. The rash proceeds downwards, reaching hands and feet and lasted for five to six days, then fades. The rash occurs, on average, at day 14 after exposure to the virus with a range of seven to 18 days, rarely as long as 19 – 21 days.

An infected individuals can transmit the virus from four days prior to the onset of rash to four days after onset. The virus remains active and contagious in the air or on infected surfaces for up to two hours.

## 1.2 People At Risk

Un-immunised persons, especially young children are at highest risk. People who have not been immunized with vaccine or who have not acquired immunity through having experienced the disease can become infected.

## 1.3 Measles Vaccine

Measles vaccine was available since 1963. Measles vaccine induces long-term and probably lifelong immunity in most individuals. Natural infection produces lifelong immunity.

Live attenuated measles virus vaccine are in use. Measles antibodies develop in approximately 85% of children vaccinated at 9 months of age, 95% of children vaccinated at 12 months of age and 98% of those vaccinated at 15 months of age. Second dose vaccination is given to children to overcome this lack detectable antibody.

Measles vaccines available in form of monovalent, bivalent (MR-measles-rubella) and trivalent (MMR-measles-mumps-rubella).

**Measles Vaccination Schedule**

Two dose of measles vaccine are recommended as the 5-10 percent who fail to be protected by the first dose will nearly all be protected by the second. The measles vaccination schedule is as follow;

| Area | Measles vaccination | Age vaccination given |
|---|---|---|
| Peninsular Malaysia & Sarawak | First dose MMR | 12 months |
| | Second dose MMR | 7 year (standard one) |
| Sabah | First single dose measles | 6 months |
| | First dose MMR | 12 months (1 year) |
| | Second dose MMR | 7 year (standard one) |

## 1.4 Case definition for measles.

Clinical case definition for suspect measles case that should be reported/notify is as follow;

**Any person with fever and maculopapular rash and cough, coryza (runny nose) or conjunctivitis (red eyes)**
**Or**
**Any person in whom a clinician suspects measles infection.**

## 1.5 Case classification.

Case classification according to laboratory confirmation;

**Clinically confirmed:**
**A case that meets the clinical case definition**

**Laboratory confirmed:**
**A case that meets the clinical case definition and is laboratory confirmed (based on laboratory criteria for diagnosis)**

**Epidemiologically confirmed:**
**A case that meets the clinical case definition and is linked epidemiologically to a laboratory confirmed case**

## 1.6 Measles Elimination.

As we succeeded in controlling measles occurance at low level, the Ministry of Health in February 2003 decided to initiate measles elimination in Malaysia starting in 2004. Following the decision, vaccination and surveillance strategies have been reviewed and changed to achieve the elimination goals and objectives.

### 1.6.1 Goals and objectives.

The main goal of this elimination initiative is to achieve sustainable reduction of measles morbidity and mortality and to interrupt the transmission of indigenous measles virus in Malaysia.

Specific objectives of elimination initiative are to;

1.) maintain the number of susceptible individuals below the critical number required to sustained transmission of the virus.
2.) eliminate measles by year 2010.
3.) achieve 0 measles mortality.

### 1.6.2 Strategies.

Sustainable reduction of measles morbidity, mortality and interruption of the transmission of the indigenous measles virus in Malaysia are possible by implementing the following strategies;

1.) Vaccination strategies
- routine two dose MMR vaccine given to children.

2.) Surveillance strategies
-enhancing measles surveillance with integration of epidemiological and laboratory information.

3.) Laboratory strategies
- laboratory confirmation should be done on all suspect measles cases.

4.) Response to outbreak
- all measles outbreaks will be carefully investigated.

5.) Case management
- improving the management of every measles case.

6.) Training

## 1.7 Measles Surveillance

Adequate disease surveillance data and analysis will permit implementation of appropriate measures to control and eliminate measles. It also will be used in the assessment of progress and in making adjustments to programmes as required. Measles is a **notifiable disease** under the **Control of Communicable Disease Act 1988.**

In the elimination phase the surveillance of measles should be case-based or known as enhanced measles surveillance (laboratory confirmation should be done).

### 1.7.1 Objectives.

The general objectives of measles surveillance are to immediate detecting any suspected case, confirming cases by laboratory diagnosis and identifying importations and possible sources of infection so that can be used to plan, monitor and evaluate measles elimination programme.

The specific objectives of measles surveillance are to;

1.) monitor incidence and coverage in order to assess progress.
2.) Identify areas at high risk or with poor programme performance.
3.) Identifying high-risk population.
4.) Describe the changing epidemiology of measles in terms of age, immunization status and the intervals between epidemics.
5.) Predict the next outbreak that may occur because of a build-up of susceptible persons.
6.) Detect and investigate measles outbreaks so that cause of outbreaks can be determined.
7.) Determine where measles virus is circulating.
8.) Assess the performance of surveillance system.
9.) Ensure proper case management.

### 1.7.2 Procedures of surveillance

i.) Case detection

- Take a proper history on the complaint of suspect measles cases who fulfill measles case definition.
- If the onset of rash is less than 4 days, take blood/serum sample and urine or respiratory specimens from the patients.
- If the onset of rash more than 4 days, take blood/serum from the patient.
- Send the clinical sample/s to laboratory identified by District Health Office together with **Measles-Laboratory Request Form (MSLF:01/2004)**. The sample/s then transported to National Public Health Laboratory (NPHL), Sungai Buloh for confirmation.

ii.) Notification

All suspect measles cases must be notified to nearest District Health Office **within 48 hours** of rash onset **via telephone**. As most of the cases detected within few days of onset, it is advisable that the case should be notified as soon as a case detected. Notification using Notification Form should follow using current system of notification.

iii.) Case investigation

Identified Officer in District Health Office must investigate all suspect measles cases within 48 hours of notification using Measles Investigation Form.

iv.) Case classification

After case has been investigated and laboratory result has been available, case must be classified according the laboratory confirmation and source of infection as following;

- Clinically confirmed
- Epidemiologically confirmed
- Laboratory confirmed

} Laboratory confirmation

- Indigenous infection
- Imported infection

} Source of infection

v.) Data analysis and interpretation

Data should be analyse on weekly basis and information should be generate.

Reference:
Ministry of Health, Malaysia (2006). Measles Prevention and Control in Malaysia Handbook for Healthcare Personnel

# RUBELLA (German Measles)

**General**

**1. The disease**

Mild febrile viral disease with a diffuse punctuate and maculopapular rash. Clinically, this is usually indistinguishable from febrile rash illness due to measles, dengue, parvovirus B19, human herpesvirus 6, Coxsackie virus, Echovirus, adenovirus or scarlet fever. Children usually present few or no constitutional symptoms, but adults may experience a 1 – 5 day prodrome of low grade fever, headache, malaise, mild coryza and conjunctivitis.

**2. Case definition for rubella.**

For surveillance purposes, the WHO-recommended case definition of a suspected rubella case is any person with fever, non-vesicular (maculopapular) rash and adenopathy (cervical, suboccipital or post-auricular).

Laboratory diagnosis of rubella is required, since clinical diagnosis is often inaccurate. Laboratory confirmation is usually based on a positive rubella-specific IgM ELISA test on a blood specimen obtained within 28 days after the rash of onset. An epidemiologically confirmed rubella case is a patient with suspected rubella with an epidemiologically link to a laboratory-confirmed case.

**3. Infectious agent.**

Rubella virus (family Togaviridae; genus Rubivirus).

**4. Mode of Transmission.**

Contact with nasopharyngeal secretions of infected people. Infection is by droplet spread or direct contact with patients. Infants with Congenital Rubella Syndrome (CRS) shed large quantities of virus in their pharyngeal secretions and urine, and serve as a source of infection to their contacts.

**5. Incubation Period and Period of Communicability.**

Incubation period is from 14 – 17 days with range of 14 – 21 days. Period of communicability for about one week before and at least 4 days after onset of rash, highly communicable. Infants with Congenital Rubella Syndrome (CRS) may shed virus for months after birth.

**6. Rubella outbreak in Sarawak.**

In year 2007, there were 13 outbreak occurred in Sarawak as shown in Table 1. Active case detection, immunization and health education were given to control and prevent the outbreak.

Reference:
David L. Heyman, MD (2004). Control of Communicable Disease Manual, 18th Edition

JABATAN KESIHATAN NEGERI SARAWAK

# NOTIFIABLE DISEASE IN SARAWAK BY DISTRICT October 2007

Epidemiological NEWS

| DISTRICTS | AIDS | Cholera | Dengue Fever | Dengue H.Fever | Dysentery | Food Poisoning | Gonorrhoea | Hand, Foot & Mouth | Leprosy | Malaria | Whooping Cough | Measles | Syphilis, Congenital | Syphilis (All Forms) | Tuberculosis (All forms) | Typhoid & Paratyphoid Fever | Typhus, Scrub | Hepatitis A | Hepatitis B | Hepatitis C | Other Hepatitis | Viral Encephalitis | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lundu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **3** |
| Bau | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **10** |
| Kuching | 0 | 0 | 27 | 0 | 3 | 7 | 6 | 42 | 1 | 16 | | 1 | 0 | 1 | 23 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | **132** |
| Samarahan | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **15** |
| Serian | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | **15** |
| Simunjan | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** |
| Sri Aman | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 4 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **19** |
| L/ Antu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| Betong | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| Saratok | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **7** |
| Sarikei | 0 | 0 | 9 | 0 | 0 | 0 | 1 | 3 | 0 | 3 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **21** |
| Julau/Pakan | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1/0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** |
| Meradong | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **4** |
| Daro | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| Sibu/S'gau | 0 | 0 | 14 | 0 | 2 | 2 | 0 | 6 | 0 | 11 | 0 | 0 | 0 | 0 | 15/1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **51** |
| Kanowit | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8** |
| Mukah | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **13** |
| Dalat | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| Kapit | 0 | 0 | 13 | 0 | 1 | 0 | 0 | 19 | 0 | 6 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **47** |
| Song | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| Belaga | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 3 | 0 | 32 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **41** |
| Bintulu | 0 | 0 | 4 | 0 | 0 | 4 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **27** |
| Tatau | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** |
| Miri | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 | 0 | 0 | 0 | 3 | 0 | 3 | 14 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | **38** |
| Marudi | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| Limbang | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **12** |
| Lawas | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **8** |
| **TOTAL** | **1** | **0** | **91** | **0** | **9** | **15** | **22** | **125** | **1** | **97** | **0** | **7** | **0** | **12** | **127** | **0** | **0** | **0** | **10** | **1** | **0** | **0** | **518** |

JABATAN KESIHATAN NEGERI SARAWAK

# NOTIFIABLE DISEASE IN SARAWAK
## October 2007

Epidemiological NEWS

| ICD CODE | DISEASES | Median 2002-2006 | Month Ending | | Cumulative Total | |
|---|---|---|---|---|---|---|
| | | | 31/10/2006 | 31/10/2007 | 2006(Annual) | 2007 |
| B20 – B24 | HIV/AIDS (Death) | 2 | 0 | 1 | 114/69(1)(20) | 14 |
| A57 | Chancroid | 0 | 0 | 0 | 0 | 0 |
| A00.9 | Cholera | 0 | 0 | 0 | 0 | 0 |
| A90 | Dengue Fever | 73 | 84 | 91 | 1799 | 1448 |
| A91 | Dengue Haemorrhagic Fever | 1 | 4 | 0 | 22 | 24 |
| A36.0-A36.9 | Diphtheria | 0 | 0 | 0 | 0 | 0 |
| A06.0,A09 | Dysentery All Types | 11 | 12 | 9 | 86 | 111 |
| A05,T61-T62 | Food Poisoning | 20 | 26 | 24 | 187 | 509 |
| A54.0-A54.9 | Gonococcal Infections(All Forms) | 33 | 24 | 22 | 383 | 300 |
| A54.3 | Opthalmia Neonatorum | 0 | 0 | 0 | 0 | 0 |
| A30.9 | Leprosy | 0 | 0 | 1 | 16 | 7 |
| B54 | Malaria | 95 | 95 | 97 | 1371 | 617 |
| B05 | Measles | 12 | 12 | 7 | 186 | 79 |
| A20 | Plague | 0 | 0 | 0 | 0 | 0 |
| A80.9 | Poliomyelitis, acute | 0 | 0 | 0 | 0 | 0 |
| A82 | Rabies | 0 | 0 | 0 | 0 | 0 |
| A68 | Relapsing Fever | 0 | 0 | 0 | 0 | 0 |
| A50 | Congenital Syphilis | 0 | 0 | 0 | 0 | 7 |
| A51-A53 | Syphilis(All forms) | 36 | 15 | 12 | 298 | 221 |
| A33 | Tetanus Neonatorum | 0 | 0 | 0 | 2 | 0 |
| A35 | Tetanus (adults) | 0 | 1 | 0 | 2 | 2 |
| A16-A19 | Tuberculosis(All forms) | 102 | 77 | 127 | 1632 | 1421 |
| A01 | Typhoid and Paratyphoid fevers | 3 | 3 | 0 | 14 | 17 |
| A75 | Typhus, epidemic | 0 | 0 | 0 | 0 | 0 |
| A75.2 | Typhus, flea-borne | 0 | 0 | 0 | 0 | 0 |
| A75.3 | Typhus, scrub | 0 | 0 | 0 | 0 | 3 |
| A83,A84,A85,A86 | Viral Encephalitis | 2 | 4 | 0 | 35 | 18 |
| B15.0-B15.9 | Viral Hepatitis A | 0 | 1 | 0 | 2 | 0 |
| B16.0 – B 16.9 | Viral Hepatitis B | 4 | 3 | 10 | 34 | 82 |
| B 18.2 | Viral Hepatitis C | 0 | 1 | 1 | 15 | 32 |
| B19.0 – B19.9 | Viral Hepatitis (unspecified) | 0 | 1 | 0 | 4 | 4 |
| A37 | Whooping cough | 0 | 0 | 0 | 8 | 1 |
| A95 | Yellow Fever | 0 | 0 | 0 | 0 | 0 |

JABATAN KESIHATAN NEGERI SARAWAK

# NOTIFIABLE DISEASE IN SARAWAK BY DISTRICT November 2007

Epidemiological NEWS

| DISTRICTS | AIDS | Cholera | Dengue Fever | Dengue H.Fever | Dysentery | Food Poisoning | Gonorrhoea | Hand, Foot & Mouth | Leprosy | Malaria | Whooping Cough | Measles | Syphilis, Congenital | Syphilis (All Forms) | Tuberculosis (All forms) | Typhoid & Paratyphoid Fever | Typhus, Scrub | Hepatitis A | Hepatitis B | Hepatitis C | Other Hepatitis | Viral Encephalitis | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lundu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **14** |
| Bau | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **7** |
| Kuching | 0 | 0 | 45 | 0 | 11 | 3 | 7 | 56 | 0 | 12 | 0 | 6 | 0 | 5 | 21 | 1 | 0 | 0 | 10 | 3 | 0 | 1 | **181** |
| Samarahan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **10** |
| Serian | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | **20** |
| Simunjan | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **13** |
| Sri Aman | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **20** |
| L/ Antu | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **10** |
| Betong | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **3** |
| Saratok | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6** |
| Sarikei | 0 | 0 | 6 | 0 | 1 | 0 | 1 | 4 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **18** |
| Julau/Pakan | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0/1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4** |
| Meradong | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6** |
| Daro | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4** |
| Sibu/S'gau | 0 | 0 | 10 | 0 | 1 | 7 | 0 | 8 | 0 | 5 | 0 | 0 | 0 | 0 | 13/1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | **47** |
| Kanowit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| Mukah | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **9** |
| Dalat | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 15 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **20** |
| Kapit | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 32 | 0 | 12 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **66** |
| Song | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **2** |
| Belaga | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **18** |
| Bintulu | 0 | 0 | 7 | 0 | 0 | 0 | 3 | 20 | 0 | 0 | 0 | 1 | 0 | 2 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **40** |
| Tatau | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| Miri | 3 | 0 | 1 | 0 | 2 | 0 | 14 | 2 | 0 | 1 | 0 | 0 | 0 | 3 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **51** |
| Marudi | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **11** |
| Limbang | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **16** |
| Lawas | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **15** |
| **TOTAL** | **3** | **0** | **126** | **1** | **16** | **10** | **33** | **160** | **0** | **74** | **0** | **8** | **0** | **13** | **151** | **2** | **0** | **0** | **13** | **3** | **0** | **4** | **617** |

JABATAN KESIHATAN NEGERI SARAWAK

# NOTIFIABLE DISEASE IN SARAWAK
## November 2007

Epidemiological NEWS

| ICD CODE | DISEASES | Median 2002-2006 | Month Ending | | Cumulative Total | |
|---|---|---|---|---|---|---|
| | | | 30/11/2006 | 30/11/2007 | 2006(Annual) | 2007 |
| B20 – B24 | HIV/AIDS (Death) | 2 | 1 | 3 | 114/69(1)(20) | 17 |
| A57 | Chancroid | 0 | 0 | 0 | 0 | 0 |
| A00.9 | Cholera | 0 | 0 | 0 | 0 | 0 |
| A90 | Dengue Fever | 54 | 181 | 126 | 1799 | 1574 |
| A91 | Dengue Haemorrhagic Fever | 3 | 3 | 1 | 22 | 25 |
| A36.0-A36.9 | Diphtheria | 0 | 0 | 0 | 0 | 0 |
| A06.0,A09 | Dysentery All Types | 8 | 10 | 16 | 86 | 127 |
| A05,T61-T62 | Food Poisoning | 14 | 13 | 10 | 187 | 519 |
| A54.0-A54.9 | Gonococcal Infections(All Forms) | 41 | 45 | 33 | 383 | 333 |
| A54.3 | Opthalmia Neonatorum | 0 | 0 | 0 | 0 | 0 |
| A30.9 | Leprosy | 0 | 0 | 0 | 16 | 7 |
| B54 | Malaria | 120 | 120 | 74 | 1371 | 691 |
| B05 | Measles | 18 | 18 | 8 | 186 | 87 |
| A20 | Plague | 0 | 0 | 0 | 0 | 0 |
| A80.9 | Poliomyelitis, acute | 0 | 0 | 0 | 0 | 0 |
| A82 | Rabies | 0 | 0 | 0 | 0 | 0 |
| A68 | Relapsing Fever | 0 | 0 | 0 | 0 | 0 |
| A50 | Congenital Syphilis | 0 | 0 | 0 | 0 | 7 |
| A51-A53 | Syphilis(All forms) | 36 | 36 | 13 | 298 | 234 |
| A33 | Tetanus Neonatorum | 0 | 0 | 0 | 2 | 0 |
| A35 | Tetanus (adults) | 0 | 0 | 0 | 2 | 2 |
| A16-A19 | Tuberculosis(All forms) | 107 | 108 | 151 | 1632 | 1572 |
| A01 | Typhoid and Paratyphoid fevers | 1 | 1 | 2 | 14 | 19 |
| A75 | Typhus, epidemic | 0 | 0 | 0 | 0 | 0 |
| A75.2 | Typhus, flea-borne | 0 | 0 | 0 | 0 | 0 |
| A75.3 | Typhus, scrub | 0 | 4 | 0 | 0 | 3 |
| A83,A84,A85,A86 | Viral Encephalitis | 1 | 6 | 4 | 35 | 22 |
| B15.0-B15.9 | Viral Hepatitis A | 0 | 1 | 0 | 2 | 0 |
| B16.0 – B 16.9 | Viral Hepatitis B | 2 | 5 | 13 | 34 | 95 |
| B 18.2 | Viral Hepatitis C | 1 | 3 | 3 | 15 | 35 |
| B19.0 – B19.9 | Viral Hepatitis (unspecified) | 0 | 0 | 0 | 4 | 4 |
| A37 | Whooping cough | 0 | 1 | 0 | 8 | 1 |
| A95 | Yellow Fever | 0 | 0 | 0 | 0 | 0 |

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