WEEKLY EPIDEMIOLOGICAL REPORT
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# Global tuberculosis control

24th March is the World TB Day. World TB Day is an occasion to urge action to stop tuberculosis, a disease which still kills an appalling 4,000 people globally every day. The man-made multi-drug resistant strain and its even more lethal form, extensively drug-resistant TB, are both spreading.

If we are to prevent a virtually untreatable tuberculosis epidemic, we must tackle the roots of the problem: poor services, poor supplies, poor prescribing and poor use of drugs. That is why the theme of this year's Day is "I am Stopping TB". This is a fight that can be won only with the collective commitment of millions of individuals – donors and researchers, doctors and health care workers, patients and family members.

Tuberculosis (TB) is a contagious disease. Like the common cold, it spreads through the air. Only people who are sick with TB in their lungs are infectious. When infectious people cough, sneeze, talk or spit, they propel TB germs, known as bacilli, into the air. A person needs only to inhale a small number of these to be infected.

Left untreated, each person with active TB disease will infect on average between 10 and 15 people every year. But people infected with TB bacilli will not necessarily become sick with the disease. The immune system "walls off" the TB bacilli which, protected by a thick waxy coat, can lie dormant for years. When someone's immune system is weakened, the chances of becoming sick are greater.

- Someone in the world is newly infected with TB bacilli every second.
- Overall, one-third of the world's population is currently infected with the TB bacillus.
- 5-10% of people who are infected with TB bacilli (but who are not infected with HIV) become sick or infectious at some time during their life.

**Global and regional incidence** : The World Health Organization (WHO) estimates that the largest number of new TB cases in 2005 occurred in the South-East Asia Region, which accounted for 34% of incident cases globally. However, the estimated incidence rate in sub-Saharan Africa is nearly twice that of the South-East Asia Region, at nearly 350 cases per 100 000 population.

It is estimated that 1.6 million deaths resulted from TB in 2005. Both the highest number of deaths and the highest mortality per capita are in the African Region. The TB epidemic in Africa grew rapidly during the 1990s, but this growth has been slowing each year, and incidence rates now appear to have stabilized or begun to fall.

In 2005, estimated per capita TB incidence was stable or falling in all six WHO regions. However, the slow decline in incidence rates per capita is offset by population growth. Consequently, the number of new cases arising each year is still increasing globally and in the WHO regions of Africa, the Eastern Mediterranean and South-East Asia.

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**HIV and TB**

HIV and TB form a lethal combination, each speeding the other's progress. HIV weakens the immune system. Someone who is HIV-positive and infected with TB bacilli is many times more likely to become sick with TB than someone infected with TB bacilli who is HIV-negative. TB is a leading cause of death among people who are HIV-positive. In Africa, HIV is the single most important factor contributing to the increase in incidence of TB since 1990.

**Drug-resistant TB**

Until 50 years ago, there were no medicines to cure TB. Now, strains that are resistant to a single drug have been documented in every country surveyed; what is more, strains of TB resistant to all major anti-TB drugs have emerged. Drug-resistant TB is caused by inconsistent or partial treatment, when patients do not take all their medicines regularly for the required period because they start to feel better, because doctors and health workers prescribe the wrong treatment regimens, or because the drug supply is unreliable. A particularly dangerous form of drug-resistant TB is multidrug-resistant TB (MDR-TB), which is defined as the disease caused by TB bacilli resistant to at least isoniazid and rifampicin, the two most powerful anti-TB drugs. Rates of MDR-TB are high in some countries, especially in the former Soviet Union, and threaten TB control efforts.

While drug-resistant TB is generally treatable, it requires extensive chemotherapy (up to two years of treatment) with second-line anti-TB drugs which are more costly than first-line drugs, and which produce adverse drug reactions that are more severe, though manageable.

The emergence of extensively drug-resistant (XDR) TB, particularly in settings where many TB patients are also infected with HIV, poses a serious threat to TB control, and confirms the urgent need to strengthen basic TB control and to apply the new WHO guidelines for the programmatic management of drug-resistant TB.

**The Stop TB Strategy, the Global Plan to Stop TB, 2006–2015 and targets for TB control**

In 2006, WHO launched the new Stop TB Strategy. The core of this strategy is DOTS, the TB control approach launched by WHO in 1995. Since its launch, more than 22 million patients have been treated under DOTS-based services. The new six-point strategy builds on this success, while recognizing the key challenges of TB/HIV and MDR-TB. It also responds to access, equity and quality constraints, and adopts evidence-based innovations in engaging with private health-care providers, empowering affected people and communities and helping to strengthen health systems and promote research.

The six components of the Stop TB Strategy are:

1. **Pursuing high-quality DOTS expansion and enhancement.** Making high-quality services widely available and accessible to all those who need them, including the poorest and most vulnerable, requires DOTS expansion to even the remotest areas.

2. **Addressing TB/HIV, MDR-TB and other challenges.** Addressing TB/HIV, MDR-TB and other challenges requires much greater action and input than DOTS implementation and is essential to achieving the targets set for 2015

3. **Contributing to health system strengthening.** National TB control programmes must contribute to overall strategies to advance financing, planning, management, information and supply systems and innovative service delivery scale-up.

4. **Engaging all care providers.** TB patients seek care from a wide array of public, private, corporate and voluntary health-care providers. To be able to reach all patients and ensure that they receive high-quality care, all types of health-care providers are to be engaged.

5. **Empowering people with TB, and communities.** Community TB care projects have shown how people and communities can undertake some essential TB control tasks. These networks can mobilize civil societies and also ensure political support and long-term sustainability for TB control programmes.

**Enabling and promoting research.** While current tools can control TB, improved practices and elimination will depend on new diagnostics, drugs and vaccines.

In Sri Lanka TB and respiratory disease control is implemented by a decentralized unit which functions through a network of 23 district Chest Clinics and 2 Chest Hospitals in close coordination with other general health institutions.

There has not been a significant decline in the incidence of TB over the years. Around 8,500—9000 new cases of TB are detected annually and it still continues to pose a major public health challenge in Sri Lanka.

During the year 2007, 8814 new TB cases, 229 relapses, and 65 treatment failures were reported. Out of the new cases, 78 per cent were cases of pulmonary TB. 205 TB related deaths were notified for the year. Western province has reported the highest number of TB cases for 2007. Male to femal sex ratio was 2.1 :1

Lowest number of cases were belonged to the under 15 age group [4%]. 36% were between 15—39 years old age group.

**Source** : National Control Program for Tuberculosis and Chest Diseases

**Source :**

Tuberculosis—WHO Fact sheet [Fact sheet No 104] [http://TB/WHO Tuberculosis. htm]

## Table 1: Vaccine-preventable Diseases & AFP

15th – 21st March 2008 (12th Week)

| Disease | No. of Cases by Province | | | | | | | | | Number of cases during current week in 2008 | Number of cases during same week in 2007 | Total number of cases to date in 2008 | Total number of cases to date in 2007 | Difference between the number of cases to date between 2008 & 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | C | S | N | E | NW | NC | U | Sab | | | | | |
| Acute Flaccid Paralysis | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 17 | 19 | -10.5% |
| Diphtheria | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00.0% |
| Measles | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 01 | 00 | 28 | 13 | +115.4% |
| Tetanus | 01 Gm=1 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 00 | 11 | 09 | +22.2% |
| Whooping Cough | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 08 | 13 | -38.5% |
| Tuberculosis | 20 | 14 | 00 | 00 | 02 | 21 | 00 | 07 | 00 | 70 | 175 | 2005 | 2219 | -9.6`% |

## Table 2: Newly Introduced Notifiable Diseases

15th – 21st March 2008 (12th Week)

| Disease | No. of Cases by Province | | | | | | | | | Number of cases during current week in 2008 | Number of cases during same week in 2007 | Total number of cases to date in 2008 | Total number of cases to date in 2007 | Difference between the number of cases to date between 2008 & 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | C | S | N | E | NW | NC | U | Sab | | | | | |
| Chicken-pox | 20 | 15 | 13 | 01 | 10 | 18 | 06 | 05 | 10 | 98 | 64 | 1356 | 736 | +84.2% |
| Meningitis | 02 GM=1 CO=1 | 00 | 05 GL=2 MT=3 | 00 | 01 KM=1 | 05 KR=4 PU=1 | 02 PO=1 AP=1 | 02 BD=2 | 04 KG=4 | 21 | 00 | 418 | 46 | +808.7% |
| Mumps | 01 | 11 | 06 | 00 | 11 | 03 | 04 | 02 | 03 | 41 | 34 | 531 | 198 | +168.2% |

**Key to Table 1 & 2**

**Provinces:** W=Western, C=Central, S=Southern, N=North, E= East, NC=North Central, NW=North Western, U=Uva, Sab=Sabaragamuwa.

**DPDHS Divisions:** CB=Colombo, GM=Gampaha, KL=Kalutara, KD=Kandy, ML=Matale, NE=Nuwara Eliya, GL=Galle, HB=Hambantota, MT=Matara, JF=Jaffna, KN=Killinochchi, MN=Mannar, VA=Vavuniya, MU=Mullaitivu, BT=Batticaloa, AM=Ampara, TR=Trincomalee, KM=Kalmunai, KR=Kurunegala, PU=Puttalam, AP=Anuradhapura, PO=Polonnaruwa, BD=Badulla, MO=Moneragala, RP=Ratnapura, KG=Kegalle.

## Table 3: Laboratory Surveillance of Dengue Fever

15th – 21st March 2008 (12th Week)

| Samples | Number tested | | Number positive * | | Serotypes | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | $D_1$ | | $D_2$ | | $D_3$ | | $D_4$ | | Negative | |
| | GT | AH | GT | AH | GT | AH | GT | AH | GT | AH | GT | AH | GT | AH |
| Number for current week | 03 | 02 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Total number to date in 2008 | 42 | 23 | 04 | 06 | 00 | 00 | 02 | 02 | 00 | 00 | 00 | 00 | 02 | 00 |

**Sources:** Genetech Molecular Diagnostics & School of Gene Technology, Colombo [GT] and Genetic Laboratory Asiri Surgical Hospital [AH]

* Not all positives are subjected to serotyping.

**NA**= Not Available.

**Data Sources:**

**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Whooping Cough, Human Rabies, Dengue Haemorrhagic Fever, Japanese Encephalitis, Chickenpox, Meningitis, Mumps.

**Special Surveillance:** Acute Flaccid Paralysis.

**National Control Program for Tuberculosis and Chest Diseases:** Tuberculosis.

## Table 4: Selected notifiable diseases reported by Medical Officers of Health

15th – 21st March 2008 (12th Week)

| DPDHS Division | Dengue Fever / DHF* | | Dysentery | | Encephal-itis | | Enteric Fever | | Food Poisoning | | Leptos-pirosis | | Typhus Fever | | Viral Hepatitis | | Human-Rabies | | Returns Re-ceived Timely** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | % |
| Colombo | 23 | 428 | 01 | 40 | 00 | 04 | 02 | 44 | 00 | 56 | 12 | 57 | 00 | 01 | 06 | 36 | 00 | 01 | **92** |
| Gampaha | 14 | 285 | 02 | 40 | 00 | 03 | 00 | 19 | 00 | 16 | 08 | 73 | 00 | 01 | 01 | 38 | 00 | 00 | **79** |
| Kalutara | 11 | 145 | 04 | 99 | 00 | 06 | 00 | 32 | 00 | 11 | 04 | 76 | 00 | 02 | 01 | 15 | 00 | 00 | **92** |
| Kandy | 03 | 64 | 04 | 64 | 00 | 02 | 02 | 14 | 13 | 21 | 03 | 49 | 02 | 26 | 01 | 50 | 00 | 00 | **84** |
| Matale | 02 | 28 | 05 | 67 | 00 | 00 | 01 | 14 | 00 | 00 | 11 | 142 | 00 | 01 | 00 | 11 | 00 | 00 | **75** |
| Nuwara Eliya | 00 | 05 | 04 | 53 | 00 | 00 | 03 | 69 | 44 | 106 | 00 | 10 | 00 | 24 | 01 | 48 | 00 | 01 | **85** |
| Galle | 04 | 36 | 00 | 32 | 01 | 08 | 00 | 10 | 00 | 42 | 07 | 77 | 01 | 07 | 00 | 04 | 00 | 02 | **88** |
| Hambantota | 00 | 38 | 00 | 26 | 01 | 03 | 00 | 05 | 00 | 06 | 00 | 27 | 00 | 26 | 00 | 03 | 00 | 00 | **100** |
| Matara | 04 | 72 | 02 | 56 | 00 | 02 | 00 | 19 | 00 | 02 | 08 | 76 | 02 | 57 | 01 | 03 | 00 | 01 | **94** |
| Jaffna | 00 | 32 | 03 | 40 | 00 | 01 | 06 | 129 | 00 | 02 | 00 | 00 | 03 | 103 | 00 | 17 | 00 | 00 | **88** |
| Kilinochchi | 00 | 00 | 00 | 02 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 00 | 00 | 00 | 01 | 00 | 00 | **25** |
| Mannar | 00 | 12 | 00 | 01 | 00 | 06 | 01 | 76 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 09 | 00 | 00 | **25** |
| Vavuniya | 00 | 10 | 00 | 12 | 00 | 01 | 00 | 01 | 00 | 04 | 00 | 01 | 00 | 00 | 00 | 02 | 00 | 00 | **25** |
| Mullaitivu | 00 | 00 | 00 | 01 | 00 | 00 | 00 | 05 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 04 | 00 | 00 | **00** |
| Batticaloa | 00 | 50 | 00 | 20 | 00 | 01 | 01 | 05 | 00 | 17 | 00 | 00 | 00 | 01 | 00 | 45 | 01 | 03 | **73** |
| Ampara | 00 | 06 | 00 | 63 | 00 | 00 | 00 | 01 | 00 | 00 | 00 | 06 | 00 | 00 | 00 | 01 | 00 | 00 | **00** |
| Trincomalee | 11 | 112 | 00 | 22 | 00 | 00 | 00 | 04 | 00 | 01 | 00 | 06 | 00 | 09 | 00 | 08 | 00 | 00 | **50** |
| Kurunegala | 12 | 143 | 00 | 101 | 00 | 05 | 00 | 16 | 00 | 02 | 03 | 15 | 01 | 12 | 01 | 14 | 00 | 01 | **89** |
| Puttalam | 09 | 157 | 03 | 31 | 01 | 02 | 01 | 38 | 00 | 03 | 00 | 02 | 03 | 14 | 00 | 15 | 01 | 02 | **89** |
| Anuradhapur | 01 | 79 | 02 | 22 | 00 | 03 | 00 | 08 | 00 | 04 | 00 | 24 | 01 | 09 | 00 | 05 | 00 | 00 | **63** |
| Polonnaruwa | 00 | 26 | 00 | 31 | 00 | 01 | 00 | 13 | 00 | 04 | 00 | 07 | 00 | 00 | 00 | 10 | 00 | 00 | **71** |
| Badulla | 01 | 18 | 03 | 110 | 00 | 03 | 01 | 34 | 00 | 01 | 01 | 08 | 02 | 34 | 00 | 46 | 00 | 01 | **87** |
| Monaragala | 01 | 22 | 05 | 57 | 00 | 01 | 01 | 13 | 00 | 08 | 00 | 16 | 00 | 38 | 00 | 07 | 00 | 00 | **91** |
| Ratnapura | 01 | 83 | 02 | 63 | 00 | 13 | 00 | 35 | 00 | 42 | 04 | 33 | 00 | 45 | 01 | 27 | 00 | 00 | **75** |
| Kegalle | 06 | 86 | 12 | 144 | 00 | 13 | 01 | 11 | 00 | 00 | 03 | 28 | 02 | 24 | 13 | 127 | 00 | 00 | **100** |
| Kalmunai | 00 | 08 | 01 | 50 | 00 | 00 | 00 | 02 | 00 | 03 | 00 | 00 | 00 | 01 | 00 | 10 | 00 | 00 | **62** |
| SRI LANKA | **103** | **1945** | **53** | **1247** | **03** | **78** | **20** | **617** | **57** | **351** | **64** | **734** | **17** | **435** | **26** | **556** | **02** | **12** | **77** |

**Source: Weekly Returns of Communicable Diseases (WRCD).**
***Dengue Fever / DHF** refers to Dengue Fever / Dengue Haemorrhagic Fever.
****Timely** refers to returns received on or before 29 March , 2008 Total number of reporting units =290. Number of reporting units data provided for the current week: 238

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