



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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Diphtheria - II

This is the second article of two in a series on "Diphtheria"

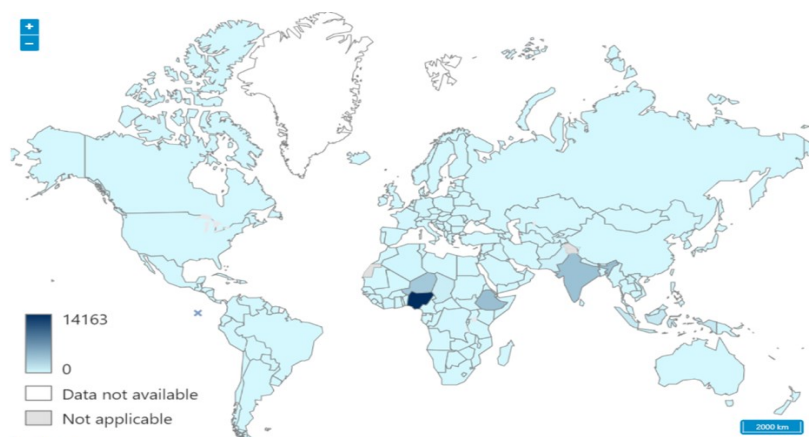
Epidemiology

In temperate climates, the majority of diphtheria cases occur during the cold season, while in warm climates, transmission happens throughout the year. In countries where diphtheria remains endemic, the most commonly affected groups are preschool and school-age children. When there are pockets of unvaccinated people or inadequate routine vaccine coverage in countries, diphtheria continues to be a serious health concern. India reported the highest number of cases (18,350) between 2011 and 2015, followed by Indonesia (3,203 cases) and Madagascar (1,633 cases). In the past decade, global annual reports have recorded between 4,000 and 8,000 diphtheria cases.

However, these numbers probably underestimate the actual disease burden due to under-reporting, omission of non-respiratory cases, and cases caused by other potentially toxic species.

The COVID-19 pandemic significantly disrupted the delivery of routine immunization services and surveillance activities. These disruptions have resulted in many children becoming vulnerable to vaccine-preventable diseases like diphtheria. No WHO region is entirely free from diphtheria. In areas where immunization coverage with diphtheria toxoid-containing vaccines is low, the bacteria can continue to circulate. This increases the risk of outbreaks and endangers unvaccinated and under-vaccinated individuals.

Global situation of Diphtheria - number of reported cases



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Photo credit: <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/diphtheria---number-of-reported-cases>

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WEB SRI LANKA 2024

The situation in Sri Lanka

Diphtheria in Sri Lanka has seen significant changes over the years, primarily due to the country's robust immunization programs. In Sri Lanka, diphtheria is a notifiable disease. The last laboratory-confirmed case in Sri Lanka was reported in 1996, and no further cases have been reported since then. The country began its active immunization program against diphtheria using the DTP (diphtheria, tetanus, and pertussis) vaccine in 1961.

The Ministry of Health in Sri Lanka continues to prioritize diphtheria prevention through regular vaccination campaigns and public health education, which has maintained high vaccination coverage. Booster doses are also emphasized to maintain immunity among older children and adults. Health officials work to address vaccine hesitancy and misinformation by engaging with communities and healthcare providers, ensuring that accurate information about the safety and efficacy of vaccines is widely disseminated. Sri Lanka's approach to controlling diphtheria serves as a model for other countries facing similar public health challenges. The country's commitment to maintaining high vaccination coverage and robust surveillance systems is essential to preventing the resurgence of diphtheria and protecting public health. Continued efforts in these areas are crucial to achieving the long-term goal of eliminating diphtheria as a public health threat in Sri Lanka.

Surveillance and Reporting

Efficient national surveillance and reporting systems are essential for the prompt identification and management of diphtheria outbreaks. Monitoring diphtheria cases through robust surveillance systems ensures swift and effective responses to any emerging threats. Countries should implement district-level data analysis and report all cases of diphtheria to track disease trends and vaccination coverage. Enhancing laboratory capacity for the identification of toxigenic *C. diphtheriae* is also important.

Prevention

To prevent diphtheria, infants should be given an initial series of three doses of the diphtheria toxoid vaccine, followed by three booster doses at properly spaced intervals to ensure lasting immunity. The most effective prevention strategy for diphtheria is vaccination. Diphtheria vaccines are typically combined with tetanus and pertussis vaccines (DTP), which are administered in a series of doses during childhood. The World Health Organization (WHO) recommends a primary series of three doses of diphtheria toxoid-containing vaccine, starting as early as six weeks of age, with subsequent doses at intervals of at least four weeks. A complete primary series should be finished by six months of age. Booster doses are essential to maintain immunity and should be given at 12-23 months, 4-7

years, and 9-15 years of age. For those who missed vaccination during infancy, catch-up vaccination is recommended. Adults and adolescents who are unvaccinated or incompletely vaccinated should receive three doses of Td (Tetanus and diphtheria toxoids) or Tdap (Tetanus, diphtheria, and acellular pertussis) vaccine at least 4 weeks apart, followed by booster doses.

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References:

1. *Clinical management of diphtheria: guideline, 2 February 2024.* Wwww.who.int. <https://www.who.int/publications/i/item/WHO-DIPH-Clinical-2024.1>
2. *Diphtheria (Last updated: September 5, 2018) - Vaccine-Preventable Diseases Surveillance Standards - World | ReliefWeb.* (2024, February 15). Reliefweb.int. <https://reliefweb.int/report/world/diphtheria-last-updated-september-5-2018-vaccine-preventable-diseases-surveillance-standards>
3. *Diphtheria vaccines: WHO position paper – August 2017.* Wwww.who.int. <https://www.who.int/publications/i/item/who-wer9231>

Table 1: Selected notifiable diseases reported by Medical Officers of Health 29th-05th July 2024 (27th Week)

| RDHS | Dengue Fever | | Dysentery | | Encephalitis | | En. Fever | | F. Poisoning | | Leptospirosis | | Typhus F. | | Viral Hep. | | H. Rabies | | Chickenpox | | Meningitis | | Leishmania- | | | Tuberculosis | | | WRCD | |
|-----------------|--------------|--------------|-----------|------------|--------------|------------|-----------|------------|--------------|-------------|---------------|-------------|-----------|------------|------------|------------|-----------|-----------|------------|-------------|------------|------------|-------------|-------------|------------|--------------|-----------|-----------|------|--|
| | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | A | B | A | B | T* | C** | |
| Colombo | 292 | 6129 | 1 | 17 | 0 | 7 | 0 | 43 | 1 | 12 | 28 | 279 | 0 | 8 | 0 | 7 | 0 | 0 | 9 | 281 | 2 | 21 | 0 | 0 | 47 | 1132 | 95 | 100 | | |
| Gampaha | 139 | 2714 | 4 | 26 | 0 | 12 | 1 | 10 | 0 | 69 | 16 | 403 | 0 | 3 | 0 | 2 | 0 | 0 | 20 | 222 | 0 | 73 | 0 | 13 | 44 | 651 | 64 | 100 | | |
| Kalutara | 60 | 1724 | 3 | 19 | 0 | 1 | 1 | 27 | 12 | 29 | 18 | 428 | 0 | 5 | 0 | 8 | 0 | 1 | 11 | 374 | 2 | 35 | 0 | 1 | 6 | 248 | 100 | 100 | | |
| Kandy | 110 | 2533 | 4 | 24 | 0 | 2 | 0 | 6 | 2 | 54 | 7 | 157 | 0 | 21 | 0 | 8 | 0 | 1 | 9 | 276 | 0 | 13 | 0 | 25 | 0 | 329 | 100 | 100 | | |
| Matale | 14 | 429 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 17 | 0 | 66 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 84 | 0 | 6 | 4 | 154 | 3 | 76 | 100 | 100 | | |
| Nuwara Eliya | 7 | 223 | 13 | 89 | 0 | 5 | 0 | 8 | 1 | 193 | 4 | 116 | 0 | 28 | 1 | 5 | 0 | 0 | 5 | 142 | 0 | 9 | 0 | 0 | 5 | 155 | 92 | 100 | | |
| Galle | 29 | 1298 | 2 | 32 | 2 | 17 | 0 | 8 | 6 | 63 | 13 | 451 | 0 | 63 | 0 | 7 | 0 | 1 | 19 | 417 | 2 | 48 | 0 | 3 | 8 | 231 | 79 | 100 | | |
| Hambantota | 12 | 587 | 0 | 24 | 0 | 2 | 0 | 3 | 0 | 42 | 9 | 316 | 2 | 29 | 1 | 5 | 0 | 1 | 7 | 177 | 0 | 21 | 18 | 303 | 0 | 80 | 92 | 100 | | |
| Matara | 22 | 518 | 0 | 4 | 0 | 4 | 0 | 2 | 1 | 25 | 19 | 273 | 0 | 12 | 1 | 3 | 0 | 0 | 7 | 208 | 4 | 55 | 10 | 76 | 3 | 82 | 100 | 100 | | |
| Jaffna | 21 | 5104 | 0 | 41 | 0 | 2 | 7 | 19 | 1 | 30 | 0 | 13 | 12 | 398 | 1 | 4 | 0 | 1 | 2 | 145 | 1 | 8 | 0 | 1 | 1 | 162 | 100 | 93 | | |
| Kilinochchi | 0 | 269 | 0 | 8 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 17 | 0 | 8 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 13 | 100 | 100 | | |
| Mannar | 2 | 195 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 21 | 1 | 8 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 1 | 0 | 40 | 100 | 100 | | |
| Vavuniya | 4 | 144 | 0 | 6 | 0 | 1 | 0 | 1 | 7 | 21 | 0 | 66 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 27 | 0 | 12 | 0 | 8 | 0 | 22 | 100 | 100 | | |
| Mullaitivu | 1 | 185 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 58 | 0 | 11 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 1 | 1 | 8 | 0 | 19 | 100 | 100 | | |
| Batticaloa | 16 | 1202 | 1 | 80 | 0 | 9 | 0 | 6 | 1 | 20 | 0 | 51 | 0 | 2 | 2 | 15 | 0 | 0 | 5 | 78 | 0 | 27 | 1 | 3 | 2 | 81 | 100 | 100 | | |
| Ampara | 6 | 183 | 1 | 21 | 0 | 3 | 0 | 0 | 0 | 14 | 2 | 139 | 0 | 1 | 0 | 5 | 0 | 0 | 4 | 72 | 1 | 27 | 1 | 11 | 1 | 86 | 100 | 100 | | |
| Trincomalee | 11 | 543 | 0 | 11 | 1 | 1 | 0 | 2 | 0 | 4 | 3 | 124 | 0 | 12 | 1 | 3 | 0 | 0 | 2 | 39 | 1 | 10 | 0 | 11 | 7 | 66 | 83 | 100 | | |
| Kurunegala | 39 | 1598 | 1 | 28 | 0 | 21 | 0 | 3 | 1 | 345 | 15 | 387 | 0 | 17 | 1 | 4 | 0 | 2 | 14 | 298 | 4 | 174 | 19 | 353 | 10 | 296 | 79 | 100 | | |
| Puttalam | 21 | 750 | 0 | 5 | 0 | 1 | 0 | 3 | 0 | 2 | 6 | 152 | 2 | 8 | 0 | 1 | 0 | 1 | 3 | 85 | 2 | 42 | 1 | 22 | 7 | 130 | 92 | 100 | | |
| Anuradhapura | 5 | 537 | 0 | 11 | 0 | 3 | 1 | 2 | 0 | 26 | 7 | 284 | 0 | 26 | 0 | 8 | 0 | 1 | 4 | 161 | 1 | 27 | 15 | 490 | 2 | 159 | 87 | 100 | | |
| Polonnaruwa | 3 | 243 | 0 | 14 | 0 | 0 | 0 | 1 | 0 | 6 | 2 | 190 | 0 | 1 | 0 | 5 | 0 | 0 | 3 | 84 | 0 | 20 | 1 | 301 | 0 | 61 | 100 | 100 | | |
| Badulla | 15 | 587 | 0 | 19 | 0 | 4 | 0 | 4 | 0 | 27 | 14 | 343 | 0 | 19 | 0 | 14 | 0 | 0 | 7 | 209 | 0 | 21 | 2 | 23 | 6 | 123 | 94 | 100 | | |
| Monaragala | 11 | 514 | 0 | 9 | 0 | 2 | 0 | 2 | 0 | 77 | 10 | 525 | 0 | 21 | 0 | 17 | 0 | 1 | 2 | 72 | 3 | 63 | 3 | 142 | 4 | 67 | 82 | 100 | | |
| Ratnapura | 52 | 1675 | 3 | 67 | 1 | 4 | 1 | 8 | 0 | 11 | 30 | 1058 | 1 | 15 | 0 | 17 | 0 | 2 | 6 | 198 | 1 | 78 | 0 | 109 | 4 | 171 | 95 | 100 | | |
| Kegalle | 38 | 1384 | 0 | 10 | 0 | 6 | 2 | 8 | 1 | 9 | 20 | 426 | 0 | 18 | 0 | 6 | 0 | 1 | 22 | 510 | 1 | 42 | 1 | 17 | 10 | 188 | 82 | 100 | | |
| Kalmunai | 5 | 579 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 51 | 0 | 2 | 1 | 4 | 0 | 0 | 5 | 144 | 1 | 11 | 0 | 0 | 1 | 81 | 92 | 100 | | |
| SRILANKA | 935 | 31847 | 33 | 594 | 4 | 107 | 13 | 171 | 34 | 1119 | 228 | 6394 | 18 | 741 | 9 | 157 | 0 | 14 | 171 | 4317 | 27 | 852 | 77 | 2075 | 171 | 4749 | 93 | 99 | | |

Source: Weekly Returns of Communicable Diseases (esurveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 05th July, 2024. Total number of reporting units 358. Number of reporting units data provided for the current week: 358. C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

29th – 05th July 2024 (27th Week)

| Disease | No. of Cases by Province | | | | | | | | | Number of cases during current week in 2024 | Number of cases during same week in 2023 | Total number of cases to date in 2024 | Total number of cases to date in 2023 | Difference between the number of cases to date in 2024 & 2023 |
|-----------------------|--------------------------|----|----|----|----|----|----|----|-----|---|--|---------------------------------------|---------------------------------------|---|
| | W | C | S | N | E | NW | NC | U | Sab | | | | | |
| AFP* | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 39 | 49 | -20.4 % |
| Diphtheria | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| Mumps | 00 | 01 | 02 | 00 | 00 | 00 | 00 | 00 | 01 | 04 | 01 | 154 | 113 | 36.2 % |
| Measles | 01 | 00 | 00 | 01 | 00 | 01 | 00 | 00 | 00 | 03 | 16 | 221 | 40 | 452.5 % |
| Rubella | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 02 | 01 | 100 % |
| CRS** | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| Tetanus | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 04 | 06 | -33.3 % |
| Neonatal Tetanus | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0 % |
| Japanese Encephalitis | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 02 | -50 % |
| Whooping Cough | 02 | 00 | 01 | 00 | 00 | 00 | 00 | 00 | 01 | 04 | 01 | 29 | 05 | 480 % |

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.
RDHS 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.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome
NA = Not Available

Take prophylaxis medications for leptospirosis during the paddy cultivation and harvesting seasons.

It is provided free by the MOH office / Public Health Inspectors.

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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