

Snakebite Envenomation

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Tamil Nadu Declares Snakebite Envenomation a Notifiable Disease

Context: The Tamil Nadu government has officially designated **snakebite envenomation** as a **notifiable disease** under the Tamil Nadu Public Health Act, 1939. This move aims to enhance the reporting, response, and treatment of snakebite cases across the state.

About Snakebite Envenomation:

- Snakebite envenomation is a **life-threatening condition** caused by bites from venomous snakes. It can result in severe complications, including:
 - **Paralysis** that can impair breathing.
 - **Bleeding disorders** that may lead to fatal hemorrhaging.
 - **Irreversible kidney failure**.
 - **Severe tissue damage** at the bite site.
- The most effective treatment is **high-quality antivenom**, which can counteract or reverse many of the venom's toxic effects.

Global Impact:

- **An estimated 5.4 million people worldwide** are bitten by snakes each year, with **1.8 to 2.7 million cases leading to envenomation**.
- Vulnerable groups include **agricultural workers, children, and residents in tropical and subtropical regions**.

WHO's Response:

- The **World Health Organization (WHO)** recognizes snakebite envenomation as a **global public health issue** and has implemented a strategy to **reduce snakebite-related deaths and disabilities worldwide**.

Snakebite Situation in India:

- India is home to **over 310 snake species**, with the majority being non-venomous.
- Of these, **66 species are classified as venomous or mildly venomous**. Most snakebite incidents involve the "Big 4" species:
 - **Russell's viper** (*Daboia russelii*)
 - **Spectacled cobra** (*Naja naja*)
 - **Common krait** (*Bungarus caeruleus*)
 - **Saw-scaled viper** (*Echis carinatus*)

National Action Plan:

- The **Ministry of Health and Family Welfare** recently launched the **National Action Plan for Prevention and Control of Snakebite Envenoming**.
- This plan aims to **halve snakebite deaths by 2030** through a **'One Health' approach** that integrates human, animal, and environmental health interventions.

Tamil Nadu's New Initiative:

- By designating snakebite envenomation as a **notifiable disease**, Tamil Nadu seeks to improve data collection and strengthen healthcare response across the state.
- Key goals include:
 - **Enhancing clinical infrastructure** for snakebite treatment.
 - **Ensuring efficient distribution of antivenom** to healthcare facilities.
 - **Reducing mortality rates** and improving treatment accessibility.
- Under this initiative:
 - **Both government and private hospitals are required to report all snakebite cases and related deaths.**
 - The reporting system will integrate with the **State's Integrated Health Information Platform** under the **Integrated Disease Surveillance Program**.

Addressing Underreporting:

- Authorities have identified **significant underreporting of snakebite cases and deaths** in previous data.
- This **new reporting system** aims to close data gaps, allowing for more accurate tracking and better resource allocation to address snakebite envenomation in Tamil Nadu.

In Summary: Tamil Nadu's declaration of snakebite envenomation as a notifiable disease marks a crucial step in improving snakebite management, accessibility to treatment, and prevention in high-risk areas, ultimately aiming to reduce mortality and strengthen public health response.

