

**Zero-death due to
Snakebites by 2030**
A Dream or a Possible Reality

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Our deliberations

1. Overview of the situation
2. Our perceptions
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Overview of the present situation

Year	Subject	References
2003	Neglected Tropical Disease, WHO	Todaro, 2003 India
2005	Transition in mortality rate in India	development: Dreze & Sen, 2005
2009	Number of death due to Snakebites per Year in India: 49000	Romulus Whitaker
2017	Number death due to Snakebites at world level per year: 95000 and 50% occurred in India.	Lancet, July 1, 2017
2020	Number of death due to snakebites only: 1004 per year between 2016 – 2018	Lokhsabha Question No. 1014 dated Feb. 7, 2020
2022	Number of Cases of Snakebites: 10 lacs. No of death due to Snakebites 58 thousands. Disabilityies due to snakebites 4 times of death	Indian Council of Medical Research, May 2022

Observation: There exists High level of divergence between official data and un-official data.

Overview of the present situation (contd.)

Inter Regional Variations of Snakebites: India 2016-2018

Zone	No. of Snakebite Cases (average of 3 Yrs.)	No. of Deaths due to Snakebites (average of 3 Yrs.)	No. of Bites per Lac population	No. of Deaths per 100 Snakebites
North – East	2726	2.6	6.03 (5)	0.09 (6)
Northern	10509	129	4.78 (6)	1.22 (2)
Western	36077	148	12.25 (3)	0.41 (4)
Southern	49278	167	19.67(2)	0.33 (5)
Central	8264	131	8.42 (4)	1.58 (1)
Eastern	47529	350	25.12 (1)	0.73 (3)

Note: Figures in the parenthesis refer to rank.

Observations:

- 1. High occurrence and moderate mortality: Eastern region**
- 2. Moderate occurrence with high mortality: Central region**

Sources: Lokhsabha - Question No. 1014 dated Feb. 7, 2020

Overview of present situation (contd.)

Incidences Of Snakebites In West Bengal

YEAR	CASES	OCCURRENCE RATE	DEATH	MORTALITY RATE
2016	25481	21.4	138	0.54
2017	31072	26.9	268	0.86
2018	36229	30.42	203	0.56

Notes: (i) Occurrence rate refers to number of persons affected per 100000 of the population/year.
(ii) Mortality rate refers to number of deaths per 100 snakebites.
(iii) Data from Disaster Management Department in West Bengal, however tells a different story.

Source: Lokhsabha Question Number 1014 dated 7th February 2020.

OUR PERCEPTIONS

- Total Prevention of death due to snakebites hinges on two things (i) improvisation of patient care system within the Hospital and (ii) sustained awareness campaign about the world of snake and snakebites in the hinterland of tertiary level hospital
- The improvisation of patient care system within the hospital has two dimensions
 - (i) doctors at the hospital should be properly trained,
 - (ii) a Dialysis Centre for patients with haematotoxic venom and a Critical Care Unit (CCU) for patients with neurotoxic venom should be there with adequate number of seats particularly during the month of April to October.
- The proper training of the doctors will improve their 'clinical eye' and a better understanding of the 'appropriate way' and 'appropriate dose' of AVS administration
- The above infrastructural improvement along with proper doctor's training are primary condition for attainment of zero deaths due to snakebites at tertiary level hospitals and block hospitals also.

OUR PERCEPTIONS (Contd.)

- The sustained awareness campaign in the hinterland of hospital stems from the following facts.
- In most cases a snakebite patient arrives at the hospital after a lapse of 2-3 hours. The reasons are the following: (i) confusion about bite particularly at the dead of night with respect to children (less than 15 years) (ii) presence of superstitions in the mind-set of rural people, (iii) distance between dwelling place of victims and tertiary/ block level hospital. The late arrival engenders the life of the patients.
- The solution of the above problems are beyond the scope of the doctors/hospital administration. As such intervention of science organisation / NGO is extremely necessary final solution to the problem. In this sense our approach is a bit difference from the 'standard one way approach'. In fact it is a 'collaborative approach' between two sets of people i.e. between skilled personnel at the hospitals and semi- skilled personnel at the rural areas.

OUR ACTIVITIES

Our area is in the vicinity of the Sundarbans. The area is a snakebite prone area due to climatic condition, salinity of the soil, high population pressure (820/km²) and the presence of three venomous snake such as Common Krait, Russell's Viper and Monocled Cobra. As a result Juktibadi Sanskritik Sanastha Canning (JSSC) has to adopt the following programme .

(i) Abolition of superstitions centred around snake from the mental frame of rural people through sustained awareness campaign and motivate the people to move to tertiary/block level hospital immediately for treatment of snakebites. The awareness campaign consists of street corner, street drama, Cycle Rally, publication of booklets, maps, holding of workshops and seminars. These programmes have been carried out for the last three decades.

The awareness campaign for the period 2008-12 was funded by National Rural Health Mission //(NRHM) vide memo no HFW/NRHM-170/2008/840/2009 dated, 11.03.09 etc.

(ii) Initiations of Help-Line (with assistance from NRHM) in March 2009 towards free medical advice to the patients living in distance places (Memo no HFW/NRHM-170/08/608/2010 dated, 30.08.10.

OUR ACTIVITIES (Contd.)

(iii) Holding of series of awareness campaign with the mothers along with children in various places of South 24 parganas to reduce child mortality rate due to snakebites.

(iv) Conducted an epidemiological survey on the incidence of snakebites in 27 Blocks of South 24 Parganas at 'sansad' level during 2008-10.

(v) Holding of series of 'Sensitization workshop on 'snakebites' with doctors and other staffs in the Canning Sub-Division Hospital and other places also.

(vi) Development of congenial environment at the hospital so that the admitted patient could be continuously monitored for at least first four hours by both attending doctors and activists of JSSC.

(vii) Holding of series of workshop with traditional healers (OJHA), unrecognised rural medical practitioners about proper treatment of venomous snakebite patients.

OUR ACTIVITIES (Contd.)

A typical scene in the Sunderbans area.

A raft (made of Banana tress), known as *Mandas* carrying a dead body of a snakebite victim.



OUR ACTIVITIES (Contd.)

Snake Book Press Release at
Kolkata Press Club 2015



OUR ACTIVITIES (Contd.)

Seminar on Snakebites at Alipurduar BSS



OUR ACTIVITIES (Contd.)

Bijan Bhattacharya addressing a crowd in Canning



OUR ACTIVITIES (Contd.)

Cycle Rally on March 10, 2023



OUR ACHIEVEMENTS

- The first set of activities have been carried out in various district of West Bengal in collaboration with other fraternal organisation such as *Ahi Bandhab* at Malda and *Alipurduar Bigyan O Sanskritik Sanastha*. (see Map1) These activities improved the rate of hospitalisation in the respective area.
- The Help Line guided the patients about the necessary steps with respect to venomous snakebites. As a result the rate of recovery due to venomous snakebites has been improved from 55.76 per cent in 2009 to 80.53 per cent in 2018 in the adjacent areas of Canning. It also restrained people from unnecessary hospitalization as 92 per cent bites are non poisonous bites.
- The third set of activities effected a 'Zero-Death' due to snakebites at Canning Sub-Divisional hospital in the year 2007 and 2018.
- The fifth set of activities have transformed the mind-set of some traditional healers and have turned them in to good science workers.
- The successful implementation of all this activities has been reflected in the 'Zero-Death' due to snakebites in Canning Block-I in the year 2018.



West Bengal



24 Parganas (S)

OUR RECOMMENDATIONS

- The approach should be participatory.
- The patient care system at the hospital should be improved.
- The myth and superstitions surrounding the snakes and snakebites should be improved through sustained awareness campaign at each layer of the village society including administration.
- Volunteers should be rewarded for any meaningful help to the snakebite patients.
- BPHC and PHC should be improved for an easier medical services to the snakebite patients.
- For a better understanding of the incidence of snakebites, the Disaster Management Department's orders should be pulled up.