Breaking the Cycle of Neglect: Confronting Snakebite Envenoming in Kenya

Guest blog by **Chloe Vasquez**, member of the Snakebite Community Engagement Network (SCEN)

Every year, millions of lives worldwide are impacted by the under-recognized tragedy of snakebite envenoming (SBE). According to the World Health Organization (WHO), sub-Saharan Africa experiences tens of thousands of snakebite cases annually, with Kenya experiencing between 82,000 and 242,000 envenomings each year. Victims are often farmers, herders, or children playing outdoors who inadvertently cross paths with venomous snakes such as mambas, adders, and cobras. Structures with gaps or openings in walls, doors, or ceilings further expose communities, as snakes can easily enter homes seeking warmth, water or food. For thousands of Kenyan families, a single encounter with a snake can mean pain, trauma, financial ruin, and, tragically, disability or death.

Snakebite envenoming is a disease of the poor. It thrives in marginalized communities, where financial resources and agency are lacking. This is precisely why SBE seldom commands the attention of pharmaceutical companies or health authorities.

Why are snakebites so deadly?

"l took my wife and brought her to the local dispensary on a motorbike. The doctors said that there was no medicine to treat her but did first aid on her, then an ambulance took us to the district hospital. We arrived at around 16.15 and were again told that there is no medicine to treat her. As we were inquiring where we would get the medicine, at around 17.00, she passed away." – HAI Focus Group Participant

In most cases, timely access to specific antivenom can save victims' lives. However, high fatality rates in Kenya stem from several systemic challenges:

1. **Treatment Access**: In snakebite prone areas, healthcare facilities are frequently unequipped to handle venomous snakebites. There are perennial stock-outs of antivenom, and a dearth of essential drugs and equipment such as ventilators, anti-tetanus toxoid, adrenaline and painkillers. Shockingly, only 27% of health facilities in Kenya stock antivenom, and even then, its cost— 6,000 Kenyan shillings, ($46 USD) for a single vial—places it beyond the reach of most families.
2. **Delayed Treatment**: Victims in rural areas may have to travel for hours to reach the nearest medical facility. Delays can mean the difference between life and death. Moreover, many people in Kenya are unaware of what to do in the event of a snakebite. Traditional remedies, such as the use of black stones or herbal concoctions,

are often the first course of action following a snakebite. These methods, proven ineffective, delay access to life-saving care and can even exacerbate venom's effects. Community education remains an underfunded yet crucial pillar in addressing this issue.

3. **Lack of Awareness**: At a structural level, snakebite incidents are underreported, which means they receive less attention from policymakers and public health programs. An estimated 70% of snakebite cases may go unreported, making it difficult to formulate effective interventions. Most healthcare workers in Kenya are not trained to manage venomous snakebites. So, even those facilities that stock antivenom may refer a patient out of a lack of confidence, further delaying patients' access to care.

The Lingering Economic and Emotional Burden

"The snakebite victims should be helped as some of them are breadwinners in their families. In my case for instance, I am paying off the loan that I borrowed to cover the hospital bill and yet my business is failing. I urge the government to offer any assistance to my business or school fees for my children both in primary and secondary schools." – HAI Focus Group Participant

Beyond the immediate medical crisis, snakebite survivors face enduring challenges. A 2020 report by HAI revealed that over half of victims are unable to return to their previous jobs, while 22% incur crippling debts to cover medical bills. Many victims are forced to take out loans, sell animals or land, or even take children out of school. While the Kenyan government offers compensation for snakebite victims, this process is often confusing and difficult. Relatively few victims report receiving compensation.

Besides socioeconomic impacts, victims often experience psychological trauma as a result of SBE. Many victims must go back to work in the same context where they experienced the snakebite, causing them emotional distress. Others endure recurring nightmares, anxiety, or depression following the bite. Still, very little is known about the long-term impacts of snakebite.

How can we Break the Cycle of Neglect?

"My brother was farming and the snake came and bit him on the left leg. He started screaming and we took him to a traditional doctor. The stone was placed on his wound but there was no difference. We later took him to the hospital where the doctor said that we were already late because the venom had spread due to delay, so the leg had to be cut off." – HAI Focus Group Participant

Snakebites may not often make headlines, but their impact is devastatingly common. Addressing this crisis requires a multi-pronged approach. Access to Medicines Platform (ATMP) in Kenya is working to address some of the aforementioned problems through an array of activities.

Schoolchildren learning about snakebite prevention.


Schoolchildren playing “Fun with Safiya” board game.

1. **Community Education**: ATMP is delivering information on snakebite prevention and first aid through many mediums: posters, videos, radio announcements, and a documentary, comic books and board game. These teaching aids (available in Swahili and English) have been disseminated across the country to some of the highest burden communities.
2. **Training Healthcare Practitioners**: ATMP is coordinating continuous medical education for clinical officers, public health officers and facilities in charge of care, management and treatment of snakebites. So far, they have engaged 230 healthcare workers from 10 counties. ATMP has also trained 1,000 community health

practitioners (CHPs), who have already reached 5,300 households.
3. **Data-Driven Interventions**: ATMP has conducted grassroots research in six high-burden counties, collecting information on patient behaviour, physician knowledge, and treatment access at a community level. This information is synthesized and delivered to county and national policymakers in the form of policy briefs.
4. **Mobilization**: ATMP is working with the departments of health, Kenya Wildlife service, Kenya Medical Supplies Agency, Kenya forestry and other NGOs to expand and improve snakebite programming.
5. **Policy Advocacy**: Kenya must prioritize snakebite management as a public health issue. ATMP is advocating for the integration of snakebite care into primary healthcare policies, allocation funds for the acquisition of antivenoms, access to ambulatory or transportation services, and mechanisms to monitor and report stockouts of key commodities for snakebite treatment.

Much work still remains to address the current crisis. Multiple actors are working to mitigate the public health crisis due to snakebite. However, as is the case with many organisations that work on Neglected Tropical Diseases, these organisations are in need of financial support. By prioritizing awareness, access to treatment, and healthcare investment, Kenya can turn the tide against this silent epidemic. For the countless lives at risk every day, the time to act is now.

Chloé is a recent undergraduate student learning about snakebite management around the

world. When her mother survived a Bothrops asper bite in 2020, she decided to dedicate her career to ensuring all people have access to quality snakebite information and treatment. Her background is in public health, economics and political science. Currently, she is conducting a fellowship to learn about snakebite prevention and mitigation around the globe. Chloe has spent the past 6 months in India, visiting clinics, hospitals, antivenom producers, government meetings, grassroots projects and other actors.