

“When the Wild Bites Back: Managing Snake, Crocodile and Hippo Injuries in a Rural Zambian Hospital”

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Introduction:

Wildlife-related injuries remain an under-recognised cause of trauma and death in sub-Saharan Africa. In rural communities bordering rivers and floodplains, daily life often brings close contact with snakes, crocodiles, and hippopotamuses. These encounters, whether during fishing, bathing, or farming, can result in devastating injuries. Snakebites cause significant morbidity through envenomation, necrosis, and secondary infection, while crocodile and hippo attacks frequently lead to massive soft-tissue destruction, amputations, and fatalities. This retrospective study looks at a rural hospital located along the Zambezi River in north-western Zambia, serving a population heavily exposed to such hazards. It reviews all cases of snake, crocodile, and hippo bites which required management in theatre over a six-year period, describing their epidemiology, management, and outcomes. Findings highlight the challenges of delivering emergency and surgical care in resource-limited settings and emphasise the urgent need for preventive education and improved trauma preparedness.

Methods:

Design: Retrospective observational review.

Setting: Rural Hospital, North-Western Province, Zambia — a 200-bed facility serving a catchment of ~100,000 people near the Zambezi River.

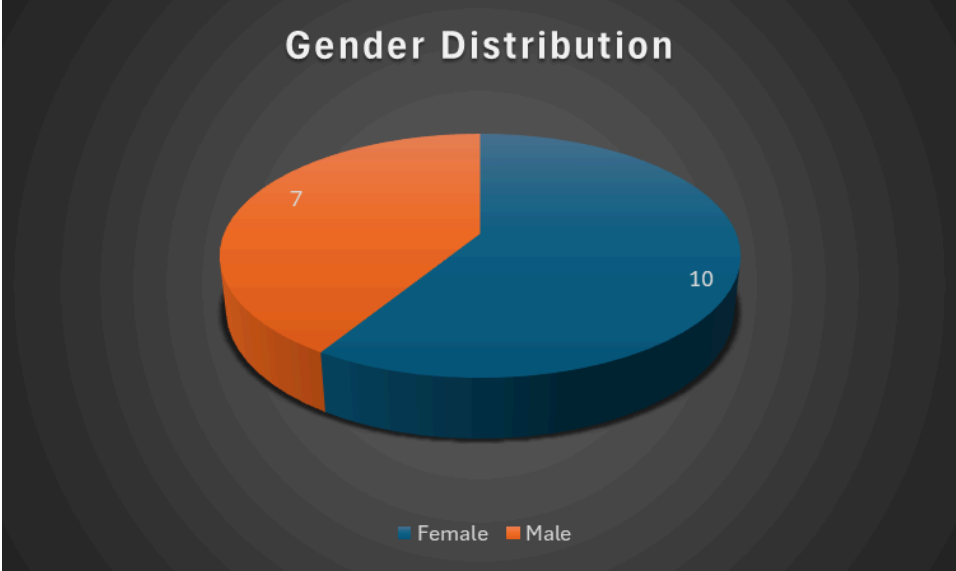
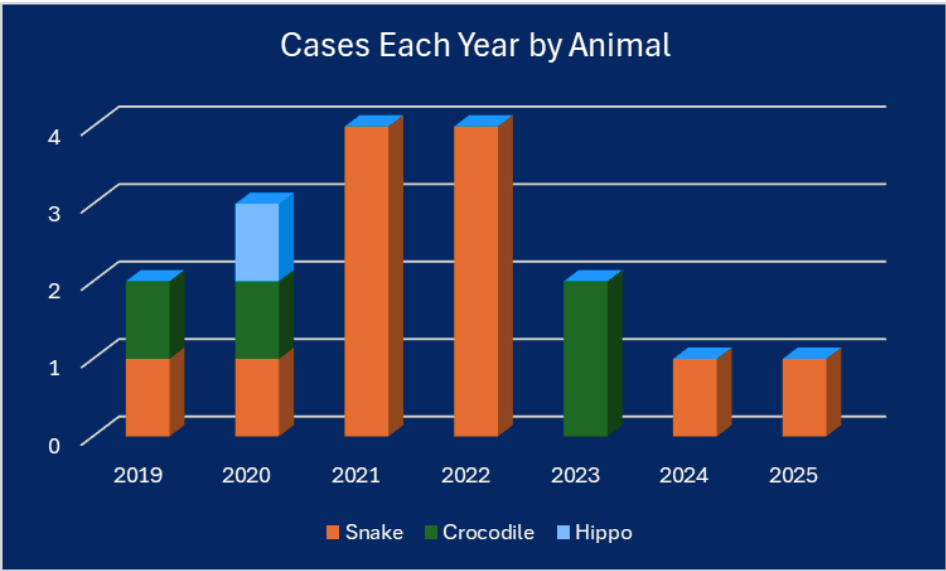
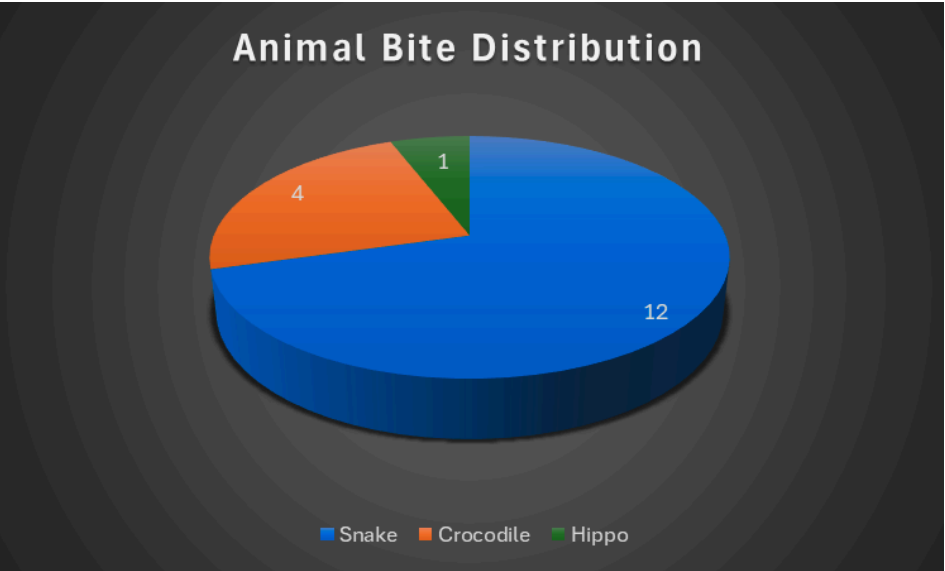
Period: January 2019 – October 2025.

Inclusion criteria: All patients with documented snake, crocodile, or hippo bites presenting to the hospital requiring management in theatre.

Data collected: age, sex, mechanism of injury, interventions (antivenom, debridement, amputation) and outcomes.

Results:

Age Range: 4 years to 73 years



Crocodile:

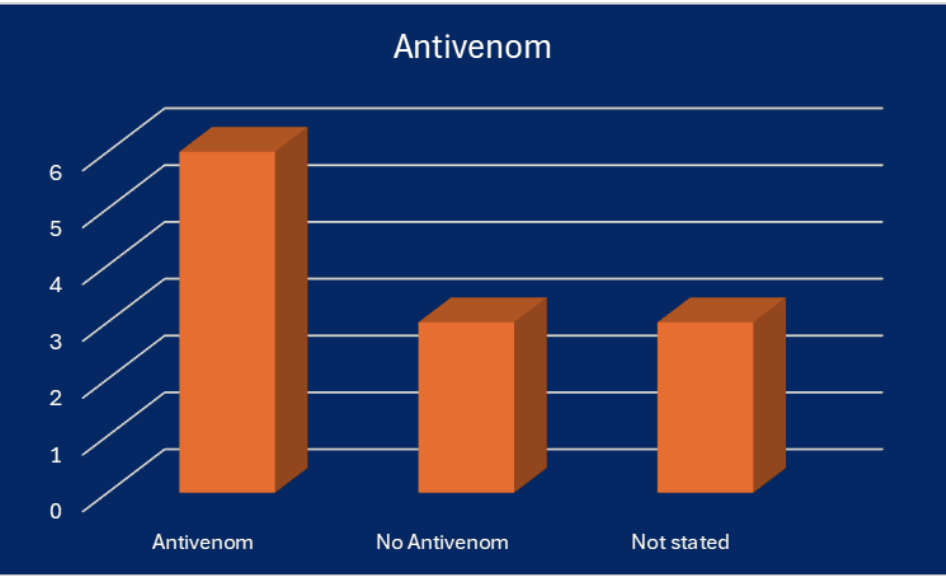
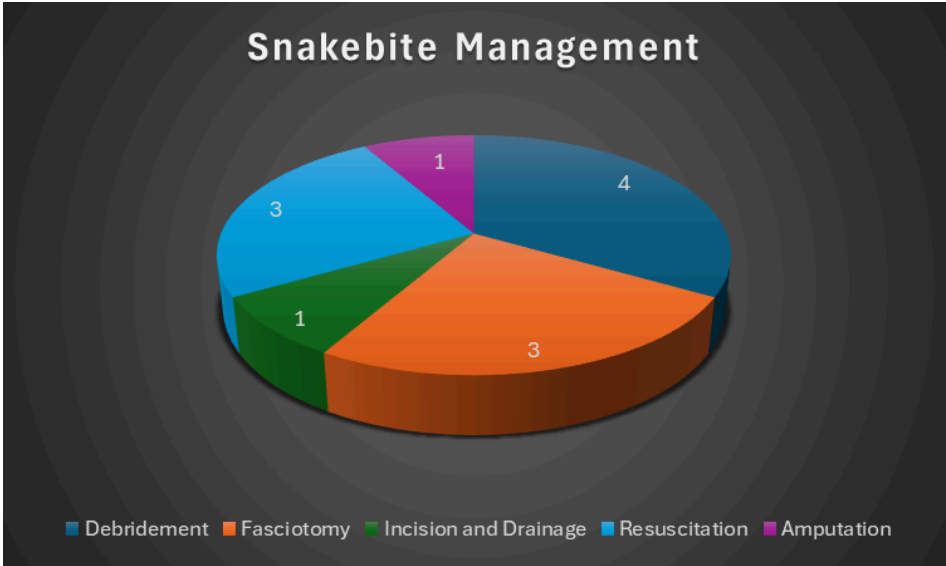
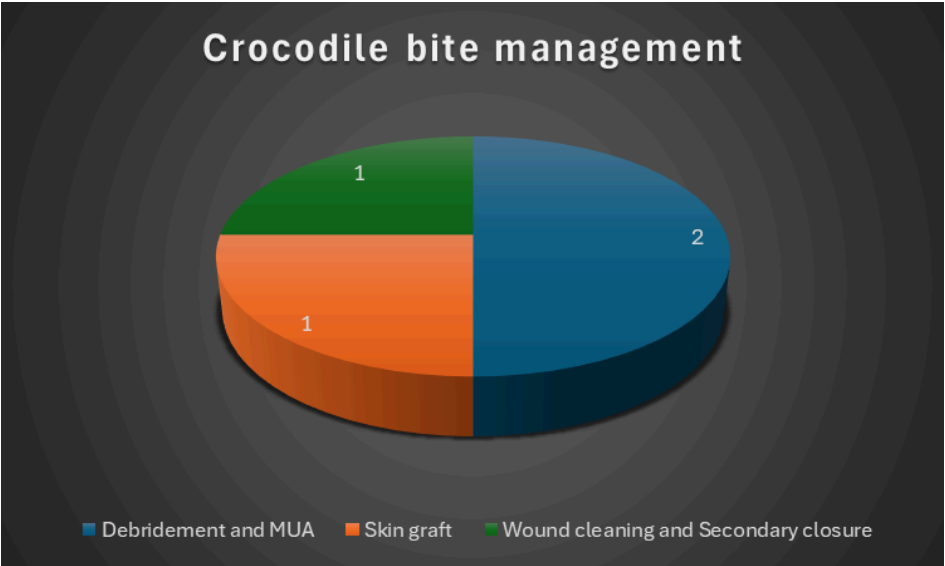
Clinical Course: commonly presented with deep lacerations, bleeding and fractures. Four patients required management in theatre. Of these there was no recorded mortality. 2 (50%) of these required debridement and manipulation under anaesthetic, 1 (25%) required wound washout followed by secondary closure and 1 (25%) required a skin graft.

Snake:

Clinical Course: commonly presented with local swelling, blistering, and necrosis. The cases requiring ventilation were due to respiratory compromise. Twelve patients required management in theatre following a snake bite. Of these there was no recorded mortality. 3 (25%) required immediate resuscitation, ventilation and antivenom. 4 (33%) required debridement, 3 (25%) with 1 (8%) amputation and 1 (8%) incision and drainage.

Hippopotamus:

Clinical Course: only one patient presented with a hippo bite. There was laceration to the foot and dislocation of their tibia. This patient proceeded to have debridement and reduction of their dislocation under general anaesthetic.



Conclusion:

Wildlife-related injuries from snakes, crocodiles, and hippos remain a preventable cause of trauma in rural African hospitals. Strengthening local emergency response capacity and public health education are vital steps toward reducing their impact.