

## THE MYANMAR SNAKEBITE PROJECT: EXPERIENCE WITH A PRACTICAL APPROACH TO CONFRONTING THE SNAKEBITE PROBLEM IN A DEVELOPING NATION

**White J**<sup>1,3</sup>; Peh C.A.<sup>2,3</sup>; Mahmood A.<sup>3</sup>; Warrell D.<sup>4</sup>; Zaw A.<sup>5</sup>; Thwin K.T.<sup>6</sup>

<sup>1</sup> *Toxinology Dept., Women's & Children's Hospital, North Adelaide SA 5006, Australia*

<sup>2</sup> *Royal Adelaide Hospital, Adelaide, Australia*

<sup>3</sup> *University of Adelaide, Adelaide, Australia*

<sup>4</sup> *University of Oxford, UK*

<sup>5</sup> *Department of Industry, Myanmar;*

<sup>6</sup> *Yangon General Hospital & Department of Health, Myanmar*

**Objectives:** Improve outcomes for snakebite patients in Myanmar through (1) improving quantity and quality of antivenom production with an aim of full national self-sufficiency; (2) improving distribution and availability of antivenom to ensure it reaches all those in need; (3) improve the clinical management pathway for snakebite patients, from village level through to major hospitals and including an emphasis on education of rural populations about effective preventative measures and appropriate timely response if bitten, with effective first aid.

**Methods:** This project was initiated after approaches from the Government of Myanmar and was funded as a foreign aid project by the Australian Department of Foreign Affairs and Trade GPF program via a competitive grant process. The project team have consulted widely with colleagues in Myanmar and identified major areas where intervention may be possible to achieve project objectives. The project is still in the early stages, but plans are already in place or implemented for (1) community-based surveys on snakebite, (2) introduction of snakebite-specific case records and diagnostic algorithms, (3) reversing problems with horse and snake husbandry which impact antivenom output. Specific study sites will be used for community surveys and clinical interventions.

**Results:** Initial data indicates horse and snake husbandry improvements are increasing survival, leading to increased AV output. Involvement of staff from bioCSL, CSIRO, University of Adelaide Veterinary School and Venom supplies has allowed identification of key issues impacting horse/snake health. A new snakebite-specific case record system has been developed and is about to be implemented in selected study sites in Myanmar, together with diagnostic algorithms. A community survey tool has been developed and will shortly be implemented. Study sites have been selected and staff training commenced.

**Conclusions:** This complex large project is still in the early phase of development and implementation, but has already shown that international cooperation through foreign aid can interface successfully with health professional colleagues in a developing nation setting to deliver meaningful change towards a goal of improved outcomes for snakebite patients, using a holistic approach. The ongoing success of this approach will be measured over the following 2 years with an intention to put in place lasting solutions that will deliver long after the project funding period finishes.