

Introduction

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Many of us know the feelings of urgency and helplessness that come when a sudden knock at the door in the early hours of morning brings the news of yet another seriously ill snakebite patient arriving at our aid posts, health centres and hospitals. Often these patients will already be in the terminal stages of severe neurotoxic paralysis, and without transport, medicines or modern hospital equipment, we are left with little to do but stand by and watch as they slowly slip away to become yet another victim of the deadly reptiles that live in our midst.

Snakebite is a medical emergency, and we live in a country where venomous snakes, although few in variety, are many in number. As you will hear during this course, the incidence and mortality rates after snakebite in Papua New Guinea are among the highest reported in any part of the world. This is in stark contrast to the experience of our neighbour Australia. Despite having many of the same species, and much higher populations living in areas with abundant snake populations, snakebite in Australia is a very minor problem at community level. With just one quarter of Australia's population, and perhaps 200 more deaths from snakebite each year, PNG's snakebite mortality rate may be as much as 800 times greater than Australia. The gap between PNG's snakebite problem and snakebite in Australia does not end there.

With a much larger revenue-contributing population, stronger resource base and solid economic foundation, Australia has some of the best medical facilities in the world. Even in many of our smaller towns and villages, there are qualified doctors working in hospitals that are well equipped. In our most remote areas we are able to extend viable emergency medical services with a long-established privately-funded aeromedical retrieval service, the Royal Flying Doctor Service. A person bitten by a venomous snake in Australia's arid heart can be retrieved using a well-equipped medical airplane, and may find themselves recovering in a large, modern city hospital in just a matter of hours. Snakebite is, nevertheless, still considered to be a very serious medical condition, and even in the most modern Australian intensive care units, snakebite patients may still have a guarded prognosis.

Here in PNG, where the economic base of the country remains in its formative years, the challenges of basic service delivery, education, transport, health, housing and policing remain great. With limited resources, and a plethora of important health issues to overcome, PNG faces a much more difficult road to prosperity. Common diseases like measles kill hundreds every year, malaria and other tropical illnesses are endemic, and the spectre of HIV/AIDS currently looms like a guillotine above the head of a condemned man. Rural hospitals and clinics do not usually have qualified doctors on hand, and resources, equipment and essential drugs are often in short supply. Medical evacuations, if and when they are carried out, come at a high cost, one beyond the economic means of most grassroots Papua New Guineans. Relative antivenom costs in PNG are much higher than in Australia, and high prices mean that even with increases in funding allocations, there simply is not enough money available to purchase sufficient antivenom for all cases. Without the benefits of modern medical facilities, a Papua New Guinean snakebite victim faces a struggle to survive that is frequently lost.

With so many challenges to overcome, one could be forgiven for thinking that survival after snakebite is a slim possibility, and while the chances of death are certainly higher in PNG than in Australia, the reality is that many people do survive snakebite.

A good part of that survival is due to the dedication and experience of health personnel who work hard against numerous obstacles to provide their patients with the best care they can provide. Well-trained and well-informed health workers are vital to the delivery of health services, and, for that reason, we have developed this training course to equip rural and urban health workers with the skills and knowledge needed to improve their snakebite assessment and management skills even further.

We aim to show you how to work with the resources that are at your disposal in the most effective and efficient manner. We will teach you the most appropriate, practical snakebite treatment techniques for your service delivery environments, and we are going to build up your knowledge base and ability to make the most of the resources that you already have. By addressing issues concerning the timeliness and use of safe, efficacious first aid treatments, the assessment, diagnosis and treatment of patients, and the care and support of patients with respiratory distress, we will try to help you learn to make the most of your resources in order to improve the prognosis for snakebite patients.

At the completion of this course we hope that you will return to your communities with the skills and knowledge to approach the treatment of snakebite with new confidence. We also hope to stimulate, in all of you, an interest in teaching what you have learned to your colleagues and staff, and in proactively helping your communities to learn proper snakebite first aid techniques as a way of improving their chances of survival even further.

Finally, we would like to see some of you take an active interest in snakebite research, and to perhaps, one day, be able to replace us as the instructors of this course.