

## Plenary Speaker – 03

### **Snakebite as a global problem; challenges and solutions; an Asia-Pacific perspective**

Julian White AM

Toxins, by definition produced by living organisms, cause a significant global disease burden. Within the array of toxin-induced-diseases (TIDs), an important group is those TIDs caused by venomous animals, of which the most important subgroup is venomous snakebite. Snakebite has been recently recognised by the World Health Organisation as a Neglected Tropical Disease (NTD), given priority “A” status, requiring all signatory countries to prioritise snakebite within their health systems. Given snakebite causes more deaths than all other NTDs combined, yet has long been ignored, this new WHO NTD status is a long overdue positive change. Snakebite is estimated to injure up to 5 million people annually, causing around 400,000 amputations and >100,000 deaths. This disease burden is greatest in Asia, particularly South Asia and SE Asia. In India alone >45,000 people die from snakebite each year, far more than the “official” government statistics. The true burden is only revealed when quality community surveys are conducted, as many victims never interact with the government health systems from which much past epidemiologic data has been obtained. The new WHO NTD status of snakebite offers a potential window of opportunity to develop and implement effective solutions, but there are challenges to be met. Epidemiologic data is incomplete or vestigial throughout much of the Asia-Pacific region and without quality relevant data, planning solutions is problematic. Prevention of snakebite is the most important public health response, yet this also faces major challenges, not just in resourcing, but in overcoming community attitudes.

Strengthening health systems to adequately manage snakebite patients will require substantial resourcing which may only occur if health bureaucrats and politicians are convinced of the importance of the problem. Three principle areas of need are ensuring availability of affordable, safe and effective antivenoms (AVs) for snake species of relevance for each nation, developing and maintaining effective AV distribution systems so that AV is available where needed, particularly at point of first contact with the health system, and lastly, but arguably most important, developing and maintaining system-wide targeted training and information resource systems to ensure all health professionals likely to have contact with snakebite patients, have adequate skills and confidence to provide optimal treatment. An example of how such a holistic approach can be developed and applied is the Myanmar Snakebite Project, an Australian Government funded foreign aid project that is delivering across the range of challenges posed by snakebite.