

SURNAME		URN	
GIVEN NAME		DOB	GENDER
ADDRESS			
SUBURB		TELEPHONE	
POSTCODE			

### EMERGENCY DEPARTMENT

#### Snake bite envenomation clinical pathway

Date: \_\_\_/\_\_\_/\_\_\_

Time of snake bite: \_\_\_:\_\_\_

This clinical pathway only applies to Victorian community-acquired snake bites in patients who are not snake handlers. Specific advice regarding bites in snake handlers and from exotic snakes should be obtained from a clinical toxicologist. Victorian Poisons Information Centre (VPIC): 13 11 26

Emergency department – Snake bite envenomation clinical pathway

IMMEDIATE MANAGEMENT	<b>Apply pressure bandage, immobilise limb and immobilise the person</b>	
	<ul style="list-style-type: none"> <li>Use a broad 10–15 cm elasticised bandage.</li> <li>Apply the bandage to cover the whole limb. Start the bandage distally (toes/fingers) and continue up the limb to include the bite site, as high as possible. The bandage should be fitted as firm as if bandaging a sprained ankle.</li> <li>Immobilisation of the limb (e.g. splint) and immobilisation of the patient (e.g. bed rest) is essential.</li> </ul> <p>Time pressure bandage applied: ___:___</p>	
EARLY DECISION MAKING	<b>Discuss with a clinical toxicologist (VPIC 13 11 26)</b>	
	<p>There are a number of relative indications for antivenom that require expert interpretation. Early discussion with a clinical toxicologist is <b>strongly recommended</b> in the following instances to determine if antivenom is required:</p> <ul style="list-style-type: none"> <li>any patient with significant symptoms (especially headache, vomiting or early collapse) or any patient who appears systemically unwell</li> <li>any abnormality of INR, APTT, fibrinogen, D-dimer, full blood count (leukocytosis) or CK &gt;1000 IU/L.</li> </ul>	
	<b>Indications for antivenom: seek advice from a clinical toxicologist (VPIC 13 11 26)</b>	
	<ul style="list-style-type: none"> <li>History of unconsciousness, collapse, convulsions or cardiac arrest (concurrent with usual emergency care)</li> <li>Neurotoxic paralysis (e.g. ptosis, ophthalmoplegia, limb weakness, respiratory effects).</li> <li>Coagulopathy (e.g. unclottable blood, INR &gt;1.3, prolonged bleeding from wounds and venepunctures).</li> </ul>	
ACUTE MANAGEMENT	<b>Choice of antivenom: seek advice from a clinical toxicologist (VPIC 13 11 26)</b>	
	<p><b>If there is a delay in contacting a clinical toxicologist and there is clear indication for antivenom, administer one vial of tiger snake antivenom <u>and</u> one vial of brown snake antivenom.</b></p> <p>All cases of envenomation should be discussed with a toxicologist to guide treatment and appropriate disposition.</p>	
	<b>Prepare to manage allergic reactions or anaphylaxis</b>	
	<ul style="list-style-type: none"> <li>Critical care area with monitoring (e.g. resuscitation bay/monitored bed).</li> <li>IV line in situ (two (2) IV access sites if possible).</li> <li>IV fluids prepared, primed and available for immediate infusion.</li> <li>Adrenaline prepared and available for immediate administration.</li> </ul>	
	<b>Preparation and administration of antivenom</b>	
	<ul style="list-style-type: none"> <li>Dilute in 100–500 mL of sodium chloride 0.9% (one vial of tiger snake antivenom <u>and</u> one vial of brown snake antivenom can be administered in the same 100–500 mL sodium chloride 0.9% infusion). Consider weight, aim for volume of 100ml for paediatric patients.</li> <li>Administer over 15–30 minutes.</li> <li>Release pressure bandage and immobilisation <b>after</b> antivenom has been fully administered.</li> <li>If requiring further management advice, contact the toxicologist (13 11 26).</li> <li><b>Time of antivenom administration: ___:___</b></li> </ul>	

## EMERGENCY DEPARTMENT

### Snake bite envenomation clinical pathway

SURNAME		URN	
GIVEN NAME		DOB	GENDER
ADDRESS			
SUBURB		TELEPHONE	
POSTCODE			

Emergency department – Snake bite envenomation clinical pathway

<b>ONGOING CARE</b>	<b>Monitor progress: seek advice from a clinical toxicologist (VPIC 13 11 26)</b>	
	Monitor, investigate for, and treat complications such as occult bleeding, electrolyte abnormality (e.g. hyperkalaemia, signs of renal impairment).	
	<b>6 hours post antivenom:</b> INR, APTT, fibrinogen, D-dimer, UEC, CK, FBE and film. If not improving/unsure, seek advice from a clinical toxicologist (VPIC 13 11 26).	
	<b>12 hours post antivenom:</b> INR, APTT, fibrinogen, D-dimer, UEC, CK and FBE. If not improving/unsure, seek advice from a clinical toxicologist (VPIC 13 11 26).	
	<b>Note:</b> Coagulopathy may not begin to improve until about 12 hours. Persistent coagulopathy is not an indication for additional antivenom. Seek advice if concerned.  Use of blood products (e.g. fresh frozen plasma) may be considered in an actively bleeding patient but should be discussed with a clinical toxicologist (VPIC 13 11 26).  12-hourly bloods thereafter until consistently improving: INR, APTT, fibrinogen, D-dimer, UEC, CK and FBE.	

<b>ADMISSION</b>	<b>Location</b>	<b>List criteria</b>
	ED observation unit	
	Ward	
	ICU/HDU	
	Transfer	

<b>DISCHARGE</b>	<b>Criteria for discharge during daytime (do not discharge at night): seek advice from a clinical toxicologist (VPIC 13 11 26)</b>	
	<b>Uncomplicated myotoxicity and mild neurotoxicity</b>	
	<ul style="list-style-type: none"> <li>Clinical features resolving.</li> <li>Blood tests normalising.</li> <li>It is at least 12 hours post antivenom.</li> </ul>	
	<b>Venom-induced consumptive coagulopathy</b> - Patients who have had systemic envenoming or received antivenom should only be discharged once their envenoming syndrome has resolved, based on:	
	<ul style="list-style-type: none"> <li>resolution of systemic symptoms, including neuromuscular paralysis</li> <li>no evidence of thrombotic microangiopathy and kidney injury</li> <li>a normal international normalised ratio (INR)</li> </ul> decreasing serum creatine kinase concentration	
	<b>Other (patient specific) criteria precluding discharge (list):</b>	
<b>Discharge advice</b>		
Explanation of the risk of serum sickness (~30%) characterised by flu-like symptoms, fever, myalgia, arthralgia and rash developing 4–14 days post antivenom.		
Letter to GP including advice regarding recognition and treatment of serum sickness.		

Pathway completed by:

<b>Name:</b>	<b>Sign:</b>	<b>Designation:</b>
<b>Date:</b>	<b>Time:</b>	