Check for Signs of Envenomation
- Swelling, tenderness, redness, ecchymosis, or blebs at the bite site, or
- Elevated prototype; decreased fibrinogen or platelets, or
- Systemic signs, such as hypotension, bleeding beyond the puncture site, refractory vomiting, diarrhea, angioedema, neurotoxicity

Check for Progression of Clinical Effects
- Swelling that is more than minimal and that is progressing, or
- Elevated prototype; decreased fibrinogen or platelets, or
- Any systemic signs

Admister CroFab®
- Establish IV access and give IV fluids
- Pediatric CroFab® dose = adult dose
- Mix 4-6 vials of CroFab® in 250 mL NS and infuse IV over 1 hour – The starting dose may vary from a minimum of 4 units to a maximum of 12 units based on clinical judgment and severity of envenomation.
- For patients in shock or with serious active bleeding, increase initial dose of antivenom to 8-12 vials and call physician-expert (see Box 12)
- Proceed slowly over the first 10 minutes – A rate of 25-50 mL/hr
- Carefully observe for any allergic reactions - No allergic reaction: increase to 250 mL/hr until completion
- Initiate first dose of CroFab® in ED or ICU
- For suspected adverse reaction: hold infusion, treat accordingly, and call physician-expert
- Re-examine patient for treatment response within 1 hour of completion of CroFab® infusion

Determine if Initial Control of Envenomation has Been Achieved
- No progression of any venom effect during the specified observation period
- No unfavorable laboratory trends in protime, fibrinogen, or platelets

Monitor Patient
- Perform serial examinations
- Maintenance CroFab® therapy may be indicated
- Read Box 13 (Maintenance CroFab® Therapy)
- Observe patient 18-24 hours after initial control for progression of any venom effect
- Follow-up labs 6-12 hours after initial control and prior to discharge
- If patient develops new or worsening signs of envenomation, administer additional doses of CroFab® per Box 4

Determine if Patient Meets Discharge Criteria
- No progression of any venom effect during the specified observation period
- No unfavorable laboratory trends in protime, fibrinogen, or platelets

See Post-Discharge Planning (Box 14)

When to Call a Physician-Expert
Direct consultation with a physician-expert is recommended in certain high-risk clinical situations:
- Life-threatening envenomation
- Shock
- Serious active bleeding
- Facial or airway swelling
- Hard-to-control envenomation
- Patients who require more than 2 doses of CroFab® for initial control
- Recurrence or delayed onset of venom effects
- Worsening swelling or abnormal labs (protime, fibrinogen, platelets, or hemoglobin) on follow-up visits
- Allergic reactions to CroFab®
- If transfusion is considered
- Uncommon clinical situations
- Bites to the head and neck
- Suspected compartment syndrome
- Rhododendron
- Venom-induced reduced blood pressure
- Complicated wound issues
- If no local expert is available, a physician-expert can be reached through a certified poison center (1-800-222-1222) or the BTG Specialty Solutions Center® (1-844-293-0007)

Maintenance CroFab® Therapy
- Maintenance therapy is additional CroFab® given: after initial control to prevent recurrence of limb swelling
- Maintenance therapy is 2 vials of CroFab® (Box 3 given on 12, and 18 hours after initial control)
- Maintenance therapy may not be indicated in certain situations, such as:
  - Non-venom envenomation
  - Facilities where close observation by a physician-expert is available
- Follow local protocol or contact a regional poison center or physician-expert for advice

Post-Discharge Planning
- Instruct patient to return for:
  - Worsening swelling that is not relieved by elevation
  - Abnormal bleeding (gums, easy bruising, melena, etc.)
- Instruct patient where to seek care if symptoms of serum sickness (fever, rash, muscle/joint pains) develop
- Bleeding precautions (no contact sports, elective surgery, or dental work, etc) for 2 weeks in patients with:
  - Rattlesnake envenomation
  - Abnormal protime, fibrinogen, or platelets at any time
- Follow-up visits:
  - CroFab® not given: PRN only
  - CroFab® given:
    - Copperhead victims: PRN only
    - Other snakes: follow up with labs (protime, fibrinogen, platelets, hemoglobin) twice (2-3 days and 5-7 days), then PRN

Treatments Not Proven to Be Beneficial in the Management of Pit Viper Envenomation
- Cutting and/or suctioning of the wound
- Ice
- NSAIDs
- Prophylactic antibiotics
- Prophylactic fasciotomy
- Routine use of blood products
- Shock therapy (electrolytes)
- Steroids (except for allergic phenomena)
- Tourettes

Notes
- This worksheet is adapted from general advice from a panel of US snakebite experts consulted in May 2010. No algorithm can anticipate all clinical situations. Other valid approaches exist, and developments from this worksheet based on individual patient needs, local resources, local treatment guidelines, and patient preferences are expected. This document is not intended to represent a standard of care. For more information, please see the accompanying manuscript, available at www.biomedcentral.com

BTG Specialty Solutions Center® is a trademark of BTG International Ltd. Copyright © 2019 BTG International Inc. All rights reserved. BTG International Ltd. is a subsidiary of BTG PLC, a public limited company registered in England and Wales. BTG PLC is a subsidiary of BTG International Ltd. This document is not intended to represent a standard of care. For more information, please see the accompanying manuscript, available at www.biomedcentral.com

© 2019 BTG International Inc. All rights reserved. BTG International Ltd. is a subsidiary of BTG PLC, a public limited company registered in England and Wales. BTG PLC is a subsidiary of BTG International Ltd. This document is not intended to represent a standard of care. For more information, please see the accompanying manuscript, available at www.biomedcentral.com