Getting Started

Thank you for agreeing to contribute to ACEP’s Critical Decisions in Emergency Medicine (CDEM). Please review these guidelines before you begin writing.

The checklist below gives a concise overview of submission requirements. Please ensure that you have included each component.

The lessons published in CDEM are based on the latest medical literature and are designed to:

• address topics and issues that are “leading edge”
• provide clinical updates on common problems in emergency medicine
• serve as practical guides for integrating techniques, technologies, medications, products, or clinical methods into the daily practice of emergency medicine.

Submission Requirements
1. The lesson should be about 25 to 30 typewritten 8½ x 11 pages (double spaced) using any standard typeface (11-point type). Documents should be created in Microsoft Word or a compatible program.

2. The following elements should be submitted as one document, in this order:
   - Title Page (including author affiliations and contact information)
   - Front Page “Teaser”
   - Lesson Objectives
   - Critical Decisions
   - Introduction
   - Case Presentation(s)
   - Body of the Lesson
   - Case Resolution(s)
   - Summary of Lesson
   - Pearls and Pitfalls
   - References
   - Additional Readings (optional)
   - 12 CME Questions with Answer Key and Explanations
   - Figures and Tables (optional)
   - Copy of Reprint Permissions (if applicable)

3. Please e-mail your electronic file to Rachel Donihoo, managing editor, rdonihoo@acep.org.

Lesson Components
Title Page
The title page of the lesson must include:

• title of manuscript
• date (be sure to change this on any subsequent revisions)
• full name(s) of all contributors and their pertinent titles and affiliations
• mailing address, telephone number(s), and e-mail address of all authors

Front Page “Teaser”
This short paragraph will appear on the cover of Critical Decisions and should tell, very briefly, why an emergency physician should read your article. This must be accomplished in two or three sentences—about 50 words. You may wish to write the lengthier “Introduction” (see below) first, and then pull out the most important elements for this section.

EXAMPLES — Front Page “Teaser”

Radiocontrast Reactions
The use of contrast-mediated computed tomography enables quicker and more accurate identification of injury and illness. However, as its use increases, so, too, do the instances of adverse effects such as allergy and contrast-induced nephropathy. Emergency physicians must be able to identify patients at risk for these adverse reactions and understand how to minimize them.

Snakebites
Venomous snakebites can cause systemic abnormalities, tissue destruction, and even death. Preventing these effects requires differentiation between a venomous bite and a nonvenomous bite, rapid recognition and aggressive treatment, and prompt initiation of antivenin.

Objectives
Each lesson should include between 4 and 6 behavioral objectives. Each objective should be supported by the lesson content and identify what the reader should be able to do as a result of reading your lesson.
Each objective should be clear and begin with a verb that indicates a measurable behavior, such as “identify,” “state,” “describe,” and “demonstrate.” Verbs like “understand,” “know,” and “learn” are too general and are not measurable.

**EXAMPLE — Objectives**

**On completion of this lesson, you should be able to:**
1. Describe the venomous snakes indigenous to the U.S.
2. Explain the difference between a dry snake bite and an envenomation.
3. Discuss the local and systemic effects of snake venom.
4. Describe the optimal treatment for a snake envenomation.
5. List treatment resources for snake envenomations available in your community.

**Critical Decisions**

Provide a list of 5 to 8 critical decisions. A critical decision is a treatment/management question that the emergency physician faces or should consider when presented with a similar situation or clinical problem. The unique quality of our publication hinges on this element.

What are the active decisions you must make when evaluating or treating the patient?

Each critical decision should be:
• stated in the form of a question
• repeated in the body of the lesson preceding the text that addresses/answers the question. (See “Body of Lesson” below for an example.)

**EXAMPLE — Critical Decisions**

• How should a venomous snakebite be assessed in the emergency department?
• When should antivenin be given to treat a pit viper bite?
• What are the potential complications of FabAV administration?
• Is antivenin safe for use in children and pregnant women?
• What features of an envenomation suggest a coral snake or nonnative snake envenomation?
• What is the disposition for patients with snakebites?

**Introduction**

Each lesson begins with an introduction that sets the stage for the content to come. It may introduce:
• the “problem” or clinical need that the lesson is intended to address
• why the practicing emergency physician should consider adopting the new information/modality/technology, etc. into practice

**EXAMPLE — Introduction**

Snakes have long been feared and their bites sensationalized as deadly. Although remedies for snakebites have been recorded in the texts of several ancient civilizations, it has only been in the past century with the development of antivenins that the treatment has progressed beyond those ancient remedies. In reality, snakebites are not very common, nor are they very deadly. In the United States, it is estimated that 45,000 snakebites occur each year of which 8,000 are from venomous snakes.\(^1\) In the past decade, fewer than 10 deaths per year have been attributed to snake envenomations. Worldwide there are an estimated 4.5 to 5 million snakebites each year, causing 125,000 deaths.\(^2\) Of the 120 known indigenous snake species in North America, about 20 are venomous to humans. Although venomous snakebites are not common, they can inflict significant tissue damage to extremities and cause systemic abnormalities. Emergency physicians can effectively reduce the dangers of venomous snakebites with rapid recognition and treatment of any suspicious-appearing bite.

**Case Presentations (maximum: 3 cases)**

The case presentations, which follow the introduction, present the reader with a clinical situation related to the content of the lesson. The case or cases should heighten the readers’ attention and serve as a springboard for the text to follow.

The cases should be brief (maximum of 1 page), relevant, and leave the reader with an “unresolved” situation. (The case resolution appears later in the lesson.)

For style consistency (ACEP uses the *AMA Manual of Style*), we ask that you:
• use mL instead of cc
• use ECG instead of EKG
• list vital signs in this order: blood pressure, pulse rate, respiratory rate, and temperature
• provide temperature in Celsius (°C) and Fahrenheit (°F)
• always spell out emergency department, emergency physician, examination, and laboratory
• use generic names rather than brand names for drugs and equipment

**EXAMPLE — Case Presentation**

An Arizona hospital is notified that a helicopter transporting a man in critical condition with a snakebite is on route from a nearby national park. The patient had been hiking with friends when he was bitten on the thigh by a large greenish-brown snake with a triangular head. The group was 1 hour from the trailhead, so they wrapped and immobilized the leg and waited for EMS. When EMS arrived, the patient was awake and oriented but was complaining of nausea, a metallic taste in his mouth, and peri-oral anesthesia. Swelling and erythema of the limb had progressed 10 cm from the original site of the bite.

The emergency physician prepares the trauma bay, crash cart, and airway cart and calls the hospital pharmacist and instructs her to begin preparation of the Crotalidae polyvalent immune Fab (ovine) (FabAV). When the patient arrives, he
is ill appearing. An assessment of his ABCs reveals that he is hypotensive with thready pulses. Intravenous fluids are started, and blood is drawn for a CBC, coagulation profiles, and chemistries. The trauma survey reveals no injuries except for two puncture wounds 3 cm apart on his right thigh. More noticeable is the progression of the surrounding edema and inflammation, which now extend up to the groin and down to mid-calf.

**Body of Lesson**

The body of the lesson contains the information on the lesson topic. It typically includes reminders of pertinent pathophysiology and discussion of the clinical pros and cons, indications and contraindications, and advantages and disadvantages in the assessment and management of various entities and, if appropriate, the politics to be anticipated by changing policies in the emergency department or introducing a new technology, treatment modality, medication, or product.

Headings (in **bold** and subheadings (in *italic*) should be used to differentiate among the sections within the body of the lesson.

**EXAMPLE — Critical Decision Repeated in the Body of the Lesson**

**Critical Decision**

How should a venomous snakebite be assessed in the emergency department?

Airway, breathing, and circulation should be evaluated in all patients, and a full set of vital signs should be recorded.

Then a detailed history should be elicited, including time of the bite, how the bite occurred, and a comprehensive description of the snake. The presence of fangs, pits, or a rattle, the coloring, and the size of the animal can help guide treatment. It has been suggested that larger snakes deliver more venom with each strike.9 The patient should be asked about any systemic symptoms (nausea, difficulty breathing, weakness, vision changes, etc.) and also about any local symptoms from the bite such as pain, swelling, and paresthesias. The area of the bite should be closely examined for fangs marks, edema, erythema, ecchymosis, and teeth or debris left in the wound. Some authors have recommended gently squeezing the bite to express blood as an indication that the bite penetrated the dermis.10 At this time, an outline of the bite, how the bite occurred, and a comprehensive description of the snake should be provided. Local wound care should be initiated. Intravenous fluids should be infused, and medications for symptom relief may be given. Other treatment considerations are based on the severity of the envenomation and whether the patient will need antivenin.

**Case Resolutions**

The case resolution describes the management of the clinical situation introduced earlier in the case presentation, reinforcing precepts presented in the lesson.

**EXAMPLE — Case Resolution**

In the case of the Arizona hiker brought to the emergency department by EMS, the emergency physician thought it likely that the patient had been bitten by either a large Western diamondback rattlesnake or a large Mojave rattlesnake. Six vials of FabAV were infused immediately, and the patient was watched closely for any signs of improvement. Instead, the patient appeared to be deteriorating and became short of breath and reported increasing pain in the extremity. On reexamination, he had significant wheezing and use of accessory muscles. No oropharyngeal swelling or rash was appreciated. His systolic blood pressure remained in the 90s. Because of the respiratory findings, the patient was given diphenhydramine, 50 mg IV, and epinephrine, 0.3 mg SQ, and the FabAV infusion was stopped for 15 minutes. He responded to both treatments, and the FabAV infusion was restarted at a slower infusion rate. Over the next hour, his airway remained tenuous, so he was electively intubated and admitted to the ICU.

In the ICU, the patient had decreasing platelets, fibrinogen, and clotting factors on laboratory evaluation, and the local effects of the venom were still progressing. He received a second infusion of 6 vials of FabAV. The thigh continued to swell despite the first two infusions of FabAV. Compartment pressures in the leg were measured and were found to be only mildly elevated. Additional vials of FabAV were infused. The local symptoms improved on day 3 of his ICU stay, and over the course of the next few days the coagulopathy also improved. He was discharged into the care of his family after 10 days in the hospital.

**Summary of Lesson**

The summary should provide the reader with a synthesis of the information contained in the lesson. Reference to the lesson’s objectives may be helpful because the objectives identify the content that is important for the reader to know.

**EXAMPLE — Summary of Lesson**

Venomous snakebites, although relatively uncommon, require rapid recognition and aggressive treatment in the emergency department. All patients need frequent reassessment for progression of the venomous effects. Pit vipers account for 99% of venomous snake bites, and coral snakes and nonnative snakes account for the remaining 1%.
Antivenin is the mainstay of treatment and should be given to all but the mildest envenomations. FabAV for pit viper envenomations is safe and effective for adults and children. The local poison control center is a valuable resource and can help to guide therapy.

**Pearls and Pitfalls**

These should refer specifically to the objectives and critical decisions (3 or 4 pearls and 3 or 4 pitfalls). They are brief, specific, cutting-edge tips consisting of special information that you would share with colleagues who already know the basics; they should reinforce the new information or important facts presented in the lesson.

**EXAMPLE — Pearls**

- If a patient is showing local signs of envenomation, unless there is specific information to the contrary, it is prudent to assume a pit viper (Crotalid) envenomation; 99% of venomous snakebites in the United States are from pit vipers.
- Mark the leading edge of edema and erythema to track the progression of the envenomation.
- Start the FabAV infusion at a slower rate and monitor for acute hypersensitivity reactions. Have diphenhydramine and epinephrine readily available at the bedside.

**EXAMPLE — Pitfalls**

- Handling a “dead” snake that the patient brought in for identification — the snake might not be dead and could bite someone else.
- Assuming a snake envenomation is mild because the patient showed minimal symptoms on presentation.
- Underdosing a child with a venomous snakebite because of weight-based dosing; experts recommend standard adult dosing for children with snake envenomations.

**References (annotated)**

Reference citations in the lesson should be checked carefully for accuracy through each draft and limited to 25. For annotations, include in parentheses a brief sentence describing the specific reason why the reference was included.

*NOTE: Please do not use automatically formatted footnote programs such as Endnotes (they do not translate into our publishing software).*

**Additional Readings (optional)**

Annotated additional readings (maximum of 5), listed alphabetically, may be included after the references.

**CME Questions**

- Each multiple choice question should be followed by four plausible foils, which should be alphabetized, disregarding “a,” “an,” and “the.” Foils such as “all of the above” and “none of the above” are not appropriate. There should be one (and only one) clear, correct answer.
- Questions should be framed to focus positively, rather than negatively, on key information. Do not use constructions such as “All of the following are correct except:” or “Which of the following is not an appropriate treatment.”
- Every question should test the behavior described in one or more of the lesson objectives.

**EXAMPLE — CME Questions**

1. Which of the following is the primary strategy for preventing hantavirus infection and hantavirus pulmonary syndrome?
   A. Immunization
   B. Prophylactic medication
   C. Respiratory protection
   D. Rodent control

   The correct answer is:
   D. Rodent control

   **Why is this the correct answer?**
   The Sin Nombre virus, a strain of hantavirus that causes hantavirus pulmonary syndrome (HPS), was first discovered in the southwestern United States in 1993. The most common host of this rodent-borne RNA virus is the deer mouse, but other kinds of mice and rats are known to spread disease. Humans typically contract the pathogen by breathing aerosolized particles of rodent urine and feces, often while cleaning. Rodent control is the primary strategy for disease prevention. In places where carrier rodents are known to live, traps should be placed, holes or gaps should be sealed, and precautions should be taken when cleaning infested areas.

   **Why are the other choices wrong?**
   A. There currently is no vaccination to prevent the Sin Nombre virus.
   B. Ribavirin has been shown to decrease mortality in patients with hantavirus infections that cause hemorrhagic fever with renal syndrome; however, the drug has no proven benefit in the treatment of hantavirus pulmonary syndrome HPS. No formal recommendation currently exists regarding the use of ribavirin or other antiviral medications for prophylaxis or early cases of HPS; further investigation is required to determine the potential role of these agents.
   C. While respiratory protection potentially could prevent exposure to airborne urine and feces particles, this prophylaxis is impractical in daily life. Primary rodent control is preferred.

   *NOTE: Please remember to include brief explanations for ALL answer choices, and clearly mark the correct answer for each question.*
Optional Lesson Components

Anything that will make your lesson more interesting or graphically represent important content is encouraged.

Figures or Tables

- Figures and tables should be used 1) to enhance the visual interest of the lesson, 2) to summarize or condense important points, and 3) to concisely represent relationships. Because these elements are separated separately from the text of your lesson, please do not embed tables or figures into the text. Place each one at the end of the lesson, on a separate page. Be sure to cite the tables or figures in the text and number them sequentially. Provide a succinct caption for each.
- You must obtain permission to reprint any copyrighted material. Obtaining reprint permission and paying any copyright fees required is your responsibility unless preapproved by ACEP. Copies of the written permission should accompany your lesson. Most publishers offer online options for requesting reprint rights. Please email the CDEM editorial staff at cdem@acep.org for assistance.

Original Artwork (photos, radiographs, ECGs, etc.)

- Artwork is at your expense unless preapproved by ACEP.
- Digital images suitable for high-quality commercial printing are preferred. File formats accepted are: TIFF, EPS, and PDF (Photoshop PSD and Illustrator AI are preferred with all fonts converted to outlines).
- PowerPoint files, images copied from the Internet, images from an ink-jet printer, and images imbedded in a Word document are not acceptable. Check with the managing editor if you have questions about the suitability of an image.
- Digital image resolution should be at least 300 dpi.
- If there are recognizable individuals in the images, it is your responsibility to obtain a release from those individuals.

Reference Format

- References should be cited in the text by consecutively numbered superscripts. The reference numbers should be typed as superscript numbers — not in parentheses — at the end of the appropriate sentence within the text.
- References listed at the end of the lesson should be numbered according to the sequence in which they are cited in the text.
- The reference list should include readily accessible publications (Index Medicus retrievable). Please include all the information as described in the examples.

NOTE: If you have reference format questions not covered above, please refer to the American Medical Association Manual of Style.

EXAMPLE — References

- Journal and Magazine
  — Author(s) Last Name and Initials. Article title. Name of Journal in Italic. Year of publication;Volume(Issue number if journal is not consecutively numbered within a volume);Page numbers. (Sentence about article.)

- Book
  — Author(s) Last Name and Initials. Book Title in Italic. City and state in which publisher is located: Publisher; Year of publication. (Sentence about book.)
  — Polsky S. Continuous Quality Improvement in EMS. Dallas, Tex: American College of Emergency Physicians; 1992. (A complete “how-to” guide for designing and implementing a CQI program for EMS.)

- Book Chapter
  — Chapter Author(s) Last Name and Initials. Chapter title. In: Editor(s) Last Name and Initials, ed(s). Title of Book in Italic. City and state in which publisher is located: Publisher; Year of publication:Page numbers. (Sentence about book chapter.)

- Newsletter References
  — Author(s) Last Name and Initials. Title of article. Newsletter Name in Italic[online text]. Year;Volume (Number, if applicable);Page numbers. (Sentence about the newsletter article.)
  — Bonds RG. Some inside information on recruiting physicians. Mod Healthcare. 1992;3:54-56. (Specific tips on how to effectively recruit physicians, directed at hospital administrators.)

- Websites
  — Author(s) Last Name and Initials. Article title. Name of Journal in Italic[online text]. Year of publication or revision, if known. Available at: url. Accessed Month, day, year.

Thank you in advance for your hard work and contribution to emergency medicine education!

QUESTIONS? Contact Rachel Donihoo, managing editor, rdonihoo@acep.org or call 469-499-0291.