Strategies for Teaching in the Emergency Department

Introduction
Teaching in the Emergency Department (ED) is inherently challenging. The Emergency physician teacher must balance the need to provide safe and timely care for multiple patients, many of whom are critically ill and have complex presentations, with the students’ learning needs. The chaotic and unpredictable environment makes it difficult to use traditional methods of teaching such as those used in inpatient wards and ambulatory care clinics, where patients usually have a known diagnosis and predictable physical exam findings, and patient encounters can be scheduled. EDs are increasingly overcrowded, and the pressure to move patients through the department quickly can make it difficult to find time to teach. Adding to the challenge, few Emergency physicians are trained as teachers, and teaching is generally remunerated at a much lower level than clinical work, or not at all. This article will review various strategies to facilitate teaching given the unique challenges of the ED.

Teaching in an Unpredictable Environment
Despite its chaotic nature, the unique environment of the ED provides several advantages for teaching. Bedside teaching in the ED allows for practice and instruction in history-taking, physical exam skills and physical findings, procedural skills, communication techniques and clinical decision-making, as well as modeling of professional behaviours and conflict resolution. There is a wide variety of both medical and surgical pathology, and untreated acutely ill patients will often exhibit more abnormal physical exam findings than admitted patients who have been stabilized. Evaluating the undifferentiated ED patient allows students to develop their diagnostic skills and management approaches.

The following are some strategies for teaching in the unpredictable environment of the ED.
1. Plan Ahead: Teachers can prepare for teaching shifts by reviewing key learning points related to common ED presentations. This can include approaches to frequently encountered presenting complaints (eg. chest pain, dizziness), physical exam techniques and findings,
appropriate investigations and practical management strategies. Any one of these key learning points could be reviewed during the course of the patient evaluation in order to provide focused and time-efficient bedside instruction, no matter what comes in the door. The teaching point should be brief; it should not include everything the teacher knows about the subject.¹

2. Get to know the student and plan the shift together: Students will have different learning goals based on their level of training, previous experience and special interests. A short introductory conversation at the beginning of the shift allows the teacher to target these specific areas in order to maximize the benefit to the student and minimize the amount of time spent on areas in which the student already feels proficient.¹² Decide together whether the shift will have a particular emphasis, such as treatment plans or procedures.² Communicate your expectations and evaluation criteria. Tell the students how you want them to present their cases and give some guidelines to make their presentations more concise.

3. Use opportunities for observational learning: Acutely ill patients present a valuable learning opportunity for students, even if the student must assume an observational role during the initial resuscitation. ED teachers can plan for resuscitations ahead of time by generating a short list of pertinent teaching points that can be emphasized during any case, such as airway management or rhythm analysis.¹ Once the patient is stabilized, these points can be reinforced and reviewed with the learner. Management of stressful situations also provides an opportunity for role-modeling of professional conduct and effective communication. Students can benefit from direct observation of common ED procedures such as lumbar puncture or insertion of chest tubes. Preparing a mental list of teaching points associated with these procedures will allow for time-efficient teaching during the performance of the procedure.

4. Focus on interpretation of diagnostic tests: Students value opportunities to learn the interpretation of diagnostic tests such as X-rays and ECGs.³ Opportunities to review diagnostic tests are abundant in the ED. Emphasizing a general approach to evaluating a test or highlighting abnormalities that might be expected in a certain clinical scenario can be accomplished during a relatively brief teaching interaction.

5. Make use of down time: Unpredictability in patient volumes can also mean slow times in the department when there are no patients for the learner to see. This is most likely to occur in the
middle of the night, when the teacher is most fatigued. This is a good time to go over basic skills that the Emergency physician is most familiar with. For example, taking the student through the resuscitation area and giving hands-on instruction with equipment such as a bag-valve mask, Broselow tape, defibrillator, or intraosseous drill has significant educational benefit for the student, and is not taxing for the teacher.

6. Teach-only shifts: If possible within the constraints of staffing the ED, having a bedside teacher who is not directly responsible for patient care has been shown to provide superior education value when compared to traditional case presentation methods.⁴

**Teaching with Time Constraints**

The ED provides an ideal environment for direct observation and evaluation of learners. Unfortunately, direct observation of students in the ED is rarely done due to perceived or actual time constraints, as well as reluctance on the part of teachers to use this approach due to concerns about student discomfort and stress. In one study of EM programs, half of the residents recalled fewer than 3 observed histories or physical examinations during their entire training.⁵ Despite its low use, studies have shown that learners regard direct observation “as an important aspect of high-quality clinical teaching,”³ and residents report that “such sessions were valuable to their education, that areas requiring improvement were appropriately identified, and that the presence of faculty evaluators was not overly intimidating.”⁴ There are also advantages for patients. Bedside teaching increases the duration of the clinical encounter and has a positive effect on the patient-physician relationship. Teaching can serve a dual purpose, as the patient is educated along with the learner. This is an important secondary outcome in an age when patients get much of their medical information from the media and the Internet¹.

Here are some strategies for dealing with the time pressures of the ED while teaching:

1. Set a time limit for the bedside encounter: Give the student specific instructions and a time limit to complete the task. For example, ask the student to do a focused abdominal exam to evaluate for right lower quadrant pain and set a limit of 90 seconds to complete it. Another example would be to instruct the student to take a relevant chest pain history and impose a 5
minute time limit. These are realistic goals for a busy emergency department, and will help the student to focus on those elements that are relevant to the chief complaint, rather than performing a rote, “OSCE”-style comprehensive assessment. Direct observation of the student over these short time segments will allow for more valuable feedback than the traditional approach of reviewing the patient with the student at the nursing station after they have been given a nebulous assignment to “go see the patient and tell me what you think.”

2. Focus on a single question: Before hearing the student present a case, ask them “What question do you need answered to better understand this case?” For example, after seeing a diabetic patient with a dental infection, a student may be thinking about infectious complications such as endocarditis, or about the availability of dental services for low-income patients. Focusing on just one aspect of the patient’s care will help to clarify teaching opportunities as the student then presents the case. This approach is less time-consuming than trying to address all the issues that may arise in the care of a complex patient, and allows for more in-depth discussion of a single issue.

3. Let the team do some teaching: Encourage the student to do procedures or tasks that would otherwise be done by a nurse or technician, such as inserting a urinary catheter, drawing blood, putting on a cast, or giving a tetanus immunization. Nurses and technicians are proficient in these skills that they use daily, and they are often excellent teachers. Encourage the student to accompany a specialist colleague to the endoscopy suite or to observe bedside echocardiography. Include the student in discussions of interesting cases they may not be directly involved in, especially if specialist colleagues are present to provide their expertise.

4. The One-Minute Preceptor model: This is a 5-step structured framework for teaching in the office or ED. This approach incorporates immediate feedback. After the student has presented a case:

I. Get a commitment: Rather than discussing differential diagnoses or multiple treatment options, get them to commit to a plan by asking a question such as “What do you think is going on with this patient?” or “What would your treatment plan be?”

II. Probe for supporting evidence: Explore the student’s thought process. Questions such as “Were there any other alternatives you considered?” or “How did you rule out condition
“X?” are more helpful than rote recitation, such as “What is the differential diagnosis for central chest pain?”

III. Teach a general rule: Find a teaching point that can be applied to other situations.

IV. Reinforce what was done correctly: Positive feedback encourages desirable behaviours.

V. Correct mistakes: Point out errors.

**Effective Teaching Despite Lack of Formal Teaching Education**

Most ED physicians lack formal training, and therefore confidence, in teaching. This can be a barrier to effective teaching, especially when it comes to direct observation of learners. Fortunately, many qualities that define a good physician are the same as those that are required for good teaching.

Here are some general teaching strategies that foster a positive experience for both teacher and student:

1. Establish cues for the learner to foster an empathetic teaching style: Teachers can be hesitant to correct a student in front of a patient for fear of embarrassing or undermining the student. These valuable teaching opportunities can be facilitated by establishing a cue for the student prior to the patient encounter. For instance, the teacher could inform the student that if they need to take over the assessment, they will signal this by putting their hand on the student’s shoulder. This allows the teacher to redirect the history or demonstrate an element of the physical exam without causing distress to the learner.

2. Allow the student to make mistakes: Encourage the student to commit to a diagnosis or treatment plan by documenting their findings and writing orders on the chart. Chart review provides a great source of teaching material, while allowing the student to develop autonomy in a safe environment. In this way, students can practice their decision-making skills without worrying that they are ultimately responsible for patient outcomes.

3. Allow the student to have successes: Try to set up positive patient experiences by pre-screening patients who are more welcoming towards student assessments. Be sure to ask students some questions they can answer. The student can be encouraged to display their
knowledge and practice their own teaching skills by choosing a topic to “teach the teacher.”
Encourage self-directed learning by asking the student to research a topic that arises on shift and having them teach the physician teacher what they have found.

4. Avoid “pimping”: While the Socratic method can be an effective learning tool, its use at the bedside should be limited due to its potential to humiliate the student and undermine his/her relationship with the patient\(^1\). When using this technique, be sure to ask questions that are clear, brief, focused and have more than one acceptable answer.\(^2\) Let the student know that the intent is to find the limits of what they know and add to their understanding,\(^8\) not to expose their deficiencies. Most importantly, allow the student time to respond. Research has shown that teachers wait less than 1 second for students to respond. By prolonging this wait time to only 3 seconds, students give more complete and thoughtful responses.\(^9\)

5. Provide immediate feedback: Feedback is most effective when it is timely and focused on specific behaviours and/or events. “Most students appreciate clear language and direct feedback about opportunities for improvement. Clear language does not threaten a nurturing environment and it often deepens trust in the teacher.”\(^6\) Tell the student when you are going to provide feedback and ask them to give you similar feedback on your teaching performance.\(^2\) Make it clear that feedback is part of the learning process, and is separate from assessment.\(^8\)

**Conclusion**

Despite lack of formalized training in teaching methods, most Emergency physicians possess the requisite skills for effective teaching. The best clinical teachers are described as being “enthusiastic, clear and well-organized, and adept at interacting with students. They are actively involved with the learner, promote learner autonomy and demonstrate patient care skills.”\(^2\) The strategies outlined above can help the ED physician teacher to balance the needs of the student against the time pressures and unpredictability of the increasingly over-crowded and resource-limited ED.
References

7. www.practicaldoc.ca/teaching/practical-prof/teaching-nuts-bolts/one-minute-preceptor