USING CLINICAL REASONING TO IMPROVE SKILLS IN ORAL CASE PRESENTATION

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Communication skills are widely regarded as essential for effective clinical practice [1–3]. Although much focus has been on communication between physicians and patients, there is growing recognition of the importance of accurate and timely exchange of information among clinicians [4]. The complexities and increasing time demands of modern practice make it essential that physicians efficiently communicate pertinent patient-related information to one another and to other members of the health care team.

The key to efficient physician-to-physician communication is selecting and presenting only the relevant data. The range of physician-to-physician communication can be diverse, including referrals, consultations, handoffs between primary care physicians and hospitalists, and team-based care. Determining what data are relevant for a particular audience is challenging. The common denominator for all physicians, however, is clinical reasoning. By using the elements of the clinical reasoning thought process as the criteria for relevant data, physicians can determine the information that will be of greatest utility to their audience. This skill is essential for all physicians but is especially important for clinical trainees, who must be able to gather, synthesize, and present a patient's medical data to other care providers in a cogent and succinct manner [5–7].

The oral case presentation is the fundamental tool used to transmit patient-related information from one clinician to another. An oral presentation should provide the data needed to generate a hypothesis as to a patient's diagnosis and should furnish information necessary to evaluate this hypothesis and proceed toward an appropriate management plan [8]. To accomplish these goals, the presenter must consider a vast array of clinical information and select only the data relevant for the patient's care at that time.

Although universally taught in medical school and applied during clinical training, the precise elements of a successful oral case presentation often are not meaningfully articulated to trainees. Most experienced physicians have a tacit understanding of the principles of effective oral presentation, making it difficult to communicate these concepts to trainees [9]. For example, attending physicians may ask clinical trainees to present only relevant data but may find it difficult to explain how to determine which information is *not* relevant [9]. Instructional handouts may emphasize the personal preferences of attending physicians, resulting in rigid, dogmatic prescriptions [10]. If the logic underlying a physician's personal preferences is not stated, trainees may struggle to adapt their patient presentations that do not easily fit within the attending physician's framework. Reference textbooks may provide relevant data generically, but they do not help trainees determine which facts are pertinent to a specific patient [11,12]. As a result, many trainees struggle with the art of oral case presentation [13].

Although the teaching and learning of oral presentation skills has largely been ignored in the medical education literature, a few studies have been done and are worth noting. Haber and Lingard [9] recently examined how and why trainees struggle to learn oral presentation skills and identified ways in which common instructional approaches may lead to long-term communication problems or unintended professional values (eg, the belief that social history is never relevant because attendings ask for less social history). Based on their observations of expert and novice presenters, the authors propose that oral presentation skills might be improved by making explicit the tacit rules experts use to sift through patient information to select data that are both *clinically relevant* (ie, patient centered) and *rhetorically relevant* (ie, context centered) [9]. Essentially, the novice presenter must come to appreciate that the definition of relevance changes from patient to patient and from situation to situation. Lingard and

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Table 1. Applying Clinical Reasoning Principles to Clinical Data Acquisition and Oral Presentation

Gathering, processing, and organizing clinical data
Characterize chief complaint then use this to generate a differential diagnosis
Use probing questions to address each of the diagnoses
Use diagnoses to focus the physical examination and to select diagnostic tests
Presenting the data
Provide succinct statement of chief complaint
State positive and negative findings (derived from the history, physical examination, and diagnostic testing) that distinguish the diagnoses under consideration
State most likely diagnosis, with supporting data
State other possible diagnoses, with data supporting or refuting each
State diagnostic and/or therapeutic plan targeting each diagnosis

Data from Wiese J, Varosy P, Tierney L. Improving oral presentation skills with a clinical reasoning curriculum: a prospective controlled trial. Am J Med 2002;112:212–8.

Haber [12] found that understanding clinical reasoning leads to easier selection of relevant information for inclusion in oral presentations. Others also have observed that sound clinical reasoning helps the presenter to distinguish relevant from extraneous data [14–17].

By understanding the clinical reasoning process, a novice clinician can better predict what another physician will find useful for the care of an individual patient at a particular time. Guided by clinical reasoning, a presenter can effectively sequence the presentation to ensure that data are provided at a time when they are best integrated into clinical problem solving [14]. Thus, the history of present illness establishes the diagnostic problem and generates a list of possible explanations (diagnostic hypotheses). Further history allows the list of hypotheses to be ordered based on the probability that a particular diagnosis will be correct [18]. Data from the physical examination and from laboratory and diagnostic tests further modify this list [19]. Finally, the assessment and plan summarizes the clinical reasoning process and presents a hypothesis to explain the patient's problem. In summary, clinical reasoning guides the presenter in 1) determining what data are relevant to include in the oral presentation, 2) organizing the presentation to highlight relevant data (ie, structuring the history, prioritizing data from the physical examination and from laboratory and diagnostic tests), and 3) justifying a probable diagnosis [20].

Table 2. General Recommendations for Oral Presentations

Be brief and succinct; the total time should not exceed 7 minutes, even for the most complex patients
Use simple, declarative statements
State historical events in order of occurrence
Avoid calendar dates; instead, state duration of time prior to presentation
Use patient's own words only when clinically useful for the differential diagnosis
When in doubt about a piece of history, include it in the history of present illness
Avoid use of repetitive phrases or colloquialisms
Make eye contact with the listener

This article describes an approach to teaching and improving presentation skills through explicit use of clinical reasoning, which has been validated in a prospective trial demonstrating an improvement in presentation quality and efficiency [20]. Each component of the spoken case presentation is examined to reveal how elements of the clinical reasoning process may guide physicians in obtaining, processing, and organizing clinical data for effective and efficient oral presentation (**Table 1**). The authors also provide general recommendations for oral presentations that are based on their collective years of experience listening to and giving oral presentations (**Table 2**). The oral case presentation, like many elements of clinical practice, is more of an art than an exact science. There are many successful styles of presentation; physicians are encouraged to develop their own style using the principles of clinical reasoning presented within this article.

The Expert Oral Case Presentation

The oral case presentation is examined here in the form most familiar to residents—with resident as presenter and attending physician as primary audience. A fictitious resident scenario is used to illustrate how a clear understanding and skillful application of clinical reasoning contributes to an expert oral presentation. In the scenario, the five components of a formal oral case presentation are considered in the context of two patients encountered by the resident while on an emergency medicine rotation. After completing the clinical evaluation of the two patients in the emergency department and obtaining initial diagnostic test results, the resident presents the patients to the attending physician. Following are the components of the resident's oral case presentations.

The History of Present Illness

Mr. Kincaid

The patient is a 50-year-old man who presented with a 4-hour history of sudden-onset substernal chest pain associated with shortness of breath and chest palpitations. He was watching TV at the time of the first pain episode, which lasted 20 minutes. The pressure pain was initially rated as 6 out of 10 but progressed to 10 out of 10 over 20 minutes. The pain radiated to the neck and was relieved with sitting forward. The pain abated after taking Maalox but recurred 1 hour later, again lasting 20 minutes. This prompted his visit to the emergency department.

He denies previous similar episodes as well as any history of heart disease, diabetes, or hypertension. He does not know his cholesterol. He smokes one pack of cigarettes per day. He has been told that he has early emphysema, but he does not use inhalers. He has had a cough for the last 4 days, but no fever. He notes a history of heartburn. He does not have a history of chest trauma. He describes no risk factors for pulmonary embolism. The patient reports that he is healthy but has recently gone through a stressful divorce. His brother suffered a fatal myocardial infarction at age 56, and his mother is being treated for diabetes and hypertension.

Ms. Ahmadi

The patient is a 37-year-old woman who has experienced a sudden onset of severe periumbilical abdominal pain associated with anorexia, diarrhea, and one episode of vomiting. The pain began 12 hours prior to presentation and has steadily increased since. It is intermittent and nonradiating. Lying flat improves the pain; any movement exacerbates the symptoms. She has observed blood in her stool.

The patient reports no health problems but admits she has been trying to lose 10 lb on a diet her friend recommended. She is recently married, with no children. Her last menstrual period was 2 weeks ago. She occasionally takes laxatives but is unable to quantify how often or how many. She does not have a history of inflammatory bowel disease, but she did have a laparotomy for a knife wound suffered 7 years ago. She does not drink alcohol. Dairy products do not worsen the symptoms. She denies recent overseas travel.

The information in the history of present illness identifies the topic of discussion and establishes the diagnoses to be considered. Because it is the foundation upon which the physical examination and laboratory data are based, the history of present illness is the most important element of the presentation. As a general rule, it should be given in narrative form and should avoid the use of repetitive phrases and colloquialisms. Ideally, the presenter should make eye contact with the listener.

Stating the chief complaint. The history of present illness begins with the chief complaint, which may be a piece of history (eg, sudden onset of acute abdominal pain), a physical finding (eg, splenomegaly), or a laboratory result (eg, a hemoglobin of 6 g/dL). Regardless of the nature of the clinical problem, the chief complaint should be a succinct statement of the problem that allows the listener to begin focusing on diagnostic possibilities. Preceding the chief complaint with historical details or past medical history decreases the audience's ability to identify and focus upon the primary problem. Consider the following example, "Mr. Kincaid has a possible history of early-stage emphysema and presents with chest pain."

Although students are commonly taught that the chief complaint should be in the patient's own words, in most cases this is not a useful way to state the problem. The exception is when the patient's words provide a dramatic and clinically valuable introduction to the subsequent history. For example, if in describing his substernal chest discomfort Mr. Kincaid had said, "It feels like an elephant is standing on my chest," these words provide a striking clinical picture, immediately limiting the differential diagnosis to ischemic heart disease. The physician should rephrase the patient's description of the problem if the words are misleading (eg, "dizziness" when "vertigo" is intended) or if colloquial descriptions are given (eg, "falling out" instead of "syncope," "missing time" instead of "seizure").

Sequencing historical data. The history of present illness should be presented in the order in which events occurred and should describe the duration of time from the onset of symptoms to the time of seeking care. Although necessary in the written medical record, calendar dates should be avoided in the oral case presentation, as they force the listener to remember the day's date and to calculate backward to the date of the onset of the complaint while listening for important diagnostic clues. The case presenter should do this calculation, allowing the listener to concentrate on the data being presented.

Determining what is pertinent history. The presenter, who is most knowledgeable about the patient at that time, should decide what historical information belongs in the present illness and deliver these facts sequentially. It is not always easy to decide what is or is not appropriate to include in the present illness. Certainly, a 25-year history of type 1 diabetes in

Mr. Kincaid would be a major contributor to the diagnostic possibilities under consideration, and thus would properly belong in the history of present illness. However, if Mr. Kincaid had a 2-year history of mild glucose intolerance, this information might more logically be stated in the past history or review of systems. Previous hospital admissions, clinic visits, and diagnostic evaluations are all part of the history of present illness when they contribute information the audience is likely to find helpful in evaluating a differential diagnosis. Similarly, any past medical history that is useful in evaluating the diagnoses being considered is helpful to include in the history of present illness. For example, the history of a previous abdominal surgery in Ms. Ahmadi is appropriate to include, as this history increases the probability for a small bowel obstruction.

Many presentations become bogged down, however, with unhelpful information from diagnostic evaluations performed prior to the clinical encounter being presented. As a general guide, the more current the diagnostic studies, the more likely they are to be useful to the listener and should be included. An exception is the reporting of laboratory and study data obtained in the emergency department as part of the patient's current admission, which should be avoided, unless an unexpected finding was the single precipitating reason for the patient's admission. Bayesian theory suggests that the physician must have a pretest probability for each diagnosis being considered to accurately interpret laboratory and study results [8,14,21]. A complete history and physical examination is required to generate this pretest probability. The presentation of objective information, such as blood tests and imaging studies, should occur after the presentation of the history and physical examination data.

Determining pertinent negatives. In general, it is easy to identify appropriate positive findings (eg, previous symptoms, abnormal diagnostic studies) related to the most likely diagnosis under consideration. However, the use of what has been called *pertinent negatives* requires more careful thought. In determining whether to include negative findings, it is useful to consider whether the positive findings lead to an unambiguous diagnosis. If they do, negatives add little to the presentation. An example would be a patient who has symptoms compatible with an exacerbation of chronic obstructive pulmonary disease due to bronchitis and who has experienced numerous similar episodes in the past.

If, on the other hand, the positive findings leave several diagnostic considerations equally possible, negative findings become relevant. Both patients evaluated by the resident in the opening scenario fall into this category. For example, Mr. Kincaid's clinical presentation suggests a few diagnostic possibilities, such as myocardial ischemia, costochondritis, bronchitis, and gastric reflux disease. Anticipating that the attending physician would be considering these diagnoses, the resident appropriately addressed these concerns by including the following statements:

- "He denies…any history of heart disease, diabetes, or hypertension. He does not know his cholesterol." (myocardial ischemia)
- "He smokes one pack of cigarettes per day. He has been told that he has early emphysema, but he does not use inhalers. He has had a cough for the last 4 days, but no fever." (bronchitis)
- "The pain was relieved with Maalox.... He notes a history of heartburn." (gastric reflux)
- "He does not have a history of chest trauma." (costochondritis)

As this example illustrates, carefully tailored negatives implicitly communicate to the listener the differential diagnosis being entertained by the presenter, and they add important information the listener needs to focus diagnostic thinking. It is apparent that the resident in this scenario used sound clinical reasoning when presenting the history of present illness for Mr. Kincaid, which will allow for a more sophisticated discussion of the case following the oral presentation. Indeed, a goal for the presenter should be the absence of a need for clarifying questions at the conclusion of the case presentation.

The review of systems. The review of systems is a list of questions asked to ensure that all potential problems have been addressed. Although it is important to document the results of this questioning in the written medical record, only those findings that assist in evaluating the diagnoses being considered should be included in the oral presentation. When present, they should be addressed as part of the history of present illness.

The Past Medical History

In most cases, little past medical history is necessary in the spoken case presentation, with details limited to those helpful for distinguishing the diagnoses under consideration. Relevant historical facts should be provided in the history of present illness; repeating these facts in the past medical history serves no purpose and takes additional time. Indeed, the presenter may choose not to mention past illnesses that bear no relationship to the current problem. For example, an appendectomy during

adolescence would appropriately be omitted when a middle-aged man is admitted for cellulitis. However, if the major diagnostic concern is a small bowel obstruction, the previous appendectomy is relevant and probably belongs in the history of present illness. Again, it is important to note a difference between the oral case presentation and the written medical record. The spoken presentation has an immediacy of purpose and a captive audience, which place a premium on the expenditure of time. The written record is a permanent document within the patient's health profile. Because the author of this document has no knowledge of when or why it might be read, the written past history should be far more inclusive than the spoken history.

The Social History

Although it is important to document elements of the social history in the medical record, these details are not always necessary for the oral presentation. If the social history is useful in evaluating the diagnoses being considered, it should be included in the oral presentation. For example, Mr. Kincaid has recently undergone a stressful divorce, and this stress may contribute to the possibility of myocardial infarction. This social history would be less relevant and could be omitted from the oral presentation, however, if he had presented with a chief complaint of cough and fever. Ms. Ahmadi works as an accountant. The resident has chosen to omit this social history from the presentation because it does not suggest or exclude the diagnoses being considered for her abdominal pain.

The Physical Examination

Mr. Kincaid

- Blood pressure was 155 over 80. Heart rate was 90. Respiratory rate was 16. Temperature was 37°C.
- The head and neck examination was normal. The carotid upstroke was normal. The JVP was 7 cm.
- There was a normal S_1 and S_2; no S_3 or S_4 was heard. There were no murmurs or rubs. The PMI was laterally displaced.
- There were no crackles or wheezes.
- The abdominal examination was normal. The liver was 8 cm and nonpulsatile. There was no ascites.
- The pulses were equal and strong in all extremities. There was no evidence of vascular insufficiency.
- The neurologic examination was normal.

Ms. Ahmadi

- Blood pressure was 105 over 60. Heart rate was 110. Respiratory rate was 18. Temperature was 37.3°C.
- The head and neck, heart, and lung examinations were normal.
- The abdomen was diffusely tender, but there was no guarding. The liver was 8 cm and nontender. The spleen was not palpable.
- There was no ecchymosis in the flanks or around the umbilicus. Murphy's sign was negative. Bowel sounds were present, and there were no borborygmi.
- The rectal examination was normal without tenderness. The stool was guaiac negative.
- The pelvic examination was normal with no adnexal masses or tenderness.
- There was no cervical motion tenderness.
- The extremity and neurologic examinations were normal.

The physical examination should be stated in simple declarative sentences and should be limited to positive and negative findings that distinguish the diagnoses under consideration. It is convention to begin with the vital signs and then proceed, top-to-bottom, addressing each organ system in sequence. This approach allows the listener to easily follow along as the presentation of the physical examination proceeds. Extra emphasis is given to organ systems that help the listener evaluate the diagnoses being considered as well as to unexpected abnormalities that were detected. To save time and improve the focus of the presentation, the organ systems that were normal and that do not contribute to the diagnoses being considered (eg, the head and neck examination in Ms. Ahmadi) can simply be noted as "normal." By anticipating which physical abnormalities might exist given the history stated thus far and then addressing these in the presentation, the presenter sharpens his or her own clinical reasoning skills as well as the skills of the audience.

Residents commonly ask whether it is acceptable to state that "The entire physical examination was within normal limits" after stating the patient's general appearance and vital signs. Although this abbreviated approach may be adequate, it may leave the audience wondering whether all the appropriate tests were performed. For example, after hearing Ms. Ahmadi's history, the audience will want to know whether she has evidence of peritonitis or small bowel obstruction. If the presenter states that "The abdominal examination was normal," the audience is left wondering whether the examiner took the time to listen for borborygmi or to perform pelvic and rectal examinations. Without being given vital pertinent negative information from these examinations, the audience cannot evaluate properly the two possible diagnoses.

In the interest of brevity and clinical relevance, it is desirable not to introduce every system with the phrase "Examination of the" (eg, "Examination of the PMI was normal. Examination of the carotids was normal."). Rather, the results of each portion of the examination should simply be stated (eg, "The PMI and the carotids were normal."). Similarly, the description of each portion of the examination usually obviates identifying the organ system (eg, "Cardiovascular system. The heart sounds were normal. There were no rubs or murmurs."). The introduction, "Cardiovascular system," is redundant; the audience can presuppose that heart sounds and murmurs imply examination of the heart.

The same principle applies to phrases that describe the patient's general appearance, such as "well-developed," "well-nourished," "in no acute distress," and "who appeared his stated age." The general description should be treated like all other physical findings: It should be included in the oral presentation only if it offers a meaningful contribution to the evaluation of the diagnoses being considered.

In summary, all physical findings that assist the audience in evaluating a differential diagnosis—whether present or absent—should be included in the oral presentation. These data will help the audience to adjust upward or downward the pretest probability of each diagnosis they are considering. All other elements of the examination should be excluded, as they do not contribute to the clinical reasoning process.

Diagnostic Studies

Mr. Kincaid

- The hemoglobin was 11. The troponin was 0.5.
- The chest x-ray revealed a large cardiac silhouette, but the aorta was of normal size. There was no sign of heart failure.
- The EKG revealed a normal rate, rhythm, axis, and intervals. ST segment depressions were noted in V_4 to V_6 and in I and aVL. He had left ventricular hypertrophy and T wave inversion in the lateral leads.
- Electrolytes, liver enzyme studies, and urinalysis were normal.

Ms. Ahmadi

- The white blood cell count was 8000. The hemoglobin was 8. The sodium was 138, potassium was 2.8, chloride was 118, and bicarbonate was 10. The creatinine was 1.8.
- Upright and flat abdominal x-rays revealed no perforation and no air-fluid levels.
- Liver enzyme studies and urinalysis were normal. Urine pregnancy test was negative.

Diagnostic study data provided in the oral presentation should be limited to positive and negative findings that distinguish the diagnoses under consideration. Indeed, *only* laboratory data necessary to evaluate the diagnoses being considered should be ordered in the first place. Reflexively ordering additional studies that do not test the hypotheses being considered increases the probability of a false-positive result that may confound the diagnostic and therapeutic plans.

Physicians should avoid the temptation to interpret laboratory values as they are presented (eg, "The sodium was 129. This is low. The potassium was 5.2. This is a bit high."). This wastes time and destroys the momentum of the presentation. An exception is a laboratory finding that is unlikely to be readily familiar to the audience (eg, "The free T_4 level was 0.04. This is below normal."). Important laboratory or diagnostic study data obtained shortly before the clinical encounter (eg, results of an echocardiogram obtained 1 month ago) belong in the history of present illness, as previously noted (*see page 32*).

Assessment and Plan

Mr. Kincaid

Problem: chest pain. I believe this patient's chest pain is due to myocardial infarction. The character and pattern of the pain, his smoking history, his family history, the positive troponin, and the EKG abnormalities suggest this diagnosis.

Other diagnoses we considered include dissecting aneurysm, gastric reflux disease, costochondritis, and pulmonary embolism. These diagnoses are less likely due to the normal chest x-ray, the normal pulses, and the absence of chest wall tenderness. He has no pulmonary embolism risk factors.

We will admit him to the CCU and begin aspirin, nitroglycerin paste, and metoprolol 25 mg bid. He will receive a cardiac catheterization today. We will consider angioplasty or bypass depending upon the results of the cardiac catheterization.

Ms. Ahmadi

Problem: abdominal pain. I suspect this patient's abdominal pain is due to new-onset inflammatory bowel syndrome, possibly associated with laxative abuse. The history of attempted weight loss, laxative use, and associated diarrhea support this diagnosis.

Other diagnoses we considered include ectopic pregnancy, pelvic inflammatory disease, small bowel obstruction, and appendicitis. These diagnoses are less likely due to the normal abdominal x-rays, the

normal white blood cell count, the absence of fever, and the normal pelvic examination.

We will obtain stool samples for culture and osmolarity. A *Clostridium difficile* culture will be obtained, and we will follow serial abdominal examinations. We will rehydrate her with normal saline at a rate of 200 cc per hour.

Having been guided by the clinical reasoning process, the expert spoken case presentation concludes with a concise and well-reasoned *assessment* of the problem and a *plan* to address it. The assessment should begin with a statement of the most probable diagnosis, followed by supporting data from the history, physical examination, and diagnostic studies. Next, all other possible diagnoses should be presented, with data to support or refute each. Finally, the presenter should outline a diagnostic and potential therapeutic plan pertinent to each diagnosis. The plan should use active as opposed to passive verbs (eg, "We will obtain stool cultures." rather than "We will consider obtaining stool cultures."). This allows the audience to know exactly what the presenter plans to do. If contingency plans are presented, the criteria that will decide the contingency should be clearly stated (eg, "We will consider angioplasty or bypass depending upon the results of the cardiac catheterization."). Immediately after the assessment and plan is presented, a logical discussion should ensue. The discussion should form a didactic framework for a teaching session involving all members of the listening group.

Some physicians prefer that a short summary of the entire case be presented prior to the assessment and plan. This is usually not necessary, as the focused, well-presented case does not require a summary to remind the audience of the salient issues. In complicated cases, however, a summary preceding the assessment and plan may help the audience focus on the essential elements of the case as the assessment and plan is presented.

A General Note on Timing

Time should be allocated to each of the five segments of the formal oral presentation based on relative importance. The history of present illness is the foundation for generating the differential diagnosis—the criteria by which subsequent data are judged to be relevant. For this reason, the history of present illness is the most important segment and is allocated the most time. The assessment and plan is the summation of the case and the point of departure for a discussion between the presenter and the audience. It, too, should be given emphasis in the presentation. The intervening segments serve only to connect the critical first and last segments and should be given proportionally less time in the presentation.

Time is of the essence in spoken presentations, and the presenter should be mindful of the audience and limit overall time expenditure. The audience's attention span usually does not exceed 7 minutes, after which data that are presented may fall on deaf ears. The presenter who exceeds 7 minutes risks failing to meet the primary objective: to communicate data to the audience. If a case appears sufficiently complicated to require more than 7 minutes of presentation time, the presenter should proportionally reduce the segments between the history of present illness and the assessment and plan, thereby maintaining emphasis on the two most important segments.

The Two-Minute Presentation

Once skilled in delivering a formal oral case presentation, a resident should be able to present a case, despite its complexity, in less than 2 minutes. This abbreviated version of the formal presentation, sometimes referred to as the *2-minute presentation*, is valuable for communicating patient-specific information in certain settings. For example, the 2-minute presentation might be useful for providing patient information to a consultant, for briefly reviewing a patient's clinical status on walk rounds, or for framing a discrete question concerning a patient to a clinical colleague.

The 2-minute presentation follows the same format as the formal case presentation, with presentation of some history, physical examination, and diagnostic data and a brief assessment. Once again, emphasis should be given to the history of present illness and the assessment and plan. It is appropriate to exclude past history and physical examination data not absolutely relevant to the diagnoses being considered. Organ systems not relevant to the differential diagnoses can be excluded entirely (eg, "The physical examination was within normal limits except for temporal wasting and digital clubbing.").

The 2-minute presentation takes considerable practice, but the exercise is well worth doing to sharpen the clinical reasoning skills needed to identify the elements of a case that are the most relevant to a patient's care at a given time. As the authors have observed, residents who are successful in doing a 2-minute presentation have the art of clinical reasoning firmly in hand.

Conclusion

The spoken case presentation is delivered thousands of times every day throughout the world, yet this

essential skill has largely been on the sidelines in medical education. Articles exploring how best to teach and learn oral case presentation are relatively few, while articles about curriculum, teaching styles, work hours, and other matters abound in the medical literature. Perhaps this is because it is assumed that the elements of an expert spoken case presentation are well taught in medical school, when in reality the teaching approach is poorly organized and problematic. The result is generation after generation of graduates entering postgraduate training without having mastered this essential skill.

The spoken case presentation stands as an excellent benchmark upon which to measure the clinical reasoning skills of the presenter. It is regrettable that such a cornerstone of the practice of medicine has received so little attention over the years, even as our diagnostic and therapeutic armamentarium has expanded notably. Without accurate and concise communication between physicians, the quality and efficiency of patient care suffer.

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References

1. Kurtz SM, Laidlaw T, Makoul G, Schnabl G. Medical education initiatives in communication skills. Cancer Prev Control 1999;3:37–45.
2. Brown JB, Boles M, Mullooly JP, Levinson W. Effect of clinician communication skills training on patient satisfaction. A randomized, controlled trial. Ann Intern Med 1999;131:822–9.
3. Steward MA. Effective physician-patient communication and health outcomes: a review. CMAJ 1995;152: 1423–33.
4. Accreditation Council for Graduate Medical Education. Outcome project: enhancing residency education through outcomes assessment. Competency language (full version). Available at http://www.acgme.org/outcome/comp/compFull.asp. Accessed 7 May 2002.
5. Hargie O, Dickson D, Boohan M, Hughes K. A survey of communication skills training in UK schools of medicine: present practices and prospective proposals. Med Educ 1998;33:25–34.
6. Morgan ER, Winter RJ. Teaching communication skills. An essential part of residency training. Arch Pediatr Adolesc Med 1996;150:638–42.
7. Platt FW, McMath JC. Clinical hypocompetence: the interview. Ann Intern Med 1979;91:898–902.
8. Kassirer J. Diagnostic reasoning. Ann Intern Med 1989; 110:893–900.
9. Haber RJ, Lingard LA. Learning oral presentation skills: a rhetorical analysis with pedagogical and professional implications. J Gen Intern Med 2001;16:308–14.
10. Wigton RS. The effects of student personal characteristics on the evaluation of clinical performance. J Med Educ 1980;55:423–7.
11. Kroenke K. The case presentation. Stumbling blocks and stepping stones. Am J Med 1985;79:605–8.
12. Lingard LA, Haber RJ. What do we mean by "relevance"? A clinical and rhetorical definition with implications for teaching and learning the case-presentation format. Acad Med 1999;74(10 Suppl):S124–7.
13. Engel GL. The deficiencies of the case presentation as a method of clinical teaching. Another approach. N Engl J Med 1971;284:20–4.
14. Kassirer JP, Kopelman RI. The accuracy of clinical information. I. The history. Hosp Pract 1991;26:21–4, 29–30.
15. Kassirer J. Teaching problem-solving—how are we doing? N Engl J Med 1995;332:1507–9.
16. Bordage G, Lemieux M. Semantic structures and diagnostic thinking of experts and novices. Acad Med 1991; 66(9 Suppl):S70–2.
17. Bordage G, Connell KJ, Chang RW, et al. Assessing the semantic content of clinical case presentations: studies of reliability and concurrent validity. Acad Med 1997;72 (10 Suppl 1):S37–9.
18. Novack DH. Beyond data gathering: twelve functions of the medical history. Hosp Pract 1985;20:11–2.
19. Kassirer JP, Kopelman RI. Learning clinical reasoning. Baltimore: Williams & Wilkins; 1991.
20. Wiese J, Varosy P, Tierney L. Improving oral presentation skills with a clinical reasoning curriculum: a prospective controlled trial. Am J Med 2002;112:212–8.
21. Kassirer JP, Kopelman RI. The accuracy of clinical information. 2. The physical examination. Hosp Pract 1991; 26:17, 20–1, 24–5.

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