What If Osler Were One of Us?

Inpatient Teaching Today

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Master, mentor, supervisor, facilitator, or all of the above—somewhere in this list lies the role of the inpatient teacher, perhaps the most intense assignment clinician-educators are asked to assume. Always challenging, inpatient teaching currently must meet requirements and regulations that did not even exist years ago. Today's handbook of inpatient teaching includes chapters written by (1) the Accreditation Council on Graduate Medical Education (ACGME) governing training experiences and working conditions for residents; (2) managed care organizations and hospital utilization committees establishing guidelines for admissions, length of stay, and utilization of diagnostic tests, consultations, and other resources; and (3) the Health Care Financing Administration (HCFA) and other third-party payers setting forth requirements that affect the level of the attending physicians' involvement in patient care and the allocation of their time, and at least indirectly, housestaff responsibility and learning.

But the purpose of this article is not to bemoan the new rules and regulations. In fact, each of these requirements in its own way makes sense. Rather, in this article I try to identify solutions to the inpatient teacher's challenges, both old and new. But first we should ask, what is the essence of inpatient teaching? What about it cannot be sacrificed, no matter how much the environment may change? That question requires that we consider theories of learning and cognition around which personal models of teaching can be built. Second, we should ask, how successful inpatient teachers do their jobs so well. Everyone faces the same dilemmas when they teach on rounds. What is it about the best attending physicians that makes them stand out? And third, what solutions can be applied to the inpatient teaching problems we face today? What can be done to ensure that the inpatient rounds we will make tomorrow are as memorable as the best rounds our predecessors made in the past? Or even, dare we ask, can we do better?

THE ESSENCE OF INPATIENT TEACHING

Inpatient teaching can be chaotic, erratic, frustrating, and demoralizing, as students of varying levels of sophistication and interest fight off (or surrender to) interruptions and urges to sleep, while the attending physician holds forth on unanticipated topics, and about patients who may not be available. Or, it can be riveting. Students and residents learn, and everyone, including the attending physician and even the patient, comes away educated and enriched. What accounts for the difference? Perhaps the difference is bounded not strictly by the teaching but, rather, by the extent to which the teaching responds to learning. Does the teacher follow a fixed internal lesson plan, deaf to the student's responses and readiness to learn? Or does the teacher listen, take cues from the student, and appreciate that teaching has value only to the extent that it facilitates learning? Molding teaching to learning will not provide foolproof guidelines; not enough is known about learning to allow for rules; and what is "known" is rarely evidence-based. But that is not to say that the field of learning is without powerful and useful ideas.

Of these, at least four are particularly germane to inpatient teaching (Table 1). The first two have to do with knowledge. Knowledge is developed not by accumulation of facts, like so many coins in a bank; rather, it is acquired by extending and revising previous knowledge. It is constructed, like a ramp or a bridge. New ideas take on meaning in a coherent relation to old ideas. Conventional approaches to education view teaching as telling, knowledge as facts, and learning as memorization. In place of that, inpatient teachers might consider a different model of instruction in which teaching is enabling, knowledge is understanding, and learning involves not memorization but active construction.[1,2] Inpatient teachers who hold to this second model find themselves asking fewer questions such as "What is the most common cause of anemia?" and more questions like "What do you think is going on?" Or, "Why do you think that?" Or, "How does that fit with what we talked about yesterday?" They scaffold new ideas around old ideas, build on learners' existing concepts, and encourage them to construct concepts that are more sophisticated and powerful.[3]

Ultimately, of course, knowledge is valuable if it can be used to solve problems. The second idea, related to the first, is that in solving problems experts rely on their repertoire of case-based solutions.[4] Success solving cardiac problems fails to predict success solving rheumatologic problems. Medical expertise tends to be specific to subject and case, and not readily transferable across different types of cases.[5] It is contextual, that is, it is related closely to the circumstances in which the knowledge was acquired.[5] Knowledge acquired in a classroom may not be readily available for use at the bedside; whereas knowledge acquired at the bedside, particularly knowledge related to a specific case, should be available when a similar case is encountered. Clinical expertise depends less upon generic problem-solving skills and general knowledge, and on more specific experiences in realistic settings.[6]

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Table 1. From Principles to Practice

Principles of Learning	Corresponding Recommendations for Teaching
1. Knowledge is constructed, not accumulated	Begin with students' conceptualization Use probing questions Encourage reflection
2. Expertise depends on experience with cases	Focus discussions on the patient Teach at the bedside Compare and contrast cases
3. Students learn when they are involved	Provide challenge *and* support Stimulate interest; make rounds fun Encourage independent learning
4. Learning is both a personal and a social process	Develop a learning community; provide orientation Leaven credibility with authenticity Know your learners

None of this would have surprised Osler, who insisted that students be taught "on the wards."[7] Nor would it have surprised Samuel Bard, the 19th Century physician who urged, "The student must see, and hear, and feel for himself. The hue of the complexion, the feel of the skin, the luster and languor of the eye, the throbbing of the pulse and the palpitations of the heart. Where can these be learned but at the bedside of the sick."[8] At the bedside of the sick students acquire knowledge in the context of actual cases.

The discussions that accompany cases serve several purposes. According to Schulman, they are occasions for offering theories to explain why certain actions are appropriate, and so they are useful for teaching principles; they function as precedents for practice and illustrate how problems are solved; and they allow students to learn how to "think like" doctors.[9] Cases are messy. Rarely do they admit a single right answer. Thus, they are ideal for initiating novices into worlds that require judgment and thought. Whether case discussions should occur at the bedside, conference room or both will be considered later on. Here we simply underscore the importance of making attending rounds case-based and giving attention to case-based discussions.

The notion of discussion leads to the third major idea about learning which is at once simple and complex: for learning to occur students must be involved, or even better, they must be personally invested in the learning process. Teaching, therefore, requires not only a knowledge of subject, but a knowledge of how students learn and how they can be engaged. Fundamentally, teaching is about creating the conditions in which students agree to take charge of their own learning, individually and collectively.[1] Inpatient teachers, therefore, have the responsibility to create settings in which students are comfortable taking risks, making mistakes, and even saying, "Hmm ..., I don't think I understand."

Faculty may recall wistfully their own experiences as learners in which the setting was far from secure; scary may be a more apt description. Such memories tend to be vivid and, in fact, there are data to suggest that recall improves as a function of stress.[10] But inpatient teaching should be about more than recall. The goal of inpatient teaching should be to get students to "work" with the material, to reflect on it, and to feel comfortable enough with it so that at some future point it can be summoned up and used.

This leads to the final major idea, which is that learning of this sort is possible only if the rounding team functions as a community. A learning community is one in which the surroundings support rigorous, intellectual analysis and collaboration, in which a series of understandable guidelines that define roles and responsibilities are negotiated and shared, and in which participants treat each other with respect.[1]

For inpatient teachers, the notion of the rounding team as community has several important implications. The first is that a month of rounds should begin with an implicit but also an explicit understanding of roles and responsibilities. Interestingly, the first-day orientation to attending rounds, though often omitted, makes the list of teaching behaviors that students value most.[11] Beyond that, it now should be considered required. The aforementioned ACGME Special Requirements call for "The program director [to] prepare explicit written descriptions of lines of responsibility for the care of patients on each type of teaching service and [to] make these clear to all members of the teaching teams." The Special Requirements go on to stipulate that "Residents should be involved in creating and revising the [curriculum] document, and the program-approved document should be distributed to and discussed with all residents particularly as they start new rotations."[12]

Another implication of the concept of a learning community is that, yes, there need to be leaders but, no, they need not be supreme. Daloz[13] writes of the importance of balancing credibility, the characteristic of the teacher who generally is assumed to be correct, with authenticity, the

admission that no one has the answers all the time, not even the attending physician. Credibility makes students perk up, while authenticity reassures them that the attending physician is human, even "just like me." When no one is always right, no one needs to fear being wrong. Students then begin to take risks and to rise to the teacher's challenges.

Challenge works best when it is coupled with support.[13] Inpatient teachers can provide support when they know who their students are, what problems they face, their weaknesses and their strengths, and what makes them tick. Christensen and coworkers write, "Our knowledge of students helps us to meet them 'where they are.' And that is where learning begins."[1]

In unstructured settings like inpatient teaching, there is nothing so practical as a good theory. The four principles identified in Table 1 may help inpatient teachers to develop personal theories about the essence of inpatient teaching. From these theories can come actual practices, some of which are listed in Table 1 and described more fully below.

ROUNDS THAT WORK

The literature on inpatient teaching contains articles of two types. There are recommendations "from the heart," often infused with data from studies that attempt to capture what virtuoso attending physicians do[13–17]; and there are the studies themselves.[11,18–20] Research on attending rounds tends to be semiqualitative. The methods used most frequently are survey questionnaires that associate teaching behaviors with teaching success, the latter determined by opinions of students and residents. Some authors have used more detailed qualitative approaches. Of these, Irby's recent work stands out as the most sophisticated exploration of how highly regarded attending physicians make rounds.[21–23]

What do these studies reveal? First, that there is no "way," no pathway to pedagogic paradise, that will lead novice inpatient teachers to fulfillment, and tenure. In fact, one is struck by the variety of ways that attending physicians conduct rounds. Some see patients ahead of time, others do not; some go to the bedside all the time, others rarely. Some bring handouts, others use slides. Undoubtedly, everyone brings doughnuts, but who knows what else?

Despite their divergent findings, or perhaps because of them, these articles are helpful, just as a recipe book is helpful even for an experienced chef. They provide a range of options and valued characteristics that are useful to review. But how can these be incorporated into a system of attending rounds that reflects an individual physician's values, commitments, strengths, and style? Listed below are a series of organizational questions that attending physicians might consider as their month "on service" draws near.

A. What do you hope to accomplish?

Brookfield[24] and others speak of an organizing vision of teaching—a series of beliefs and values that enables teachers to stay on course even when the seas get rough. This vision should be personal, and it should express one's goals and aspirations for inpatient teaching. Few would argue that some principal goals for inpatient rounds are setting high standards, modeling professionalism, and demonstrating that internal medicine is at once scientific and humanistic. But how often do inpatient rounds reflect these beliefs? How often do inpatient attending physicians have these values in mind when their rounds are planned? Christian's account of Osler's rounds (Figure 1) leave little doubt about Osler's values and beliefs regarding patient care and his goals for inpatient teaching. These were expressed in his rounds. Can't we do the same?

A personal vision of inpatient teaching aids the attending physician in several ways. First, it provides a road map for making day-to-day instructional decisions: it allows one to stay on course. And it provides a system of self-assessment, an important consideration that will be discussed below. The start of a month of inpatient rounds might be the time to empty our pockets and see if there is not room for a card that describes a vision of what our rounds should provide.

B. What is your point of view?

Decide next on the facets of medicine you will emphasize. Diagnosis and treatment go without saying. But what else? What aspects of diagnosis and treatment are most important? Possible answers, none mutually exclusive, might include clinical epidemiology and evidence-based medicine, pathophysiology, physical diagnosis, qual-

FIGURE 1. Osler's rounds expressed what he believed important about patient care and teaching.

> At each exercise, reports on patients previously seen were asked for, since each student was expected to keep track of his patients in subsequent visits to the dispensary, to the ward, if the patient was admitted, or by visits to the patient's home, if the patient failed to keep dispensary appointments. The patient was made to feel that he was helping in the education of medical students and that the student was his doctor, more interested in his welfare than was anyone else. Dr. Osler always created a friendly atmosphere, and patients were willing to answer his questions and to do whatever he asked of them. The student was seeing in Dr. Osler a demonstration of the best sort of patient-physician relationship and was gaining invaluable preparation for his own independent clinical work.
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> (Source: Christian HA. Osler: recollections of an undergraduate medical student at Johns Hopkins. Arch Intern Med. 1949;84:77–83.)

ity management, and prevention. These disciplines do not replace clinical medicine; they are lenses through which clinical medicine can be examined and enhanced. Pick an approach. Make sure it matches your strengths, and make sure it is worth the students' time. Then write it down and decide how it will shape your rounds.

C. How will your learners be engaged?

Students need to be involved. How will you make that happen? Here the inpatient attending physician considers the actual conduct of rounds. How will the students see their way onto center stage? Can the residents be more involved? How can rounds be made more interesting, more fun? Some of this will come from the attending physician's personality and style. But planning ahead may suggest ideas for shared teaching, lively discussions, and a variety of techniques that will keep everyone engaged.[14,15,25,26]

Teaching effectively entails a series of decisions, many of which are made on the spot. But it pays to consider, even before the first case is heard, the strategies that one will use to ensure that everyone gets involved. Here is where one's beliefs about knowledge and learning can guide in the selection of questions, the role of the discussion leader, and the way that the entire group is deployed. Students tell us, and personal experience supports, that presentations should not be interrupted and that students should be allowed to "go first" and be given a chance to say, "What is going on?" Then, others can be drawn into the discussion with questions like, "Bill, how does that sound to you?" Space does not allow for a full exploration of discussion-leading strategies. Several texts are helpful.[1,24,27,28] The point is that rounds should be lively, challenging, and fun. No one should be hurt, no one should dominate, and everyone should learn. There should always be an attempt to reach closure, to summarize, and to provide feedback, generally based on what each member has contributed to the discussion. Although this may sound contrived, really, it isn't. Remarks such as, "Well, I guess we agree it's CHF. Jim's history—which, by the way, was extremely helpful—and Jane's interpretation of the x-ray, point in that direction. Anyone want to ante up for an echo?" With comments such as these, the inpatient teacher solidifies what was learned and leaves everyone with a sense of accomplishment.

D. How will you meet the needs of each learner?

Your round community will be a model of diversity, at least in terms of experience. Each learner will have different needs. You must decide if you will set aside time for student-only rounds, walk-rounds with the residents, etc., and make a commitment to getting to know each member personally. Time might be set aside as the month begins to meet with each individual; this can be informal. Get to know them. Find out where they've been and where they're going, their strengths and weaknesses. Clarify the goals of the month and be prepared to modify those goals so that learners' needs are met.[29]

E. How will rounds be organized?

Yogi Berra said, "When you come to the fork in the road, take it." Can we do better? The ACGME is not silent on the organizational structure of attending rounds. Figure 2 presents relevant text from the most recent Residency Review Committee (RRC) Special Requirements for Internal Medicine. In addition to stipulating time and team size, the RRC is quite clear on several other issues. First, "a few," not all, case patients should be seen. Selectivity often is the key to making rounds interesting. Irby documented different approaches to selecting cases for discussion.[21,23] Several of the attending physicians he studied consulted with the residents the night before, while a few did preliminary rounds; still others had a cache of prepared talks and used them when things were

FIGURE 2. Formal teaching rounds as stipulated in the ACGME RRC-IM Special Requirements.

Teaching Rounds

i. Patient teaching rounds are essential. Although management issues frequently arise during teaching rounds, such rounds should focus on issues more general than the immediate management of patients assigned to the residents' care. Teaching rounds must be regularly scheduled, and must be conducted on a formal basis on at least three days of the week for a minimum of four and one-half hours per week. Generally, a few cases are presented on teaching rounds as a basis for discussion of such points as interpretation of clinical data, pathophysiology, differential diagnosis, and specific management of the patient and the appropriate use of technology. Teaching rounds must include direct bedside interaction with the patient by the residents and the scheduled teaching physician. These bedside sessions should include personal evaluation of the history and physical examination by the teaching physician. It is of fundamental importance that the dignity of the patient/physician relationship be preserved and emphasized. The faculty members conducting teaching rounds should be selected for their knowledge of medicine, their clinical skills and their interest and ability in teaching.

ii. In order to facilitate bedside teaching, a single teaching attending physician should not be assigned more than six residents and medical students in total. Even under extreme circumstances, a single teaching attending physician must not have responsibility for more than ten residents and students at a time.

(Source: Accreditation Council for Graduate Medical Education.[12])

slow. Cases can be selected by the attending physician, the housestaff, or preferably by the team as a whole.

And second, the RRC requires teaching at the bedside. Kroenke details the issues that need to be considered in deciding where case patients should be presented and how the bedside can be used to greatest advantage.[15] Others have argued even more strongly for conducting all of rounds—the presentation, examination, and discussion—in the patient's room.[30] In that regard, Osler's rounds (Figure 3) provide a touchstone. Having done rounds several ways, I find myself increasingly committed to teaching at the bedside from the beginning to end. My commitment to bedside teaching is pragmatic. I find that I gain a richer and more reliable picture of the patient when the presentation is done at the bedside, and I can devote more time to physical examination—my particular favorite perspective—and then better observe and demonstrate clinical, humanistic, and professional skills.

Concerns that patients will react negatively to bedside teaching can be laid to rest. The literature is clear on this point: patients like bedside teaching.[31,32] They urge us to continue in that practice, and they graciously accommodate us by keeping their heart rate, plasma norepinephrine levels, and anxiety inventory scores in check even as rounds are made.[33,34] For general internists, the bedside should be the default venue. The conference room should still be used, but not to the exclusion of the bedside.

FIGURE 3. Osler teaching at the bedside.

> Ward rounds with Dr. Osler were held three days a week, beginning at about 9 o'clock. Dr. Osler rarely missed being present to conduct them. He would enter a ward trailed by his assistants, the resident physician, assistant residents, medical interns, clinical clerks from the fourth year class (the section of one fourth of the class assigned to medicine for two months) and usually visiting physicians. He would go to a patient's bed, stand (or sometimes sit in a chair) near the head of the bed at the patient's right side, give him a cheery greeting and, if he were a new patient, ask for his history, which then would be given to the student clinical clerk. After it had been commented on, possibly criticized and often added to and illuminated by Dr. Osler with accompanying pertinent remarks, the report of the physical examination was called for from the clinical clerk. Often he was asked to demonstrate the features of the physical examination. Usually Dr. Osler made some examination himself and demonstrated and discussed salient features, all the time mingling his discussion with remarks and explanations to the patient, so that he would not be mystified or frightened. Various members of the resident staff would be asked for reports of special examinations and for descriptions of changes and developments in the patient, witnessed in the ward by them. If others of the visiting staff had seen the patient, they were asked for comments and opinions. A visitor, often some prominent out-of-town physician, might be asked to comment or to give his opinion.
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> (Source: Christian HA. Osler: recollections of an undergraduate medical student at Johns Hopkins. Arch Intern Med. 1949;84:77–83.)

F. Are your rounds successful?

The teachers Irby studied reported reflecting on rounds, generally afterward, in what appears to be a self-driven evaluation and quality-improvement process.[23] Here is where a well-thought-out vision statement is useful. Reflecting on rounds, assessing what happened against a vision of what rounds might be, provides an internal monitoring system that is both stimulating and helpful. Attending physicians need feedback but, like students, rarely receive it. A good deal of the feedback can be internal, particularly if one's goals and directions are clear.

G. How will you make the time?

Along with providing orientation and feedback and, of course, demonstrating clinical expertise, a frequently reported characteristic of successful attending physicians is availability.[11,19] When one considers the array of duties the attending physician must assume, the increasing requirements of third-party payers, particularly the HCFA, for professional fee billing for teaching physicians (summarized in Figure 4), the recent estimate that inpatient teaching takes 23 hours per week seems realistic.[35] Clinician-educators whose job descriptions include outpatient clinical care and teaching obviously will have to modify their responsibilities when the are "on-service." Some academic institutions—and managed care organizations—regard this as inefficient and have pressed for the new role of "hospitalist," a physician whose clinical and teaching responsibilities are focused on the inpatient service. If this trend takes hold, we can expect to see a smaller and probably younger cadre of inpatient teachers.

NEW CHALLENGES

Be they hospitalists or hangers-on, tomorrow's inpatient teachers have a difficult row to hoe. The exigencies of the ACGME and HCFA have been described. Not yet mentioned, but hardly in need of emphasis, are the conflicts that arise when cost-containment measures such as shortened lengths of stay and the shift toward ambulatory settings are imposed on inpatient teaching services.

Throughout this article the legacy of Osler, the paradigmatic internist, has been invoked. His career provides a defining example of what internists as inpatient teachers can offer. But Osler and the ACGME? Osler and managed care? How much of Osler's teaching style still applies? To respond, we need to come to grips with the circumstances currently affecting inpatient teaching. Three issues need to be considered.

First, patients no longer dwell in the hospital as they used to. Dwell? Drive-through probably is more apt. How

FIGURE 4. Medicare's Final Rule for Teaching Physicians: issues relevant to inpatient teaching, effective July 1996.

General principles

1. Payment for inpatient physician services furnished in teaching settings will be provided if:

- the services are personally furnished by a physician who is not a resident; or
- the services are furnished jointly by a teaching physician and resident or by a resident in the presence of a teaching physician

2. Payment to the teaching physician when a resident participates will be governed by the physician fee schedule as long as the teaching physician is present during the key portion of the service, and documents his or her presence and participation at the appropriate level of Evaluation and Management Services

- for initial hospital care, an appropriate notation must be entered by the teaching physician documenting his or her participation in the three key components of this service (i.e., history, examination and medical decision making)
- if key elements of the service already are documented by the resident, the teaching physician's documentation can be a brief summary that ties into, confirms or revises the key elements recorded by the resident, and reflects the teaching physician's personal interview and examination of the patient

3. Payment to the teaching physician for subsequent hospital care requires the teaching physician to personally provide and document two of the three key components of service (i.e., the history, physical examination and medical decision making)

(NB: Teaching physicians should be aware of the complexities of these regulations and also their importance. This text cannot substitute for an institutionally derived, detailed plan and policy statement. It is presented here merely to illustrate the impact these rules can have on the duties of inpatient teachers.) (Adapted from memorandum No. 96-27 of the Association of American Medical Colleges.)

can the benefits of case-based teaching be exploited when the case patient has gone home? Many academic institutions have developed innovative solutions.[36,37] Firm systems linking inpatient and outpatient care can be helpful in this regard, as can follow-up clinics, and redefinition of the attending physician's role to include not only inpatient supervision but also outpatient supervision for follow-up visits (L. Bellini, personal communication). At a minimum, better lines of communication, ensuring that inpatient house officers are kept in the loop even as the evaluation shifts to outpatient settings, are necessary. Interestingly, Osler (Figure 1) expected his students to "keep track of their patients." More so now than ever before, follow-up reports and discussions of what those reports add to everyone's understanding of the case need to become a regular part of inpatient rounds.

Second, the profile of the inpatient service has changed. More patients are admitted for procedures, fewer for diagnostic evaluations. At a minimum, inpatient teaching must become more selective. Not every patient should be discussed, and the most instructive cases should be made available for teaching. As noted, case selection cannot be left to chance. But the changing profile of the inpatient service has another ramification: house officers may be less engaged. Short-stay patients and prearranged workups hardly afford opportunities for experiential learning; and new requirements for attending involvement leave fewer chances for residents to "fly on their own." At this point, many attending physicians may reminisce: nights alone in the intensive care units, just you, your *Washington Manual*, and a unit full of patients. But these same nostalgic physicians may be confusing service with education. Alone, or even with junior-level supervision, did we learn as much as we might have if there were an experienced teacher at our sides? Autonomy is desirable, but so is a well-educated physician.

Today's inpatient teacher must ensure that learners are challenged and meaningfully engaged with actual patient problems. To some extent, that can be brought about through discussion. "What would you do now?" "Why does—or doesn't—that make sense?" "What do we learn from all this?" Such questions engage the learners with the problem in a meaningful way. Ask them during or immediately after a bedside discussion, and not just one but all the students and residents can learn. Beyond that, inpatient teachers and department leaders responsible for organizing the teaching service need to ensure that well-supervised residents have responsibility for a panel of patients. This is mandatory in continuity practice settings (although changes in insurance arrangements threaten to deplete the residents' panel); it must be part of the inpatient experience as well. Supervision need not conflict with responsibility if inpatient teachers are committed to working closely with the residents they teach.

A third factor is the impact on inpatient teaching of various quality-improvement measures. It is easy to label critical pathways and institutionally sanctioned guidelines as mechanical or even anti-intellectual approaches to patient care. However, a recent patient of mine, admitted with a deep venous thrombosis, convinced me that need not be the case. In fact, with a critical pathway for management of this condition in hand, the time-honored questions occupied our attention, just as they always did: When to start coumadin? How many days of bed rest is best? What is the preferred level of anticoagulation? Moreover, these questions were center stage as the team probed the recommendations and critiqued the evidence from which the recommendations were derived. Well-done guidelines facilitate discussions of evidence-based medicine and rational clinical decision making. Controversies and conflicts—the stuff of learning—are adjudicated by critical pathways, but they are not swept away. The "old method," which encouraged residents to order every pos-

sible test and in so doing prove the textbooks right, can be laid to rest without, I should add, much remorse.

CONCLUSIONS

Coursing through this article is the assumption that inpatient teaching skills can improve. Christensen said it best: "The most fundamental observation I can make about discussion [and presumably other forms of teaching] is this: however mysterious or elusive the process may seem, it can be learned."[1] In this article I have tried to make inpatient teaching less mysterious by relating its practices to principles of learning. I have tried to make it less elusive by anchoring it to internal medicine's traditions and individual values and beliefs. And finally, I have tried to cull what is known about successful inpatient teaching practices and demonstrate the relevance of those practices to the current inpatient environment.

Elsewhere in this supplement, Skeff and others write about faculty development.[38] Formal instruction in inpatient teaching can be enormously helpful; it even may be necessary. It probably is not, however, sufficient. Formal instruction in inpatient teaching can provide the tools, but it does not, I believe, substitute for the labor, energy, or commitment, or necessarily for the vision of inpatient teaching that only can come from within.

Given the pace and profundity of changes in inpatient medicine today, it is easy for that vision to turn gray. How can beleaguered clinician-educators retain a vision of inpatient teaching that is focused and clear? How can they sustain an attitude toward inpatient teaching that allows teaching to represent the difference between medicine as a business and medicine as a profession? Inpatient teaching is, after all, one of the calling cards of internal medicine; no other specialty should do it better.

Writing about teaching in general, Brookfield recommends, "If you have forgotten what inspired you to become a teacher in the first place, and if you can't recall why you felt it was such an important way to spend your life, make a deliberate and repeated effort to revisit the source of your decision and to drink from the waters there." He goes on, "Take the time to think long and hard about the values, beliefs and convictions by which you want your [teaching] efforts to be guided. The benefits to be gained from such reflection are substantial."[24(p28)]

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REFERENCES

1. Christensen CR, Garvin DA, Sweet A. Education for Judgment: The Artistry of Discussion Leadership. Boston, Mass: Harvard Business School Press; 1991.
2. Hewson MG. Clinical teaching in the ambulatory setting. J Gen Intern Med. 1992;7:76–82.
3. Schmidt HG, Norman GR, Boshuizen HP. A cognitive perspective on medical expertise: theory and implications. Acad Med. 1990; 65:611–21.
4. Schon DA. Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions. San Francisco, Calif: Jossey-Bass; 1988.
5. Elstein AS, Shulman LS, Sprafka SA. Medical Problem Solving: An Analysis of Clinical Reasoning. Cambridge, Mass: Harvard University Press; 1978.
6. Perkins DN, Salomon G. Are cognitive skills context-bound? Educ Res. Jan–Feb 1989:16–25.
7. Huddle TS, Ende J. The clinical clerkship in America: one hundred years of learning from experience. J History Med Allied Sci. 1994;49(4):483–503.
8. Samuel Bard, quoted in Rosenberg C. The Care of Strangers. New York, NY: Basic Books; 1987:194–95.
9. Shulman LS. Toward a pedagogy of cases. In: Shulman JG. Case Methods in Teacher Education. New York, NY: Teachers College Press; 1992:1–30.
10. Ende J. Learning and emotions. Careers Intern Med. 1995;11(1).
11. Mattern WD, Weinholtz D, Friedman CP. The attending physician as teacher. N Engl J Med. 1983;308:1129–32.
12. The Accreditation Council for Graduate Medical Education. Program Requirements for Residency Education in Internal Medicine. In: American Medical Association's Graduate Medical Education Directory 1996–97. Chicago, Ill: American Medical Association; 1996:72–80.
13. Daloz L. Effective Teaching and Mentoring. San Francisco, Calif: Jossey-Bass; 1986.
14. Shankel SW, Mazzaferi EL. Teaching the resident in internal medicine: present practices and suggestions for the future. JAMA. 1986;256:725–9.
15. Kroenke K. Attending rounds: guidelines for teaching on the wards. J Gen Intern Med. 1992;7:68–75.
16. Medio FJ, Wilkerson L, Reinhard JD, Maxwell JA, Cohen RM. Improving teaching rounds: action research in medical education. Proc Res Med Educ. 1984;23:283–8.
17. McLeod PJ, Harden RM. Clinical teaching strategies for physicians. Med Teacher. 1985;7:173–89.
18. Irby DM. Clinical teacher effectiveness in medicine. J Med Educ. 1978;53:808–14.
19. Irby D, Rakenstraw P. Evaluating clinical teaching in medicine. J Med Educ. 1981;56:181–6.
20. Stritter FT, Hain JD, Grimes DA. Clinical teaching reexamined. J Med Educ. 1975;50:876–82.
21. Irby DM. How attending physicians make instructional decisions when conducting teaching rounds. Acad Med. 1992;67:630–8.
22. Irby DM. What clinical teachers need to know. Acad Med. 1994;69:333–42.
23. Irby DM. Three case studies of teaching rounds. Acad Med. 1994;69:947–53.
24. Brookfield SD. The Skillful Teacher. San Francisco, Calif: Jossey-Bass; 1990.
25. Engel GL. The deficiencies of the case presentation as a method of clinical teaching. N Engl J Med. 1971;284:20–4.
26. Fitzgerald FT. Bedside teaching. In: Chief Residents' Manual. Washington, DC: Association of Program Directors in Internal Medicine; 1993.
27. Eble KE. The Craft of Teaching. San Francisco, Calif: Jossey-Bass; 1981.
28. Kasulis TP. Questioning. In: Gullette MM, ed. The Art and Craft of Teaching. Cambridge, Mass: Harvard-Danforth Center for Teaching and Learning; 1982:38–48.
29. Pratt D, Magill MK. Educational contracts: a basis for effective clinical teaching. J Med Educ. 1983;58:462–7.
30. Fitzgerald FT. Bedside teaching. West J Med. 1993;158:418–20.
31. Wang-Cheng RM, Barnas GP, Sigman P, Riendl PA, Young MJ.

Bedside case presentations: why patients like them but learners don't. J Gen Intern Med. 1989;4:284–7.
32. Linfors EW, Neelon FA. The case for bedside rounds. N Engl J Med. 1980;303:1230–3.
33. Romano J. Patients' attitudes and behavior in ward round teaching. JAMA. 1941;117:66407.
34. Simons RJ, Baily RG, Zelis R, Zwillich CW. The physiologic and psychological effects of the bedside presentation. N Engl J Med. 1989;321:1273–5.
35. Shea S, Nickerson KG, Tenenbaum J, et al. Compensation to a department of medicine and its faculty members for teaching of medical students and housestaff. N Engl J Med. 1996;334:162–7.
36. Wartman SA, O'Sullivan PS, Cyr MG. The service/education conflict in residency programs: a model for resolution. J Gen Intern Med. 1990;5:S59–69.
37. Czarnecki M, Wallenstein L. Reorganization of the internal medicine residency program into a firm system. In: Association of Program Directors in Internal Medicine, The Educational Clearinghouse. Washington, DC: APDIM; 1995.
38. Skeff KM, Stratos GA, Mygdal W, DeWitt TA, et al. Faculty development: a resource for clinical teachers. J Gen Intern Med. 1997;12(suppl 2):S56–S63.

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