

The Five-Minute Moment



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ABSTRACT

In today's hospital and clinic environment, the obstacles to bedside teaching for both faculty and trainees are considerable. As electronic health record systems become increasingly prevalent, trainees are spending more time performing patient care tasks from computer workstations, limiting opportunities to learn at the bedside. Physical examination skills rarely are emphasized, and low confidence levels, especially in junior faculty, pose additional barriers to teaching the bedside examination.

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To adapt to the challenges of today's evolving teaching climate, we have adopted the philosophy that a physical examination skill can be demonstrated in 5 minutes or less (the 5-minute moment) but augmented by narrative, elements of history, the use of story to provide clinical significance, and pearls to magnify the effect on the learner. Through this instructional technique, confidence and enthusiasm can be built in even novice instructors, while acknowledging the increasing time demands our millennial trainees are facing. The 5-minute moment is a simple model that can be easily learned, practiced, and taught to promote teaching at the bedside.

Ever since Sir William Osler brought medical students out of the lecture hall and into the wards for clinical training, teaching at the bedside has been an important and time-honored means of clinical education. The Accreditation Council for Graduate Medical Education states that bedside teaching is one requirement of patient-based instruction for the internal medicine program.¹ Until recently, this form of teaching took place

during attending rounds; throughout this time, the medical team made decisions about the treatment plan after listening to the patient's story and performing a thorough physical examination. It was also during this time that the senior physician taught the more junior physicians and medical students how to look for and interpret physical findings.

The explosion of imaging tools and laboratory testing has considerably increased the raw data that pertain to every patient, and as a result, physicians are spending many more hours in front of computers, often at the expense of being with the patient.^{2,3} The "iPatient" appears to get far more attention than the living, breathing patient,⁴ a sentiment that most patients would agree with. Trainees commonly begin to feel that the electronic health record represents a more reliable and comprehensive source of information than the interaction with the patient.² Moreover, in the current era of duty hour restrictions and competing demands for time, opportunities for bedside teaching have become increasingly rare.⁵ The morning hours, traditionally reserved for rounds at the bedside, have been encroached on by teaching lectures, meetings with the multidisciplinary team, discharge planning, and the rush to ensure that patients are discharged before noon. Thus, there are few opportunities for an attending to round at the bedside with the full team.

Indeed, the emphasis on productiveness has made it increasingly common for trainees and attendings to see the patient separately. Multicenter observational studies have shown that attending rounds vary considerably in audience,

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content, and duration.⁶ As a direct result, physical examination skills are rarely emphasized. For junior attendings, diminished confidence in their own skills and lack of faith in the notion of a bedside examination (often because they were not instructed sufficiently in this manner during their own training) pose additional barriers to teaching the bedside examination.⁷ Chalk talks or “card flipping” in a team room can feel more comfortable all around. A trainee is more likely to receive feedback on whether physical examination elements were charted in the electronic health record than on how the actual examination maneuver was performed.⁸ It should not be a surprise that residents rarely improve their examination skills much beyond their first few months of internship.⁹

Studies show that physician burnout has been increasing, often related to the hours physicians are forced to spend in front of the computer.¹⁰ Spending this much time away from the patient and on the computer diminishes the joy of being a physician. At a time when cognitive knowledge about medical illness is both democratic and easily accessed, there are few things in medicine as satisfying as examining a patient and making a diagnosis based on the examination findings. The ritual itself is of importance,¹¹ and most physicians recall episodes when a thorough physical examination prevented the patient from having to undergo invasive and expensive studies. Many diagnoses can easily be made by a thorough physical examination (eg, herpes zoster, cellulitis, Wernicke encephalopathy, to name just a few). A recent study by our group catalogued the types of oversights and the consequences when simple physical findings are overlooked: The result is expensive testing, diagnostic delay, therapeutic misadventure, and even surgical misadventure.¹² The recent Institute of Medicine Report, “Improving Diagnosis in Health Care,” has made explicit reference to the importance of the history and physical examination skills, and mentioned our pedagogic method, the Stanford Medicine 25, as one such means of improving diagnostic skill.¹³

As the healthcare and teaching landscape in America continues to change, it is crucial to keep teaching basic time-honored bedside skills. There are few templates that exist to offer the novice attending some help as they attempt to teach at the bedside, although the more experienced teacher may consciously or subconsciously have such a template. To fill this gap, we have codified and taught a technique we call the “5-minute bedside moment.” **Table** The 5-minute bedside moment is a pedagogic tool that emphasizes the physical examination, taking into account the limited opportunities at the bedside. The philosophy of the 5-minute bedside moment is that a physical examination skill can be demonstrated in 5

minutes or less but also can be augmented by narrative, by elements of the history of medicine, and by the use of story, literary allusions, anecdotes, and even humor to provide clinical significance, pearls that leave the learners with something memorable that they themselves can both incorporate into their own teaching and practice and pass on to others.

This framework has proven useful in the training of our own clinical faculty who are heavily engaged in teaching and in conference workshops, coaching attendees with a wide range of teaching experience,¹⁴ including our recent national workshop where attendees saw examples and demonstrations of the 5-minute moment, and then developed their own.

The 5-minute bedside moment consists of the following 2 elements: (1) a narrative to explain the context and the usefulness of the maneuver (often, a case vignette or a historical anecdote will help

the learner remember the technique more easily); and (2) the demonstration of the physical examination finding. This demonstration also should include the interpretation of the finding and cover common errors in the technique.

DISCUSSION

Teaching frameworks such as the 5-minute bedside moment can help organize material and provide structure for junior faculty as they transition from the role of trainees to teachers. Although weaving instructional content into clinical care can be challenging, teaching even in brief intervals can make a significant impression on the learner.¹⁶ Established teaching models such as the 1-minute preceptor help teachers to impart clinical knowledge on the learner during a busy clinic day.¹⁷

The obstacles to bedside teaching for both faculty and trainees are considerable today during morning rounds. Learners are distracted by the anxiety of uncompleted work, and teachers can be discouraged by their self-perceived lack of skills, competing responsibilities, and learners with limited bandwidth. The 5-minute bedside moment is a simple model that can be easily learned, practiced, and taught to help ease this reluctance. This bedside demonstration of physical examination skills taught with limited time available places clear emphasis on the satisfaction of “reading” the body as a text and the downsides to missing the low-hanging fruit, the obvious abnormality on physical examination that influences patient outcome. In addition, good examination technique fulfills a satisfying ritual at the bedside that is appreciated by patient and physician.¹¹

As confidence grows and expectations of teaching rounds evolve, this model can be adapted and extended to morning

CLINICAL SIGNIFICANCE

- Bedside teaching during attending rounds has become more challenging because of competing demands on trainees.
- Junior faculty who rarely experienced bedside teaching during their own training may be less likely to role model physical examination technique.
- Using pedagogical tools, such as the “5-minute moment,” can facilitate the teaching of physical examination skills.

Table Example of 5 Minute Bedside Moment

Narrative

The narrative is the story. It is the foundation of why teaching this physical examination technique is important. The ingredients of the narrative include historical perspectives, clinical vignettes, or any information that provides value to why you are taking the time to teach your examination topic.

Example

Let's examine the ankle reflex today. It's a great test because it is so technique dependent. With good technique, you can confidently say the "ankle reflexes are absent (and that their absence is not a failure of your technique). Absent reflexes also can mean that you have just diagnosed a neuropathy, particularly if the knee reflexes are brisk. It would be a shame to send patients for electromyograms that are costly and painful for lack of this kind of skill."

Historical Perspective

When available, a historical context can provide greater appreciation for the physical maneuver and facilitate a better teaching environment among learners.

Example

Did you know that the reflex hammer's history is rooted in wine? The story of the reflex hammer dates back to 1761 when Joseph Leopold Auenbrugger first described the art of percussion adapted from his father's method of tapping wine caskets to measure the level of remaining wine. Percussion was initially performed with a hammer, but it fell out of use when the fingers were used as pleximeter and hammer. The hammer would later be adapted by physicians for the deep tendon reflexes when Erb and Westphal described the diagnostic utility of the knee-jerk reflex, about 1875.¹⁵

Tips

It is useful in a larger and longer session to bring a collection of different hammers from the Taylor to the Queen's Square. We favor hammers that have a good weight, particularly for the novice. Bring an article on the history of the reflexes or provide a reference to one.

Clinical Vignette

An anecdote from personal experience or a compelling case that you learned from. This is an opportunity to make the case for why this examination maneuver remains important.

Tips

Perhaps include a bad outcome from a missed examination finding.
Or add another sign in. Had there been tenderness over the third thoracic vertebral spine, teach the formula for finding the corresponding spinal cord segment beneath that vertebral level.
Because the cord ends at the lower border of L1, there is no 1 to 1 correspondence between vertebral level and spinal segment level.

Example

Mr Jones presented with progressive weakness in both legs and arms. The examination showed bilateral weakness in all 4 extremities. There was normal sensation below the clavicle, normal cranial nerves, and normal mentation. Deep tendon reflexes were very brisk, and there was ankle and patellar clonus. The Babinski and Hoffman reflexes were present with 3+ reflexes in all 4 extremities. The distinct constellation of findings suggested a transverse cord lesion. The differential would have been different had the reflexes been normal or absent.

Physical Examination Findings

Demonstrate on patients with abnormal examination findings when possible, but many maneuvers can be demonstrated without abnormal signs being present. Videos and images also can be a valuable resource. For the ankle reflex, we demonstrate 3 different ways of positioning the leg.

Interpretation	When applicable, include relevant terminology and clarification.	Example	Question: Can someone explain reflex grading? Answer: 0 absent, 1+ slight but clear response, 2+ a brisk and normal response, 3+ very brisk or exaggerated response, 4+ clonus	Tips	This may be discussed while demonstrating the reflexes, be they abnormal or normal.
Caveats and Errors	Invite learners to observe as you perform the reflex incorrectly and ask them what you have done wrong. Also, when the trainee performs the reflex, there is an opportunity for gentle correction of technique.	Example	When first using the reflex hammer, many learners tend to hold the hammer too high. This lowers the torque and can lead to a reflex that is falsely absent because adequate pressure is not applied quickly. Holding the hammer in too tight a fashion impairs the stroke.	Tips	This can be discussed while demonstrating the physical maneuver.

report or dedicated “Chief’s” rounds. In particular, we encourage our faculty to develop their own unique repertoire of 5-minute bedside moment moments on the basis of their own clinical experience and interests, a repertoire they can draw on during appropriate opportunities at the bedside.

CONCLUSIONS

In teaching at the bedside, the teacher is reenacting medical history and living the Osler adage, that a student who “studies medicine without books sails an uncharted sea, but (s)he who studies medicine without patients does not go to sea at all.”¹⁸ There remain compelling reasons to be at the bedside and to teach at the bedside, the most important one being that the bedside is where the patient is.

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