

# Bedside Teaching in Undergraduate Medical Education: Issues, Strategies, and New Models for Better Preparation of New Generation Doctors

## Review Article

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## Abstract

Bedside teaching is a vital component of medical education. It is applicable to any situation where teaching is imparted in the presence of patients. In teaching in the patients' presence, learners have the opportunities to use all of their senses and learn the humanistic aspect of medicine such as role modeling, which is vital but difficult to communicate in words. Unfortunately, bedside teaching has been on the decline. To investigate the reasons for the decline in bedside teaching, its importance and its revival, a review of literature was carried out using PubMed and other data bases. The review revealed that the major concerns of bedside teaching were time constraint, false preceptors' concern about patients' comfort, short stay of patients in hospitals, learner distraction by technology, lack of experience and unrealistic faculty expectation. Whatsoever the reasons, bedside teaching cannot be replaced with anything else. There are newer approaches of effective bedside teaching, and the core focus of all such approaches is educational process. A bedside teacher must learn how to involve patients and learners in the educational processes. Moreover, bedside teaching is the process through which learners acquire the skills of communication by asking patients' permission, establishing ground rules, setting time limit, introducing the team, diagnosing learner, diagnosing patient, conducting focused teaching, using simple language, asking patient if there is any question, closing with encouraging thanks, and giving feedback privately. It is most important to ensure a comfortable environment for all participants, the learner, the patient and the bedside teacher. Ongoing faculty development programs on educational processes and realistic faculty expectations may overcome the problems.

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**Keywords** • Bedside teaching • issues • strategies • new models

## Introduction

Bedside teaching is a vital component of medical education and one of the most effective ways to learn clinical and communication skills.<sup>1,2</sup> Evidence-based studies show that interpersonal and communication skills of doctors have a significant impact on patient care.<sup>3-6</sup> Bedside teaching is defined as teaching in the presence of a patient. Generally, it is thought that bedside teaching is applicable only to the hospital setting.

However, bedside teaching skills apply to any situation where the teaching occurs in the presence of a patient, including an office setting and long-term care facility.<sup>7</sup>

Sir William Osler (1849-1920), a renowned clinician-teacher, put emphasis on the importance of bedside teaching. In 1903 he stated "To study the phenomena of disease without books is to sail an uncharted sea, whilst to study books without patients is not to go to sea at all."<sup>8</sup>

Sylvius (1614-1672), a French practitioner after whom the 'Sylvian Fissure' was named, was one of the first to record his thoughts on teaching on rounds. He said that to lead students by hand to the practice of medicine, it was necessary to make them see patient everyday and get back the symptoms and physical findings. He also inquired from the students regarding their observation, thought and perceptions related to the patients' illness and the principles of treatment.<sup>9</sup>

As opposed to listening to a presentation or reading off a blackboard, teaching in the presence of patients allows the learners to use nearly all of their senses such as hearing, vision, smell and touch to learn more about the patient. There are many skills, particularly the humanistic aspects of medicine, which cannot be taught in a classroom.<sup>8,10</sup> A comprehensive physical examination can provide 70% diagnosis, while 56% of the diagnosis is derived only from a patient's history.<sup>11</sup>

In spite of such importance and historical support for bedside teaching, Landry and colleagues,<sup>12</sup> reported that teaching at the bedside was declining. Many studies exposed that a substantial number of doctors perceived their own competencies as inadequate.<sup>13-15</sup> La-Combe,<sup>16</sup> identified that actual teaching at the bedside with emphasis on history taking and physical diagnosis has declined from 75% in the 1960s to 16% in 1978 and even lesser today. Therefore, the questions of how important the clinical teaching is, and why it declines arise. The purpose of this review article is to highlight three major areas: first, to reinforce the importance of teaching at the bedside, second, to identify the major issues or reasons for the decline of bedside teaching and third, to prescribe the strategies and newer models or approaches of bedside teaching that might help prepare future competent medical practitioners.

## Methodology

The literature search on bedside teaching was carried out using PubMed, Ovid, ProQuest,

and ERIC databases between the year 1980 to 2009, and selected papers were retrieved. The literature search was performed based on the salient key words; 'bedside teaching, importance of bedside teaching, issues in bedside teaching, strategies in bedside teaching, new models in bedside teaching, patient based teaching and clinical teaching.' All searches were limited to English language publications. Publications that related to search elements were retained. Unreferenced and unrelated articles were excluded. All other articles and books referred to in this review were cross-checked for consistency. A quality analysis was performed to investigate the concepts, importance, problems and the strategies to overcome those problems in bedside teaching.

## The Importance of Bedside Teaching

By providing a chance for asking relevant question to obtain history and develop physical examination skills in a sympathetic manner, teaching at the bedside presents an excellent opportunity for the modeling of professional behaviors. It provides active learning in real context, observes students' skills, increases learners' motivation and professional thinking, integrates clinical, communication, problem solving, decision making and ethical skills, and improves patients' understandings.<sup>1,2,17,18</sup> Bedside teaching allows direct feedback, which strengthens learning, from the patient.<sup>19,20</sup> It also offers an opportunity for learners to observe and learn a humanistic approach from an experienced clinician.<sup>7,19,21</sup> The clinician-teacher is able to demonstrate the role modeling of skills and attitudes, which are vital but difficult to communicate with words.

## Reasons for Declining Bedside Teaching

The most important reasons for the decline of bedside teaching are time constraint due to pressure to see more patients with increased record keeping, shortened hospital stays of patients,<sup>22</sup> and preceptors' worry about patient comfort.<sup>23-25</sup> In addition, faculties' unworkable expectations, lack of confidence or experience, uncomfortable role of the bedside teacher, learners' distraction by technology, and others' low recognition of the role lead to the decline in bedside teaching. The general feeling about bedside teaching is that there is erosion of the teaching ethics, devaluation of teaching, and a great deal of unobtainable skills.<sup>26</sup> Despite the belief that bedside teaching is the most effective method to teach clinical and communication

skills, the frequency of bedside rounds is decreasing. It is believed that this is a major factor causing a sharp decline in trainees' clinical skills.<sup>8</sup> Now a days, clinical skills are increasingly taught in preclinical courses by integrating clinical scenarios. The effects of this educational reform need further research to investigate the competencies of graduates entering higher professional training.<sup>27</sup> Whatever the causes, the reality is that teaching at the bedside is declining.<sup>2,12</sup>

### Strategies to Overcome the Decline of Bedside Teaching

#### *Strategy 1: Allocate some time with detailed planning*

The bedside is valued as a site of learning from a real patient that is alive and tangible. It is, therefore, easier for learners to recall and remember the clinical situation,<sup>10</sup> and a clinician-teacher should allocate some time for it, which only needs a detailed planning. This may add a little time to that normally spent with the patient, but could provide a major experience. The key to perform more bedside teaching is to start without unrealistic expectations and gradually provoke how to improve it. We may look at the list of our patients, all of whom, with whatever their diagnosis, have histories and physical findings, even though we may feel that there are no interesting teaching opportunities. More routine patients are good cases to strengthen observation skills. Get the learners involved with a specific purpose. Use the material you have, and review your own physical exam skills. There is teaching and learning opportunity in any encounter. The allocation of some time with detailed planning can provide a significant learning experience.

#### *Strategy 2: Raise patients' comfort through a high level of professional approach, and ignore false preceptors' concerns about patients' discomfort*

Although researchers recognized preceptors concern about patient's discomfort while discussing the bedside teaching,<sup>23-25</sup> Nair et al.<sup>23</sup> reported that a majority of patients enjoyed and benefited from bedside teaching by understanding their own problems. Preceptors' concern about bedside teaching that may cause patients' discomfort is not true.<sup>28</sup> Nevertheless, patients' comfort and discomfort depend upon the type of measures and the way that those measures are implemented at the bedside. The emphasis of new competence-based learning does not only relies on the

performance of the tasks that a doctor does, but also on how the tasks are approached and the levels of professionalism shown.<sup>19</sup> A teacher in a clinical environment has a complex task, which can be described as; (1) an information provider, (2) a role model, (3) a facilitator, (4) an assessor; (5) a curriculum and course planner, and (6) a resource material creator. Many clinicians assume the task without adequate preparation or orientation.<sup>29</sup> An advanced notice of visit to a patient, time limitation, focused teaching, role modeling, explanation of all examinations and procedures to the patient are some approaches to raise patients' comfort in bedside teaching.

#### *Strategy 3: Raise teachers' comfort at the bedside through a preparatory phase*

As the patients' comfort is a vital consideration, teachers' and learners' comfort also are of a great importance. It is important to maintain a comfortable environment for all participants. Avoid the teaching of topics that are less comfortable. One should feel as comfortable as possible in the role as bedside teacher. Preparation is a key element to conduct effective rounds and increase teachers' comfort at the bedside. For clinician-teachers who plan bedside rounds, especially if not familiar or not comfortable with the technique, a preparatory phase would be of invaluable help in raising their comfort level.<sup>30</sup> They should be familiar with the clinical curriculum that is to be taught.<sup>31</sup> They should also investigate the actual clinical skill levels of all the learners, improve their own history taking and clinical examination skills, learn from expert clinicians, and use learning resources on specific areas of clinical examination. Ongoing faculty development programs could be an adjunct to raise bedside teachers' comfort.<sup>32</sup> Bedside teaching is successful when people involved in the activity namely, the teacher, patients and learner feel better afterwards.<sup>16</sup>

#### *Strategy 4: Make a focused-teaching of what you want to achieve at the bedside for each encounter*

Bedside teaching requires specific skills and techniques, which help make it more efficient.<sup>8</sup> It needs to be decided what particular system is to be taught at the bedside. For example it has to be decided what specific aspects of bedside teaching including history taking, physical examination, patient counseling, breaking bad news are going to be emphasized. A planned activity is required to keep everyone engaged and involved in the teaching

and learning. Those patients, who would be good for bedside teaching, should be selected preferably using the learners' input. It needs to be decided how much time is to be allocated to a given patient. Bedside is a place for positive learning, and not a place for pointed questioning or criticism of learners. Bedside teacher must use the skills and attitudes that come naturally most often, and should gradually hone and add new skills with repeated visits to the bedside. They should make a focused-teaching of what they want to achieve at the bedside for each encounter.

Teachers' involvement in clinical, research, administrative and educational duties, and learners' distraction by technology have resulted in the decline of bedside teaching, and have led to fewer students' encounter with patients in practicing clinical skills and unsupervised feedback.<sup>33</sup> So, what should be done, and how the graduates who will be the future health care provider of a nation should be prepared? The General Medical Council recommends that general clinical training is an integral part of basic medical education, the aim of which includes the development of competence in history taking, clinical examination, interpretation and selection of diagnostic tests, as well as diagnosis and decision making skills.<sup>31</sup> The council also requires that doctors to be honest and trustworthy, treat patients politely and considerately; listen to them, respect their dignity, privacy, and rights to be involved in clinical decision making process, respect their spouses, and respect and protect confidential information. These are the core values of clinical medicine.<sup>33</sup>

To overcome the problems that are encountered in bedside teaching one just need a sufficiently prepared careful planning. The planning should include the identification of the followings. 1) a description of the learner whether he (she) is a first or a fifth year student, a senior house officer in psychiatry or else, 2) a description of the behavior that the learner should demonstrate such as the ability to inform the patient, ability to examine or elicit, 3) a description of the condition in which the learner will demonstrate the learning such as the context for a follow up patient, a palliative setting, office setting, etc, 4) a description of the extent to which the learner can function in a responsive and honest manner.<sup>34</sup> The implementation of an effective bedside teaching needs careful planning and coordination.<sup>35</sup> Teachers and educational managers should be motivated and trained,<sup>34,36,37</sup> to adopt the changing needs. The change in medical education is currently a

worldwide phenomenon,<sup>38</sup> and the changing the needs of teaching at the bedside must be adopted to prepare doctors who are able to fulfill the needs of the community.

Below is a selection of some models that might help us to think about and structure bedside teaching.

### **Three Domain-Model of Best Bedside Teaching Practices**

Janicik and Fletcher (2003),<sup>2</sup> suggested a new three domains "Model of Best Bedside Teaching Practices," which emphasizes on (1) attending to patient comfort, (2) focused teaching, and (3) group dynamics. Patients' comfort can be achieved through established rules of conduct including asking the patient ahead of time, introducing all, providing a brief overview, avoiding technical language, teaching with data about the patient and providing a genuine encouraging closure. Focused teaching session should be relevant to an individual patient's and learner's needs. To make the teaching-focused, we have to diagnose the patient, diagnose the learner, target the teaching and provide constructive feedback privately. Group dynamics is very important to keep the entire group active during the session. It can be achieved by setting goals, assigning roles, setting a time limit and paying attention to the entire group.

### **Patient-Based Models**

Doshi and Brown (2005),<sup>19</sup> reported that about a number of patient-based teaching models such as, (1) shadowing (role modeling), in which trainee shadows a more senior clinician and learns by observation, (2) patient-centered model, in which some patients are allocated to trainees, and they follow their progress from the start to end of episode of illness, (3) reporting-back model, in which trainee assesses the patients, and reports back to the trainer, (4) direct observation in which the trainer observes the trainee's performance directly, (5) video-conferencing interviews in which the trainee's interview with a patient is recorded and later viewed with the trainer, and (6) case conference in which the trainee presents a case, which is discussed by a wider audience.

### **Five-Step "Microskills" Model**

Neher et al,<sup>39</sup> presented a five step model that utilizes simple, discrete teaching behaviors or "microskills". The skills that make up the model

are (1) asking for a commitment, (2) probing for underlying reasoning, (3) teaching of general rules, (4) reinforcing what was done or providing positive feedback, and (5) correcting mistakes. The model can be used as a ready frame work for most clinical teaching encounters.

### Triologue—A Model of Interaction between Three Groups of Players

McKimm,<sup>40</sup> developed a model named as “Triologue”, which focuses on the relationships and interactions between three groups of players with different principles, background and expectations. The three groups, which are clinicians (as teachers), learners and patients, help explain and analyze complex clinical teaching and learning activities through the metaphor of a continually shifting dialogue. The model provides clinical teachers with a framework for scaffolding learning, facilitating learner and patient active engagement in the learning process, ‘reflecting in action’ to promote student learning whilst simultaneously attending to the needs of the patient, helping clinical teachers to pay conscious attention to the relationship and emerging dialogue between players.

### Conclusion

High quality medical education is a fundamental aspect of high quality medical care. Since clinical practice involves the diagnosis and management of patients’ problems, the teaching of clinical medicine should be carried out on real patients. Bedside teaching cannot be substituted. We cannot discard a teaching tradition that has a long valued history of teaching the humanistic aspect of medicine just due to time constraint and some other insufficient reasons. We must give appropriate importance to bedside teaching. If we truly want a change in bedside teaching, we must budget a little time for bedside teaching with rightful planning. We should be able to make a patient’s visit a teaching visit with very specific purpose. But the most important factors are those that are within the willingness of the instructors to adopt to any change. There are newer models and strategies for effective bedside teaching. The core message of such models is the educational process. A bedside teacher must learn how to involve patients and learners in the educational process. Maintaining a comfortable environment for all participants; the learner, the patient and the bedside teacher is very important. It is through this process that the learners

acquire the skills of observation, communication, examination and professionalism. Medical schools should give due importance to bedside teaching, and must renew and increase the efforts to get ahead of this past shapers of the profession.

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