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## Short Communication

## Bedside pharmacology — Need of the hour

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Medical students of present era have to prove their efficiency in every step of life. To do so one has to become a competent doctor. This is possible only with the proper knowledge and application of the rational therapeutics in clinical practice. This can happen only when the students are motivated and taught medicine in an innovative way that can produce better understanding and learning. The clinical aspect of medicine is usually touched in very theoretical way at present. This way of teaching pharmacology lacks the proper correlation of medicine and the disease. We are still sticking to the age-old methods of didactic lectures. Though things are changing with Competency Based Medical Education, there is a long way to go as far as implementation is concerned. Ultimately, teachers have to be innovative in their approach of teaching especially when it comes to preclinical and paraclinical subjects.

Presently, *Pharmacology Teaching* is facing major challenges, one of which being the fact that at most of the institutes of India, teaching merely comprises of a series of didactic lectures using power point presentations (or other audiovisual aids).<sup>1</sup> Even the practicals in pharmacology don't seem to have any direct clinical correlation. Teaching needs to be shifted from classroom to bedside. Analysis of the actual treatment received by the patient in the hospital in bedside clinics seems to be the most effective way of teaching rational pharmacotherapy and surely this could

be one small, but decisive step towards a much-required revolution in academics

The primary aim of pharmacology is to train students in rational therapeutics. However, whether or not this objective is achieved by our present, orthodox way of teaching is debatable. This dynamic and rapidly evolving branch of medicine demands a concurrent evolution and innovation in our teaching technique as well.

Students fail to see importance of pharmacology in clinical practice, and hence it has arguably become one of the most disliked subjects by the medical undergraduates. To some extent, this harsh reality reflects our inability to introduce them to the wonders of this beautiful subject and infuse a sense of excitement regarding the same. Much of the emphasis to date has been in the translation of classroom teaching to the clinic. However, an area of great potential is the expansion of patient insights and real-world clinical data to improve understanding of the students regarding drugs, by exposing the students to the real patients and their medical management. This may enhance their concept of rational therapeutics. Hence, reverse translation completes the cycle of knowledge gain by capturing critical learnings from the classroom to the bedside, and back to the students again by reflecting on the same. As teachers in this field, we should take this as a challenge. Efforts need to be directed towards creating interest in this subject and adding some element of reality by making it more clinical. I do agree that modern teaching trends in

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Annexure.1		
Name of the practical –	Date	
Patient details – Name	Age/Sex	Income
Indoor/Outdoor	Ward no. /Bed no	
Diagnosis	Comorbid conditions	
Medical management:		
Important instructions if any:		
Adverse Drug Reaction if any:		
Comments		

medical education do exhibit some form of a paradigm shift from the conventional classroom teaching methods by incorporating nonconventional teaching methods, like problem-based learning, seminar presentations, role plays and quizzes. The question is “Are they enough to clarify their concept of rational pharmacotherapeutics and create interest in the subject in students’ minds”?

Creative teaching module can be a part of theory as well as practical classes. Teaching-Learning strategies which focus on critical thinking and clinical reasoning have to be identified. Active, student centric learning must replace the entire process of passive learning. Reforms in education are required to promote deep understanding by incorporating medical management of the actual patient rather than following a superficial approach of problem-based learning. Students are an integral part of any education system and, therefore, we as teachers, need to spur our efforts to stimulate the students to be responsible for their own learning, by involving them to learn creatively in order to emerge as true professionals in the future.

The question remains, how can it be incorporated in already limited hours allotted to pharmacology? With the new CBME syllabus, 138 hrs have been allotted to practicals, small group learning, tutorials etc. while 80 hrs to the theoretical didactic teaching. So, implementation of bedside pharmacology concept shouldn't be a problem. Pharmacology practicals do include case studies like congestive cardiac failure, diabetes mellitus, epilepsy, hypertension etc. A batch for practicals consists of approximately 50 students, which can be further be divided into 5 groups. Each group will have to visit the hospital and get the details of the patient as given in Annexure 1.

They will have to analyze the medical management of the patient giving justification of the prescribed drugs. This will also help them to understand the basis of selection of a particular drug over others, factors taken into account while prescribing a drug like co-morbid condition, drug interactions, pharmacoeconomics etc. History regarding important instructions given to the patient and adverse drug reactions if relevant can also be elicited. Emphasis of this practical will be on medical management and not on the diagnosis and clinical examination, so these practicals can be conducted in the college without disturbing the hospital decorum.

This transition and reformation by incorporating bedside pharmacology will surely transform the undergraduates' outlook of the subject. They will develop more rational thinking towards medical management of the patients. They will also be able to correlate pharmacology clinically which will help in igniting curiosity in their minds, with understanding of the concept of rational pharmacotherapeutics.

### 1. Source of Funding

None.

### 2. Conflict of Interest

None.

### References

1. Singh P, Kumar BD, Lakhani P, Tutu S. Impact of Teaching Clinical Aspects Of Cardiovascular Pharmacology At Bedside . *Int J Pharm Sci Res.* 2017;8(1):301-4. doi:10.13040/IJPSR.0975-8232.8(1).301-04..

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