Original Article

Preliminary Experience with learner-centered Evidence Based format Morning Report

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Abstract

Objective: To observe the advantages of implementing learner - centered evidence based format morning report at King Abdulaziz National Guard Hospital, Alhasa, Saudi Arabia.

Methods: We modified conventional morning report by changing to a semicircular seating pattern to promote small group interactive discussions during case presentations. A facilitator was appointed to guide the sessions and asking problem based questions emanating from patient centered discussions. The question was formulated based on Evidence based medicine principles on a modified educational prescription and assigned to a volunteer to be answered in subsequent morning report sessions. Volunteers were asked to mention the search strategy, results and the evaluation of the process. The perceptions of the participants regarding the new format were assessed by a 17-statement questionnaire rated on Likert scale.

Results: A total of 46 different types of questions were asked during the initial 3-month period. All of them were answered. Participants utilized Medline and UpToDate® the most to retrieve evidence. The commonest evidence retrieved were abstracts/journal articles followed by UpToDate® articles. The new format was well perceived by the participants.

Conclusion: Evidence based medicine can be applied successfully in the setting of morning report. Semicircular seating pattern and presence of facilitator promotes interactive discussions (JPMA 57:120;2007).

Introduction

Morning report (MR) has become an important component of most of the residency training programs.[1] It provides forum for academic discussions, resident evaluation, and several non-medical activities.[2] In recent years evidence based medicine (EBM) has been utilized in several teaching activities including morning report.[3-5] As an evidence-based learner it is important to realize that practice of EBM starts with assessment of the patient, asking question, acquiring updated knowledge, analyzing evidence, applying that evidence to the patient and eventually reassessing the patient. These six As are the cornerstone for practicing EBM. The most important outcomes of EBM education and practice are durable skills along with increased application of EBM principals to patient care resulting in improved patient care decisions, improved patient care outcomes, and improved use of health care resources.[4,6]

Incorporating EBM practice in morning report is a challenging task. The presence of specialists and sub-specialists at times influence decision making by strong opinion based statements rather than evidence based. We tried to incorporate EBM practice in our morning report and our preliminary experience is presented here.

Materials and Methods

King Abdulaziz National Guard Hospital, Alhasa is a 310-bedded hospital. Department of medicine has several academic activities, the most pivotal of which is the morning report. Patients are admitted to general medical service and combined coronary care/intensive care unit. Staff physicians, with background of several years of experience in medicine and critical care, act as front line doctors. Pre-scholars accepted for fellowship training in North America, rotating interns and medical students support them. Consultants make daily rounds on these patients during daytime and after hours if needed.

Our prior format of morning report comprised of daily case presentations and open discussion amongst the staff (12 to16 in number) who sat in rows in front of the presenting physician. In pursuing the global trends of evidence based medicine and small group learning, we restructured our morning report. The newly introduced format had a semicircular sitting arrangement for consultants, staff physicians, interns, medical students and pharmacists. The presenting physician sat besides the facilitator at the beginning of the semicircle. All prior admissions were presented in brief and one case was selected for detailed presentation by the facilitator. The facilitators rotated on daily basis from different subspecialties of medicine. Participants were allowed to ask questions or make comments after seeking permission from the facilitator.

Prior to the implementation of the current format two detailed sessions were conducted on developing well-built clinical questions on PICO (patient/problem, intervention, comparison intervention and outcome) format and searching medical literature. An additional session on learning strategies including small group dynamics was also conducted.

In the changed format, questions asked during case presentation and discussion were noted down and converted into PICO format. Searchable question was assigned to a volunteer from the audience to be answered on a specific date. Volunteers were required to mention their search methodology and information source for the retrieved evidence.

Internet facility was already available throughout the hospital and library with access to full text articles. Limited UpToDate® (a constantly updated evidence-based medicine service available on the web or compact discs) subscriptions were available to individual consultants.

Searchable questions asked were categorized in to therapy, prognosis, harm, etiology, diagnosis, differential diagnosis, prevention and management. Search methodology, information source for the retrieved evidence and the hard copies were collected for data collection and archiving.

Three months after the inception of the changed format, participants anonymously graded a 16- statement instrument pertaining to the changed format on a 5-point likert scale.

Results

During the first 3-month period a total of 46 questions were raised during the morning case presentations over 66 sessions. The distribution based on the type of questions is shown in Table 1. All 46 questions were searched using various literature sources (Table 2). Medline provided by Pubmed® was the most frequently used search source (47.8%) followed by UpToDate® (17.4%). The eventual reproduced evidence (hard copy) in morning reports was mostly in the form of abstracts or journal articles as shown in Table 3. A survey addressing the seating arrangement, small group dynamics, and process of searchable question revealed positive response from the participants. The responses on a 5-point Likert scale are shown in Table 4. Most of the participants rated the new

Table 1. Distribution of searchable questions according to the type of question asked.

Question category	Number of questions asked (n=46)	Percentage of questions asked
Therapy	9	19.6
Diagnosis	11	23.9
Prognosis	2	4.3
Harm	9	19.6
Etiology	5	10.9
Differential diagnosis	2	4.3
Prevention	2	4.3
Clinical finding	1	2.2
Disease management	5	10.9

Distribution of searchable question according to the type of question asked.

Table 2. Distribution of search methodology used in various questions.

Search methodology used	Number of times used	Percentage
Medline® (PubMed®)	22	47.8
Evidence based sources/websites		
UpToDate®	8	17.4
Cochrane®	2	4.3
Ovid®	1	2.2
Other known	5	10.9
Internet search engines	2	4.4
Others*	6	13.0

*= Mosby drug consult, COPD GOLD website, ACP journal Club, Textbooks.

Table 3. Categories of retrieved evidence.

Information source for the evidence retrieved	Number of times	Percentage
UpToDate®	10	21.7
Journal article/Abstract	27	58.7
Website	3	6.5
Practice guidelines	1	2.2
Others	5*	10.9

*= Mosby drug book, ACP Journal club, Textbooks.

Table 4. Feedback from the participants.

Survey statements	Agree/ Strongly agree (Likert 1-2)	Neither agree nor disagree (Likert 3)	Disagree/ Strongly disagree (Likert 4-5)
1- Present "semi-circular questioning" seating allows more interactive discussion	100		
2- Facilitators follow the set format.	92.9	7.1	
3- Present format has improved the sense of participation	92.9	7.1	
4- Process of building searchable question is patient oriented.	100		
5- Awareness of developing searchable question has improved.	92.9	7.1	
6- Process of searching for evidence has improved.	71.4	28.6	
7- Answering searchable questions helps to ask more frequent questions during ward rounds	71.4	28.6	
8- Current format is useful in discussing issues not routinely covered in prior medical training	69.2	30.8	
9- Presence of medical students/Pharmacists detracted the objectives of morning report.	35.8	28.6	35.6
10- Learning atmosphere is more threatening as compared to conventional format.	7.1	14.3	78.6
11- Searching the answer of a question mostly requires less than 10 minutes.	35.7	28.6	35.7
12- Present format has improved critical thinking skills.	84.6	15.4	
13- Present format has created a learner-centered environment.	92.9	7.1	
14- Present format has improved your awareness to deal with small group learning.	92.9	7.1	
15- Present format has diminished the role of opinion-based medicine.	92.9		7.1
16- Present format is no different in productivity from conventional format.		14.3	78.6

Feedback from the participants.

format better than the conventional one. There was a general consensus that the new seating arrangement promoted more interactive discussions in a more congenial atmosphere where personal opinions were replaced by proven evidence.

Discussion

Practice of evidence-based medicine has gained immense attention both in undergraduate as well as postgraduate education worldwide.[7,8] More and more post graduate programs are incorporating EBM in their routine teaching and practice. There is enough evidence to suggest that EBM modifies attitudes, improves patient care outcomes and helps transform health care practitioners into life long learners.[4]

Several of our consultants went through EBM workshops, basic and advanced arranged at National Guard postgraduate training center in Riyadh. This triggered the need for incorporating EBM in routine patient care decisions and also to inculcate the habit of asking clinical questions in consultants, staff physicians, interns and medical students.

Our initial experience showed that most of the questions asked during EBM format interactive MR setting, were answered by physicians. Our main stress was to create an atmosphere where questions can be asked by anyone without any hesitation and then transform that question in to EBM format ready to be searched in medical literature. The fact that all the questions asked were answered showed the enthusiasm of the participants. Moreover the response from the participants was extremely positive for the process.

Studies suggest that didactic sessions are less likely to change physicians' behaviour than are interactive small group sessions.[9] The current format helped a great deal in understanding the small group dynamics by the participants as reflected from the survey.

The opinion about the time required to search the question was divided but 35% of individuals were able to find the evidence within 10 minutes. This possibly reflects prior experience of some participants with literature searching skills. Participants agreed that the new format promoted the critical thinking and made practice of medicine more exciting.

Participants tended to get their most useful information from two resources, UpToDate® and original articles via a Medline® search. These two sources complement one another in addressing most clinical knowledge gaps. UpToDate® combines both background information on disease epidemiology and pathophysiology, along with frequently updated information regarding the evaluation and treatment, making it a well-chosen resource to start. Fortunately, the recent emphasis on EBM has increased the quality and quantity of resources. With a wealth of pre-appraised, synthesized information available online, the practice of EBM is becoming less burdensome, less intimidating, and more efficient. Still, for many, lack of time, lack of resource awareness, and inefficient access remain significant hurdles.

We did not study the participants' behaviours prior to the new format. Moreover the effect of evidence based practice on clinical decision-making remains to be seen, as the real test will change the physicians' attitude in the light of evidence. We also did not analyze the critical appraisal skills of physicians' retrieved evidence though these skills are routinely addressed in our evidence based format journal club. The task of critical appraisal requires certain skills but with the availability of several predigested evidence-based databases (UpToDate®, Cochrane library, ACP journal club etc.) the task has been made easier and applicable even for the beginners in evidence-based practice.

Conclusion

Small group EBM format morning report promotes participation, interactive discussions and help in generating clinical questions. In our pilot study we were able to demonstrate that physicians can find answers to the questions raised during real life case scenarios with minimal prior training. The process of answering such questions can generate more interest and sense of participation at all levels of learning. Whether those evidence-based answers could be applied to patient management and subsequent patient assessment needs to be studied for long-term effect of EBM practice.

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