

## Medical grand rounds in Riyadh, Saudi Arabia: Current attitudes and barriers

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### ABSTRACT

**Background:** Medical grand rounds (MGRs) are considered key educational tools in most academic medical institutions. In this multi-center cross-sectional survey, we tried to determine the current attitudes of local medical practitioners to MGRs, as well as perceived barriers. **Methodology:** A total of 120 physicians from the National Guard Hospital, King Fahad Medical City, King Khalid University Hospital and King Faisal Specialist Hospital participated in the survey. The questionnaire consisted of statements on attitudes and perceived barriers against participating in MGRs, as well as participants' levels of agreement. **Results:** Most participants attend MGRs regularly (94.2%), claiming that it is mandatory (88%). Participants also agreed that MGRs were important tools for continuing medical education (89.2%) and that they provided an opportunity to both present materials and interact with their colleagues in other divisions (86.7% and 81.6%, respectively). The vast majority of respondents agreed that "topic review/update" and "inviting guest speakers" were the two most preferred suggestions for improving MGRs (94.2% and 92.5%, respectively). Major barriers included constraints of time (43.3%) and topics that were not patient-related (40.8%). **Conclusion:** MGRs in the major Tertiary Hospitals in Riyadh are well attended, and the majority of the local practitioners believe in the positive effect of MGRs in delivering quality and up to date medical knowledge. Time and physician-specific issues were identified as major barriers that needed to be addressed in order to maximize participation of medical staff.

**Key words:** Attitudes, barriers, grand rounds, Riyadh, Saudi Arabia

### BACKGROUND

Medical grand round (MGR) or case presentation has been the center piece educational tool of all training physicians and consultants, as well as medical students.<sup>[1]</sup> It is a continuing medical education (CME) activity intended to keep physicians up to date and more importantly, competent.<sup>[2]</sup> MGR presents a great opportunity to exchange expert opinions, and for the junior physicians a chance to learn new approaches and management strategies based on real patients.<sup>[3]</sup> In the last couple of years, however, the conduct and attendance of MGRs have been

reevaluated. In their survey of 389 US hospitals, Hebert and Wright documented that most university hospitals fail to incorporate curricular tenets of needs, program and knowledge assessment in their MGRs.<sup>[4]</sup> Furthermore, they emphasized that MGRs were costly and did not take into account learners' needs. They, therefore, suggested a reevaluation of the commitment of MGR to educate, showcase faculty role models and promote a collegial atmosphere.<sup>[4]</sup> Mazmanian *et al.* observed that MGR as a form of CME is poorly defined in relation to clinical outcomes, and suggested the use of multiple media and techniques of instruction to improve quality and guideline implementations.<sup>[5]</sup>

In the Kingdom of Saudi Arabia (KSA), very few studies have investigated the quality of grand rounds and their impact on the growth of medical practitioners. Available reports relate mostly to medical students and how the medical curriculum, considering cultural and religious differences from the west, should be taught.<sup>[6]</sup> A study in 1994 by Milaat and El-Gamal observed that

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clinical bedside teaching was a popular, effective way of teaching medical knowledge, skill and patient interactions to medical students.<sup>[7]</sup> Furthermore, the degree of attendance at lectures was associated on the quality of the lecture and the lecturer.<sup>[7]</sup> These observations were noted as Saudi Medical Colleges started adopting the evidence-based medicine into the clinical years, which proved to help medical students develop their decision-making skills when taught in a clinical context.<sup>[8]</sup> In the context of MGR, however, these limited local observations have not contributed significantly to the influence of MGR as a CME if any, to the local Saudi Medical Community.

In the present cross-sectional study, the aim of the investigators was to assess the attitude and attendance of medical staff at MGRs in major tertiary and training hospitals in Riyadh, KSA. The investigators also expected to discover the barriers that seemingly affect the medical staff's ability and willingness to participate in MGRs.

## METHODOLOGY

This was a cross-sectional survey of 120 physicians from four major Tertiary Hospitals in Riyadh: National Guard Hospital (NGH) ( $n = 50$ ), King Fahad Medical City (KFMC) ( $n = 28$ ), King Khalid University Hospital (KKUH) ( $n = 24$ ) and King Faisal Specialist Hospital (KFSH) ( $n = 18$ ). The selection of hospitals was based on proximity, scale and convenience of the investigators in terms of data collection. Convenience sampling was done, and all medical practitioners, from residents to consultants, were invited to take part in the survey. For the purpose of this study, only physicians were included for homogeneity of the cohort as other medical positions (interns, students, nurses, etc.) may serve as potential confounders. Other medical staff members such as medical students, interns, and nurses were, therefore, excluded from the survey. Ethical approval was obtained from the Institutional Review Board of KFMC Research Center in Riyadh, KSA.

Data were collected using a self-administered, questionnaire. The survey questionnaire consisted of four parts: The demographic section contained details of the hospital and departments of the participants, age and position in the hospital, followed by several questions on what they thought was the best time of the day and week for MGRs as well as duration and frequency of MGRs. The next sections asked for participant's degree of agreement on six attitudes and 10 barriers against attending MGRs. The response was according to a 5-item Likert-type scale from strongly disagree to strongly agree. Lastly, 10 predefined suggestions

and 10 statements on how MGRs are conducted in their respective hospitals were given and were to be answered with either yes or no.

Survey sheets were entered manually in MS Excel Sheet for Windows (MS Windows 2010). Frequencies were presented as percentages (%). Bar graphs were drawn to illustrate participants' response to select variables.

## RESULTS

Table 1 shows the demographics of the subjects. Almost half the participants in the survey were from NGH (41.7%), followed by KFMC (23.3%), KKUH (20.0%) and KFSH (5.0%). A high proportion of them were below the age of 40 (68.3%); 80% were in internal medicine, and

**Table 1: Subject demographics and MGR preferences ( $n=120$ )**

Parameter	N (%)
Hospital	
National Guard Hospital	50 (41.7)
King Khalid University Hospital	24 (20.0)
King Faisal Specialist Hospital	18 (15)
King Fahad Medical City	28 (23.3)
Age (years)	
20-40	82 (68.3)
>40	20 (16.7)
No answer	18 (15.0)
Specialty	
Internal medicine	96 (80.0)
Neurology	5 (4.1)
Pediatrics	8 (6.7)
Others	11 (9.2)
Position	
Resident	81 (67.5)
Senior registrar	16 (13.3)
Registrar	7 (5.9)
Consultant	16 (13.3)
Preferred MGR time of the day	
Early morning	61 (50.8)
Noon	33 (27.5)
Afternoon	26 (21.7)
Preferred MGR time of the week	
End of the week	67 (55.8)
Beginning of the week	43 (35.8)
Alternating times each week	10 (8.4)
MGR frequency you find appropriate	
Once a week	84 (70.0)
Twice a week	22 (18.3)
Once a month	5 (4.2)
Twice a month	9 (7.5)
Appropriate MGR time duration	
One hour	95 (79.2)
Two hours	25 (20.8)

MGR: Medical grand round

almost 70% were training physicians (residents). When asked what are best time of the day and week for MGRs, more than half preferred the morning and the end of the week (50.8 and 55.8%, respectively). A massive 70% of the participants wanted MGRs once a week for not more than 1 h (79.2%) [Table 1].

Table 2 highlights the participants' attitudes and barriers toward MGRs. A large majority had a positive (agree to strongly agree) response to MGRs indicating that they were important tools for CME (89.2%), that they affected their patient care (75.8%) and that they offered an opportunity to both present materials and interact with their colleagues in other divisions (86.7% and 81.6%, respectively). Furthermore, there was an overwhelming agreement that MGR was a good means of learning about medical issues from other fields (85%). It was also an opportunity to get up to date on several administrative issues in the hospital (85%). The biggest barriers identified for not participating in MGR were "other commitments" More than half of the participants (52.5%) cited this factor, followed by 49.2% who cited a "heavy workload." The participants mostly disagreed with other barriers mentioned in the survey. It is worth noting, however, that of these less commonly identified barriers, 37.5% identified the inconvenience of the venue as a difficulty for their attendance at MGRs and another 37.5% thought that there were easier ways of acquiring the medical information given during MGRs.

Figure 1 shows that of the 10 survey suggested methods of improving the quality and attendance at MGR, implementation of topic review/update topped the list with 94.2%, followed by invitation of guest speakers (92.5%), implementing case-based discussions (90.8%) and the provision of food and refreshments (88.3%). The least accepted suggestions were implementing breaks (34.2%) and changing the current time of MGRs (36.7%).

Figure 2 highlights the participants' agreement and involvement with how MGRs are conducted in their respective hospitals. As expected, most of the participants (94.2%) attended MGRs regularly. According to 88% of the participants MGRs were mandatory; 91.7% said they were held regularly and 90.0% at a fixed location; 80.8% said they covered important medical events and 77.5% said refreshment was provided. Other percentages of agreement by the participants on how MGR is conducted are shown in Figure 2.

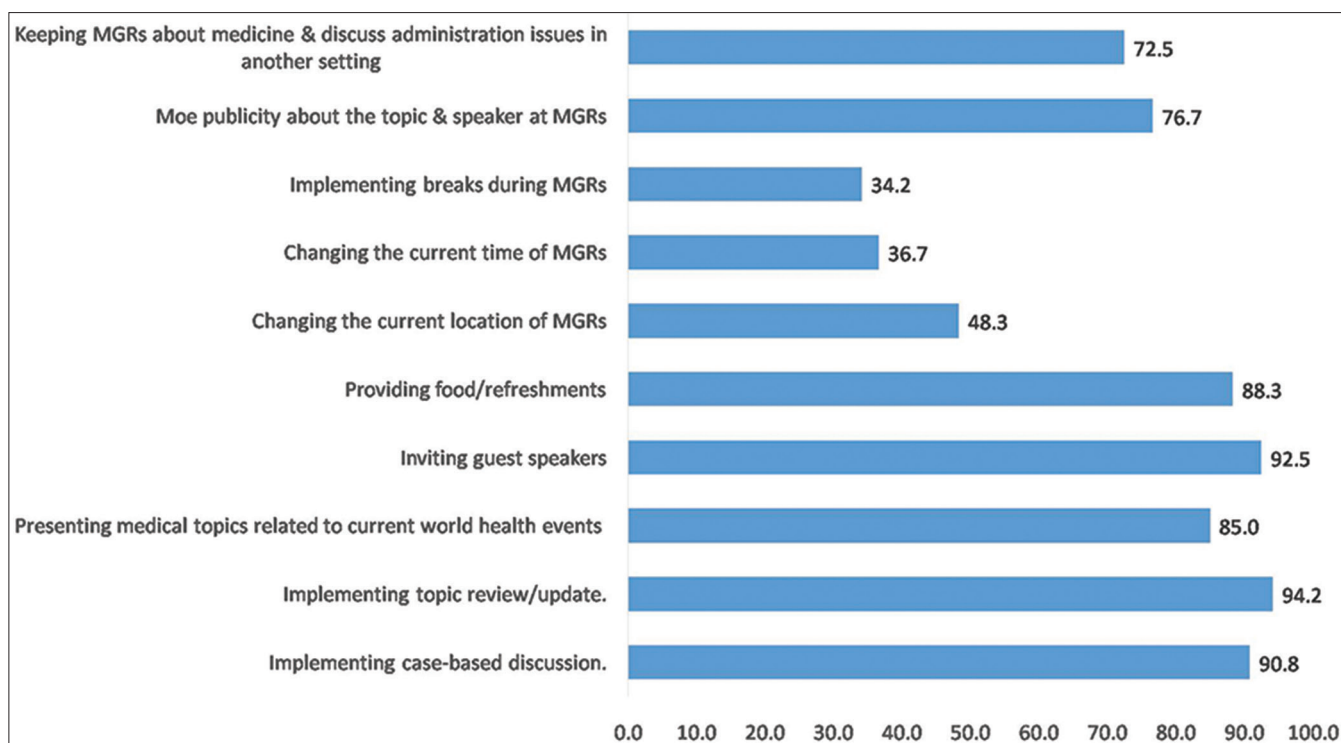
## DISCUSSION

The main finding in the study was that the majority of the participants, irrespective of their hospital affiliation, agreed that MGRs were important educational tools for CME, which had an impact on their practice of patient care. Furthermore, participants' foremost reason for not attending was their apparently heavy workload and other commitments, giving

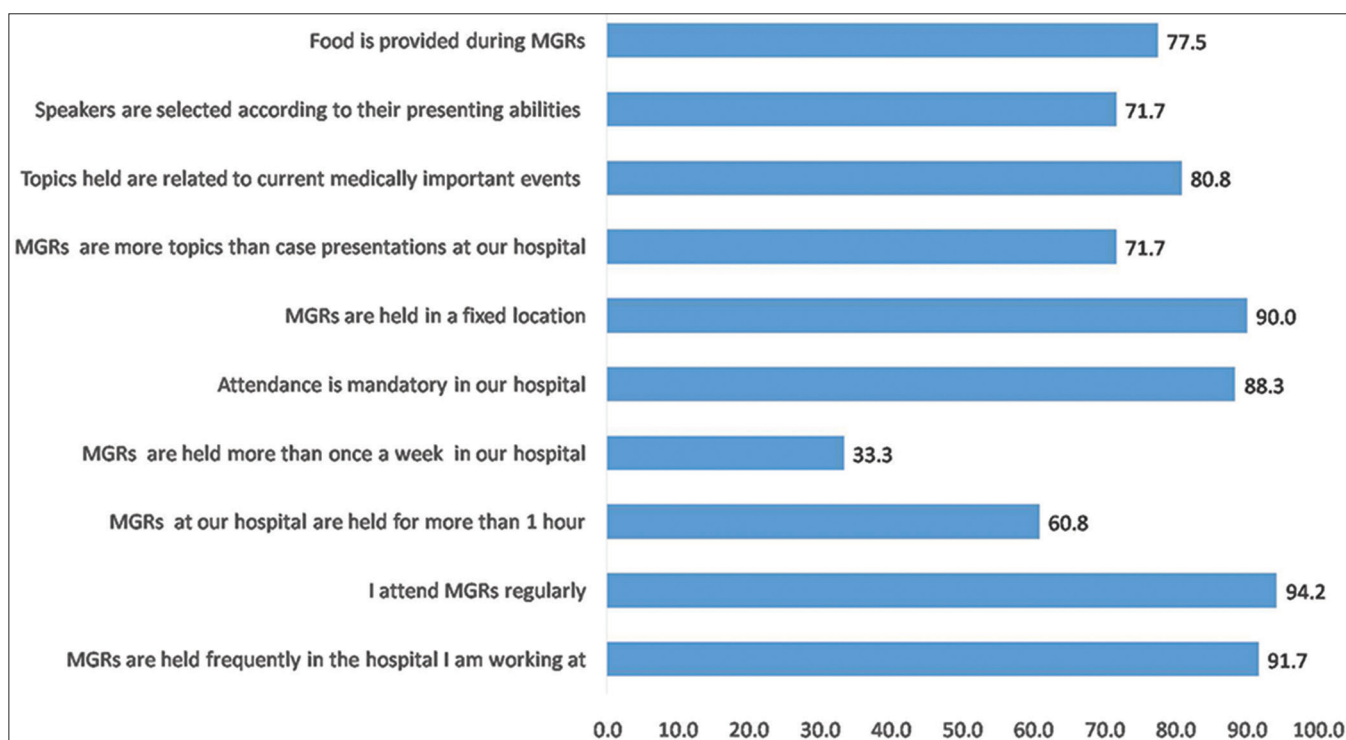
**Table 2: Attitudes and barriers toward MGR (n=120)**

	Strongly disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly agree N (%)
<b>Attitude toward MGR</b>					
MGRs are important tools for continuous medical education	3 (2.5)	2 (1.6)	8 (6.7)	48 (40.0)	59 (49.2)
The quality of MGRs affect patient care in practice	1 (0.8)	6 (5.0)	22 (18.3)	54 (45.0)	37 (30.9)
MGR is an opportunity to present materials to colleagues in other divisions	1 (0.8)	5 (4.2)	10 (8.3)	62 (51.7)	42 (35.0)
MGR is an opportunity to interact with colleagues in other divisions	2 (1.6)	6 (5.0)	14 (11.7)	52 (43.3)	46 (38.4)
MGR is a good method to learn medical issues indirectly related to your own field	2 (1.6)	4 (3.3)	12 (10.0)	59 (49.2)	43 (35.9)
MGR is an opportunity to keep informed about administrative issues in your hospital	3 (2.5)	7 (5.8)	32 (26.7)	45 (37.5)	33 (27.5)
<b>Barriers for lack of interest in MGR</b>					
I regularly have other commitments that constrain my ability to attend	8 (6.7)	28 (23.3)	21 (17.5)	49 (40.8)	14 (11.7)
Topics presented are not interesting to me	15 (12.5)	45 (37.5)	27 (22.5)	14 (11.7)	19 (15.8)
Speakers are frequently poor presenters	17 (14.2)	40 (33.3)	38 (31.7)	16 (13.3)	9 (7.5)
MGR venue is inconvenient	14 (11.7)	47 (39.2)	14 (11.7)	21 (17.5)	24 (20.0)
MGR time is inconvenient	13 (10.8)	52 (43.3)	19 (15.8)	20 (16.7)	16 (13.2)
There are too many interruptions	14 (11.7)	42 (35.0)	29 (24.1)	21 (17.5)	14 (11.7)
MGRs are too long	23 (19.2)	48 (40.0)	30 (25.0)	12 (10.0)	7 (5.8)
Topics presented are not patient-related	17 (14.2)	49 (40.8)	33 (27.5)	12 (10.0)	9 (7.5)
My work load is too heavy to have the time to attend	7 (5.8)	25 (20.8)	29 (24.1)	32 (26.7)	27 (22.4)
There is not enough interaction between the presenter and the audience	8 (6.7)	41 (34.2)	39 (32.4)	21 (17.5)	11 (9.2)
There are easier ways to learn about medical information shared in MGR	3 (2.5)	30 (25.0)	42 (35.0)	35 (29.2)	10 (8.3)
I don't have anything to contribute in this setting	11 (9.2)	44 (36.7)	37 (30.8)	19 (15.8)	9 (7.5)

MGR: Medical grand round



**Figure 1:** Suggested methods to improve medical grand rounds (%)



**Figure 2:** Medical grand round implementation in Riyadh Tertiary Hospitals (%)

MGRs a lower priority than the barriers. Despite the barriers alluded to, the present study also indicated a high attendance rate amongst participants. Nevertheless, nonattendance at academic and educational activities such as MGRs has been attributed to individual habits, lack of interest and the over-all

conduciveness and culture of the environment and institution in acquiring new knowledge.<sup>[9]</sup> However, as was evident in our study, the element of time and physician-specific issues as barriers to participation in medical rounds have been identified in other studies.<sup>[10]</sup>

In the present study, the majority of the participants would rather have MGRs done in the mornings, which are considered not only the ideal time for resident teaching,<sup>[11]</sup> but also documented as the peak performance time for memory and cognitive inhibition tasks for older adults.<sup>[12]</sup> Morning rounds are especially beneficial for the care of patients whose cases are being presented. It has also been shown to reduce the hospital length of stay and costs for these patients.<sup>[13,14]</sup> The participants were also almost unanimous in their agreement that MGRs were best utilized in presenting topics and updates, which confirms the fact that MGRs in Saudi Arabia are also used to showcase excellence in medical care and recent medical advances. Lewkonian and Murray suggest that the emphasis should be placed on the educational structure and evaluation for training since professional interaction is inherent in traditional grand rounds.<sup>[15]</sup> Multi-disciplinary grand rounds also enhance the enthusiasm of physicians and were observed to be associated with enhanced job satisfaction aside from an improvement in the efficacy of care.<sup>[16]</sup>

Implementation of what was discussed topped the list of suggestions for improving MGRs, which is necessary since MGRs should reflect current patient care. Attendance for most physicians at MGRs was expected since it is mandatory and is credited for CME.<sup>[17]</sup> Other studies try to enhance MGRs by improving publicity and giving honoraria to presenters.<sup>[2,18]</sup>

The authors' recommendations are based on the subjects' suggestions and what is currently available in the literature. Besides the implementation of what transpires during MGRs and invitation of experts, there should be increased bedside teaching in order to raise the enthusiasm of those who attend. Bedside teaching has always been considered an essential component of medical education.<sup>[19,20]</sup> Educators should be made aware of the barriers to making the best of MGRs. In particular, MGR or bedside teaching ethics should be reestablished to challenge learners to think clinically while setting realistic goals.<sup>[21]</sup> Lastly, morning MGRs should be continued since it promotes better patient care. They should also introduce new concepts structured in a way that would encourage more active participation and less absenteeism.

The authors acknowledge several limitations. Several important demographic variables were not included such as gender, nationality, and medical training of the participants. These factors may directly influence attitudes of participants toward MGR independent of the mandatory maintenance of annual accumulated CME credits. The descriptive nature of the study also limited its findings although as they stand, the results present

opportunities for further investigations with an equal number of participants for each institution and a bigger sample size. Lastly, the answer to the question, whether MGRs are associated with over-all competence of the physician in delivering quality health care, was not within the scope of the present study.

In summary, MGRs in major Tertiary Hospitals in Riyadh, Saudi Arabia, are well attended, and the majority of the local practitioners believe in its efficacy in delivering quality and up to date medical knowledge in their specialty. However, several problems need to be addressed to maximize participation of medical staff. They relate to time and physician-specific issues. Until a more comprehensive survey is conducted to include under-represented specialties and regions in KSA, the present findings at best provide suggestions. Further investigations are necessary to include factors that affect the attitudes and barriers of medical staff toward MGRs.

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