

---

## Original Article

# Compliance of Morning Reports at Teaching Hospitals of Kurdistan University of Medical Sciences with Standards of the Ministry of Health and Medical Education (2015)

Yadolah Zarezadeh Ph.D.<sup>1</sup>, Fayagh Yousefi Ph.D.<sup>1</sup>, Farhad Sharifi M.Sc.<sup>2</sup>, Adib Khezri M.A.<sup>3</sup>, Farzaneh Gharibi Kanipan M.Sc.<sup>1\*</sup>

1. *Social Determinants of Health Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran*

2. *Besat Teaching Hospital, Kurdistan University of Medical Sciences, Sanandaj, Iran*

3. *Tohid Teaching Hospital, Kurdistan University of Medical Sciences, Sanandaj, Iran*

\* *Address for Correspondence, Social Determinant of Health Research Center, Educational Development Center, Kurdistan University of Medical Sciences, Pasdaran Avenue, Sanandaj, Iran, Zip-code, 66177-13446, Tel. +988733664645, Email. gharibifarzaneh@gmail.com*

(Received: 9 Aug 2016 Accepted: 8 Feb 2017)

---

## Abstract

**Introduction:** Morning report is a long-lasting method in medical students' clinical education. This study was aimed to evaluate the structure and content of morning report sessions at teaching hospitals of Kurdistan University of Medical Sciences in 2015 as well as their compliance with standards proposed by the Ministry of Health and Medical Education.

**Methods:** This cross-sectional study was conducted in eight wards, having active morning reports, at three teaching hospitals of Kurdistan University of Medical Sciences. The data were collected by a two-section checklist, including structure and content. The validity of this scale was confirmed based on the opinions of experts, and its reliability was approved via inter-rater reliability. A total of 24 cases were observed and the obtained data were recorded. The recorded data were analyzed by SPSS.19 software using one-sample t-test.  $P < 0.05$  was considered significant for all tests.

**Results:** As for the structure, the time of administration (100%), management of sessions (50%), venue, frequency, duration and stages of patient introduction (>50%), equipment, participants and patients' selection (<50%) were in compliance with the standards. With regard to the content, over 50% of effective interaction, atmosphere of meetings, fitness of the room with the number of participants, evidence and documentation and less than 50% of discussion content, holding evidence-based morning report, follow-up and evaluation were in line with the standards.

**Conclusion:** In general, running morning report sessions at teaching hospitals of Kurdistan University of Medical Sciences was in line with the standards announced by the Ministry of Health and Medical Education. Despite the overall conformity of running morning report at teaching hospitals of Kurdistan University of Medical Sciences and appropriateness of most indices, several indices that are essential for holding this important educational conference were not fully in compliance with the standards. Considering the significance of clinical education in empowering the graduate physicians in the future, it is necessary for all indices of morning report sessions to be progressing and in line with the standards.

**Keywords:** Morning report, Standard, Medical education

Citation: Zarezadeh Y, Yousefi F, Sharifi F, Khezri A, Gharibi Kanipan F. Compliance of morning reports at teaching hospitals of Kurdistan University of Medical Sciences with standards of the Ministry of Health and Medical Education (2015). *Educ Res Med Sci.* 2017; 6(1), 25-32.

## Introduction

Morning report is an educational activity that is held to practice and reinforce communication skills and to improve the diagnostic and therapeutic approaches of emergency patients and inpatients with critical conditions (1). Morning report, as one of the most significant educational methods, is an integral component of clinical education programs (2).

In scientific sources, morning report is considered a common medical education tool, the basis of residency training, the most valuable educational activity, an important educational tool and an educational conference, with a very long history in medical education (3).

Numerous objectives such as education, residents' evaluation, qualitative assessment of services, discovering and reporting unexpected events, non-biomedical issues and social interaction have been reported for morning reports, among which education has been expressed as the main objective. The educational objectives of morning report involve a wide range of activities, including case-based teaching, reviewing and planning of patient management, reinforcement of presentation skills, development of intellectual curiosity and research, promotion of decision-making skills and direct self-learning (4).

In modern medical education, active learning has been increasingly emphasized. Through active participation, students will develop their abilities in independent thinking and problem solving. Morning report can be an opportunity for active learning via group discussions about interesting subjects, diagnosis and management of critical situations and other related issues (5).

"Clinical education of physicians has fundamental differences from education in other disciplines" (6). Reporting his project, Yazdani stated that using appropriate clinical education methods in apprenticeship and internship courses helps graduate physicians to gain appropriate skills and capabilities. "Due to lack of standards or scientific strategies related to clinical education, education is victimized in most cases when faced with clinical training" (7). In a piece of research, Moharari et al. reported that morning report is recognized as one of the most important educational methods in medical sciences (8).

In Iran too, morning report has long been held in clinical departments of medical faculties. In a study performed at obstetrics and gynecology residency training department in one of the medical universities of Iran, the senior residents spent 8% of their daily learning time on morning report (9).

In line with organization and improvement of medical education, the Deputy of Education and Students' Affairs of the Ministry of Health and Medical Education offered a national project entitled "determination of criteria and indices of clinical education at educational centers and hospitals" to a group of authorities aiming chiefly to present a set of "clinical education standards". To implement this project, which is considered a giant step in line with standardization of medical clinical education, including morning report in Iran, first a team of authorities was established and then data on the current status of clinical education were collected. Next, through reviewing the literature, a draft of standards was prepared taking into account the data of current status analysis. Having collected the data, the project summarized eleven pivotal domains of problems in medical education along with the solutions. One of these domains is ignoring the classroom structure and educational equipment in different departments. The clinical education standards derived from this national project have been formulated in various educational domains, including morning report (7).

In a study, the structure of morning report sessions of inpatient wards of teaching hospitals of type I universities was investigated and compared with the formulated standards of the aforementioned project. From all 58 standards announced by the Ministry of Health and Medical Education on morning reports, 8 standards were analyzed (10). In another study, the status of running morning report sessions of cardiology ward at teaching hospitals of Mashhad University of Medical Sciences was compared with these standards (11).

Morning report sessions are being held on an idiosyncratic basis by academics even if they have not been trained. They may conduct the sessions without appropriate consideration of standards. The current research was aimed to analyze the structure and content of morning report sessions and their compliance with the standards mentioned at teaching hospitals of Kurdistan University of Medical Sciences.

## Methods

This cross-sectional study was carried out in the fall and winter, 2015 at three teaching hospitals of Kurdistan University of Medical Sciences. Totally, eight wards, including psychiatry, surgery, obstetrics and gynecology, pediatrics, infectious, internal and neurology which had active morning reports were included in the study. After making the required arrangements with the education deputy of hospitals and taking a written permit, a trained expert attended the morning report sessions of each ward three times and observed and recorded the required information according to a checklist. All wards were evaluated in a 3-4-month period.

The checklist of holding morning report was designed based on the standards of the Ministry of Health and Medical Education, which consisted of two sections of structure and content. The structure section included 12

items (venue, equipment, frequency, time, duration, participants, managing sessions, patient introduction stages, patient selection, type of patients introduced, number of patients introduced and patient history presentation) and the content section comprised of 9 items (discussion content, effective interaction, atmosphere of sessions, room fitness for the number of people, evidence-based practice, running evidence-based morning report, documentation, follow-up and evaluation).

The standards declared by the Ministry of Health and Medical Education summarized in table 1. consist of preparation, timing and implementation, each with indices expressed at different levels as "should" and "it is better". For some indices like equipment and frequency, various equipment and facilities have been presented at both "should" and "it is better" levels, while for other indices such as venue and time, only one index has been considered (7).

**Table 1. A summary of morning report standards announced by Ministry of Health and Medical Education**

Standards	Indices	Expected level
Preparation	Venue	It is better
	Equipment	Both
	Frequency	Both
Timing	Time	It is better
	Duration	It is better
	Participants	Both
Implementation	Managing the sessions	Must
	Stages	It is better
	Patient selection	Both
	Types of patients introduced	Must
	Number of patients introduced in each session	It is better
	Patient history presentation	Must
	Discussion content	Must
	Effective educational interaction	It is better
	Appropriate space for interaction	Both
	Atmosphere and ethics	Both
	Evidence-based morning report	It is better
	Evidence-based practice	It is better
	Registration and documentation	It is better
	Follow-up	It is better
	Evaluation	It is better

Based on the type of standard, the items for which only compliance and non-compliance with standards were considered, score 1 for compliance and score zero for non-compliance were taken into account. For the standards determined to be moderate and presented as "should" and "it is better", score 2 for full compliance, score 1 for relative compliance and score zero for non-compliance were considered. The total score of the checklist was calculated to be 27.

The content validity and face validity of the checklist were confirmed by the expert opinions before it was used.

To this end, the views of five faculty members of cardiology, obstetrics and gynecology and internal departments of Kurdistan University of Medical Sciences, who had a lot of experiences in holding morning report sessions, as well as five graduates of medical education of Kurdistan University of Medical Sciences in 2013 were sought, and required changes and modifications were applied. The reliability of the checklist was confirmed by inter-rater reliability so that two equal observers (evaluators) attended ten morning report sessions and completed the checklist separately. The coefficient of agreement of assessors in determining the reliability of

checklist was found to be 0.87% by kappa coefficient, which is indicative of high reliability. In total, 24 cases were observed and the obtained data were recorded and analyzed by SPSS.19 software using one-sample t-test.  $P < 0.05$  was considered significant for all tests.

The observations were interpreted according to the standards. For ethical considerations, the data of hospitals were archived confidentially, and numbers 1, 2 and 3 were used in this study instead of the names of hospitals.

## Results

According to the results of one-sample t-test, the mean scores of morning report sessions at teaching hospitals of Kurdistan University of Medical Sciences were significantly different from those of national standards ( $P < 0.001$ ). Therefore, running morning report sessions at the aforementioned hospitals was not in accordance with

the standards of morning report sessions presented by the Ministry of Health and Medical Education.

In general, morning report sessions of teaching hospitals of Kurdistan University of Medical Sciences were in accordance with the standards of the Ministry of Health and Medical Education in terms of venue (62.5%), equipment (12.5%), frequency (87.5%), time (100%), duration (83.3%), participants (12.5%), managing sessions (50%), patient introduction stages (83.3%), patient selection (33.3%), types of patients introduced (58.3%), number of patients introduced (58.3%), patient history presentation (95.8%), discussion content (16.7%), effective interaction (70.8%), atmosphere of sessions (87.5%), room fitness with number of people (75%), evidence-based practice (66.7%), holding evidence-based morning report (4.2%), documentation (66.7%), follow-up (20.8%) and evaluation (29.2%) (Table 2).

**Table 2. Compliance of structure and content of morning report sessions at teaching hospitals of Kurdistan University of Medical Sciences with standard\***

	Hospital	Number of observations (compliance percentage)			
		Hospital 1	Hospital 2	Hospital 3	Total
Structure	Venue	100.0 (3)	33.3 (3)	75.0 (9)	69.43 (15)
	Equipment	0.0 (0)	0.0 (0)	25.0 (3)	8.33 (3)
	Frequency (per week)	100.0 (3)	100.0 (9)	75.0 (9)	91.7 (21)
	Time (morning)	100.0 (3)	100.0 (9)	100.0 (12)	100 (24)
	Duration	33.3 (1)	77.8 (7)	100.0 (12)	70.36 (20)
	Participants	33.3 (1)	22.2 (2)	0.0 (0)	18.43 (3)
	Managing sessions	66.7 (2)	11.1 (1)	75.0 (9)	50.93 (12)
	Patient introduction stages	100.0 (3)	55.6 (5)	100.0 (12)	85.2 (20)
	Patient selection	100.0 (3)	22.2 (2)	25.0 (3)	49.06 (8)
	Types of patients introduced	66.7 (2)	100.0 (9)	100.0 (12)	88.9 (23)
	Number of patients introduced	33.3 (1)	44.4 (4)	75.0 (9)	50.90 (14)
	Patient history presentation	100.0 (3)	88.9 (8)	100.0 (12)	96.3 (23)
	<b>Total of structure</b>	<b>44.69 (25)</b>	<b>54.62 (59)</b>	<b>83.70 (102)</b>	<b>64.96 (186)</b>
	Content	Discussion content	33.3 (1)	33.3 (3)	0.0 (0)
Effective interaction		0.0 (0)	55.6 (5)	100.0 (12)	51.66 (17)
Atmosphere of sessions		100.0 (3)	66.7 (6)	100.0 (12)	88.9 (21)
Room fitness with number of people		100.0 (3)	100.0 (9)	50.0 (6)	83.33 (18)
Evidence-based practice		33.3 (1)	100.0 (9)	50.0 (6)	61.1 (16)
Holding evidence-based morning report		0.0 (0)	11.1 (1)	0.0 (0)	3.7 (1)
Documentation		33.3 (1)	100.0 (9)	50.0 (6)	61.1 (16)
Follow-up		33.3 (1)	11.1 (1)	25.0 (3)	23.13 (5)
Evaluation		100.0 (3)	11.1 (1)	25.0 (3)	45.36 (7)
<b>Total of content</b>		<b>48.13 (13)</b>	<b>54.32 (44)</b>	<b>44.44 (48)</b>	<b>48.95 (105)</b>
<b>Total of content and structure</b>	<b>58.78 (38)</b>	<b>54.47 (103)</b>	<b>57.63 (150)</b>	<b>56.95 (291)</b>	

\*Standard in this study is the standard approved by the Ministry of Health and Medical Education in the project entitled "determining clinical education criteria and indices at teaching centers and hospitals" in 2009.

The structure and content of morning report sessions held at three teaching hospitals of Kurdistan University of Medical Sciences were investigated in each ward separately (Table 3).

In terms of structure, the venue of morning report sessions was away from the gynecology, pediatrics and cardiology wards. The equipment of cardiology ward was complete

and that of other wards was incomplete. The morning report was held twice a week in neurology ward and three days and more in other wards. The sessions in all wards were held from 8:00 to 9:00 am. They lasted for more than 1.5 hours in psychiatry and genecology wards and 0.5 to 1 hour in other wards. Regarding the participants' attendance, the psychiatry and pediatric wards were found

to be at an average level and others appeared to be at a poor level.

The manager of sessions was a senior resident at psychiatry ward, a faculty member at surgery, gynecology and pediatric wards and a faculty member in charge of night shift at cardiology, infectious, internal and neurology wards. Patient introduction stages were performed incompletely in surgery and gynecology wards and completely in the rest of wards. In psychiatry, pediatric and internal wards, an on-duty senior resident was in charge of patient introduction, but this was not true for other wards. In all wards except psychiatry, patients were introduced to be interesting, challenging and educationally valuable. In psychiatry, surgery, pediatric and infectious wards, only one patient was introduced. In all wards, a senior resident or an on-duty intern presented

the patient history. With regard to the content of sessions, patient management was fully discussed only in the gynecology ward. There was no effective educational interaction in psychiatry, surgery and gynecology wards. Atmosphere of sessions was not friendly in one ward.

In cardiology and infectious wards, the room was not big enough to host the participants, and evidence-based practice was also not observed. Evidence-based morning report was held only in the pediatric ward. Documentation and follow-up were done completely in the internal ward, and evaluation of sessions was not performed in any of the wards except psychiatry and internal wards. To sum up, the overall structure and content of morning report of teaching hospitals are presented in Table 3. The overall compliance of structure and content was found to be 56.95% (Table 2).

**Table 3. Structure and content of morning report sessions at teaching hospitals of Kurdistan University of Medical Sciences for all wards**

Hospital	Hospital 1		Hospital 2			Hospital 3			
Ward	Psychiatry	Neurology	Surgery	Obstetrics & gynecology	Pediatric	Cardiology	Infectious	Internal	Neurology
<b>Venue</b>	Near the ward	Near the ward	Near the ward	Off ward	Off ward	Off ward	Within ward	Near the ward	Near the ward
<b>Equipment</b>	Incomplete	Incomplete	Incomplete	Incomplete	Incomplete	Complete	Incomplete	Incomplete	Incomplete
<b>Frequency (per week)</b>	3 days	3 days	3 days	3 days	3 days	3 days	3 days	2 days	2 days
<b>Time (morning)</b>	8-9	8-9	8-9	8-9	8-9	8-9	8-9	8-9	8-9
<b>Duration (hour)</b>	1>	0.5-1	0.5-1	1>	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1
<b>Participants</b>	Average	Poor	Poor	Poor	Average	Poor	Poor	Poor	Poor
<b>Managing sessions</b>	Senior resident of ward	Faculty member	Faculty member	Faculty member	Faculty member	Faculty member in charge of night shift	Faculty member in charge of night shift	Faculty member in charge of night shift	Faculty member in charge of night shift
<b>Patient introduction stages</b>	Complete	Incomplete	Incomplete	Incomplete	Complete	Complete	Complete	Complete	Complete
<b>Patient selection</b>	On-duty senior resident	Faculty member	Faculty member	Professor in charge of night shift	On-duty senior resident	Faculty member	Faculty member	Senior resident of ward	Senior resident of ward
<b>Types of patients introduced</b>	Common	Interesting	Interesting	Challenging	Educationally valuable	Challenging	Challenging	Interesting	Interesting
<b>Number of patients introduced</b>	1	1	1	2-4	1	2-4	1	2-4	2-4
<b>Patient history presentation</b>	On-duty resident	On-duty intern	On-duty intern	On-duty intern	On-duty intern	On-duty intern	On-duty intern	On-duty intern	On-duty intern
<b>Discussion content</b>	*Management and information	Management and information	Management and information	Management and information	Management and information	Management and information	Management and information	Management and information	Management and information
<b>Effective interaction</b>	No	No	No	No	Yes	Yes	Yes	Yes	Yes
<b>Atmosphere of sessions</b>	Friendly	Unfriendly	Unfriendly	Friendly	Friendly	Friendly	Friendly	Friendly	Friendly
<b>Room fitness with number of people</b>	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
<b>Evidence-based practice</b>	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
<b>Evidence-based morning report</b>	No	No	No	No	Yes	No	No	No	No
<b>Documentation</b>	No	Somewhat	Somewhat	Somewhat	Somewhat	No	Somewhat	Yes	Yes
<b>Follow-up</b>	No	No	No	No	No	No	No	Yes	Yes
<b>Evaluation</b>	Yes	No	Yes	No	No	No	No	Yes	Yes

\* A combination of patient management and medical information and knowledge

## Discussion

The analysis of morning report sessions at teaching hospitals of Kurdistan University of Medical Sciences in 2015 showed that these sessions were generally in compliance with the standards. To the best of the researchers' knowledge, only one domestic study by Yazdani has compared the status of morning report with the standards of the Ministry of Health and Medical Education, which is in line with the present study (7). The venue of morning report sessions was 100% in compliance with standards in hospital 1, 33.3% in hospital 2 and 75% in hospital 3.

In the mentioned standard, the word "should" has been used for some indices and phrase "it is better" is used for some other indices. Based on the "it is better" standard, to facilitate the presence of teachers, residents and students, the venue of morning report was selected to be inside the ward or to be at a place with the least distance from the ward (7). In the study of Gharibi, the venue was inside the ward in one hospital and a little away from the ward in another hospital (11).

The equipment in the venue in hospital 3 was 25% in accordance with standards, but not in accordance with standards in the other two hospitals. In the study of Yazdani performed in type I teaching hospitals, there was basic equipment in more than two thirds of cases, which can be indicative of more equipment at type I teaching hospitals than other hospitals of universities like Kurdistan University of Medical Sciences. Based on the standards, the venue of morning report sessions has to be equipped with examination bed, negatoscope and whiteboard and should be equipped with computer, printer, internet connection and video projector. However, in some wards like psychiatry, lack of examination bed is because of its inapplicability and is not considered a flaw because the psychiatric patients are visited seating in a chair and examination bed is used for physical examinations. Although no definite global standard is reported for frequency of morning report sessions and reports indicate holding the sessions 3-5 times a week (7), all three hospitals were more than 80% in accordance with the standard of the Ministry of Health and Medical Education in terms of frequency, time and duration of morning report sessions. According to standards, morning report is better to be held with a specific frequency on certain days for at least five times a week. It seems that the standard of the Ministry of Health regarding the frequency of morning report sessions is at a maximum level.

As for the time of holding morning reports, it is better to be held before 9:00 am in internal wards and before 8:00

am in surgery wards. It is also better to be initiated and terminated at due times. The duration of morning report sessions is suggested to be at least one hour in internal wards and at least half an hour in surgery wards (7). In our study, the morning report session lasted more than one hour in gynecology and psychiatry wards and half to one hour in other wards. In university of Louisiana, it was also held from 8 to 9 in internal wards (12).

Regarding the participants of morning report sessions, all three hospitals were found to be 12.5% in accordance with the standards, which is not a favorable status. The night shift residents and interns, faculty in charge of night shift, second- and third-year residents, senior resident and interns of wards are required to attend morning report sessions. The ward manager and other faculty members, first- and fourth-year residents, interns and head nurse should also attend morning reports.

The management of morning report sessions was in line with the standards in half of the cases and was done by a senior resident or a faculty member in charge of night shift.

Patient introduction stages were complete except for surgery and gynecology wards. Patient introduction should include introduction (5 minutes), feedback (5 minutes), responding the questions and presenting evidence (5 minutes), summarizing and highlighting educational points (1 minute). Patient selection was unfavorable and was performed correctly only in three wards. The on-duty senior resident should determine which patients hospitalized during the night shift need to be introduced in morning reports. The introduced patients (among the interesting, challenging and educationally valuable options) were in accordance with the standards in 95.8% of cases. The history of patients was presented by an on-duty resident or intern in all cases, which was fully in line with the standards.

The discussion content of this important educational conference, having a little compatibility with the standards (16.7%), revolved around patient management only in the gynecology ward, less attention being given to patient management in other wards. Discussion should be about managing the patients introduced, and changing the discussion into a competition of medical knowledge and information should be avoided in any way possible (7).

Effective educational interaction is one of the necessities of an educational session, which was present in 70.8% of cases in the current study. The senior residents and teachers should enrich the discussion more and more by sharing the scientific points and experiences as well as practical points about the disease (7). The atmosphere of

sessions was appropriate in more than 80% of cases. The atmosphere of morning report sessions should be friendly, based on respect and away from any threat and humiliation (7, 13).

The venue of 75% of morning report sessions was appropriate for the number of participants attending the sessions. Morning report sessions are suggested to be held in a room with enough space for the participants so that it can facilitate cooperation and social interaction among all of them (7).

Evidence-based practice was performed in 66.7% of cases. The resident or intern responsible for patient introduction is advised to refer to evidence-based databases before attending morning report sessions in order to prepare the best evidence for presentation in sessions (7, 14). The evidence-based morning report is advised to be held on a fixed day. On this day, first the common morning report is briefly presented in 30 minutes and then evidence-based morning report is run in the remaining 30 minutes by posing a clinical question about one of the patients introduced, translating it into a multiple-choice clinical question and assigning responsibility for completion of educational version related to one of the interns or residents. In our study, no noticeable point was observed in this index (4.2% of cases).

Documentation was found in 66.7% of cases, and follow-up and evaluation were performed in less than 50% of cases. The resident or intern, who is responsible for patient introduction, should prepare a summary of patient history and outcomes of discussions at the end of morning report and deliver it to the manager of morning report session to sign (the main version of this report is recorded in the ward archive and a copy of it is saved in the portfolio of introducer). The resident and intern are also responsible for tracking diagnostic and therapeutic measures taken for the patient and have to add the final diagnosis and outcome of the patient to the abovementioned report. The follow-up results of the patients introduced in the morning report should be discussed every month or every two-months in a meeting in the presence of all faculty members and residents of the ward. Moreover, a special form is recommended to be designed to assess the performance of on-duty team, to be completed every session by the senior resident of the ward and teachers attending the morning report session (7).

## Conclusion

Morning report, as an important clinical strategy, provides the teachers and students with an appropriate opportunity

to, by reviewing the patients discussed, monitor their management again and use the morning report session to teach and highlight the treatment standards. In the absence of logical and tested standards and evaluation of morning report sessions based on standards, morning reports may become irregular and lose their true function. By comparing the morning report sessions with national standards, this study emphasized the significance of assessing standard-based morning report sessions and shed more light on the challenges of holding these sessions. The results of this study show that morning report sessions of teaching hospitals of Kurdistan University of Medical Sciences are generally in compliance with the standards presented by Ministry of Health and Medical Education, but the quality of morning report sessions is not favorable where standards are disregarded or not observed. The findings of this study can be used to promote the process of holding morning report sessions in each hospital and ward based on indices.

## Acknowledgments

This article was taken from a research project conducted by the Medical Education Development Center at Kurdistan University of Medical Sciences. The authors would like to appreciate the research deputy of university for approving the study and providing financial support as well as the teaching hospitals for allowing access to data.

## References

1. Makarem A, Moghadam AA, Emadzadeh A, Shakeri MT, Zarezadeh Y, Kanipan FG. Effectiveness of morning report sessions of cardiology wards at teaching hospitals of Mashhad University of Medical Sciences (2012). *Res Dev.* 2015; 4(1): 35-39.
2. Naderi N, Pakdel F, Asghari N, Zare S. Morning report in main wards of teaching hospitals: An evaluation report. *Journal of Medical Education.* 2016; 14(4): 206-211.
3. Yazdani S, Arab M, Noghabaei G, Hosseini F. Quality dimensions of educational morning report sessions. *Journal of Medical Education.* 2015; 14(2): 82-86.
4. Haghdoost AA, Jalili Z, Asadikaram E. A survey on status of morning reports in education hospitals in Kerman University of Medical Sciences. *Development Steps in Medical Education Journal.* 2005; 2(2): 88-94.
5. Gross CP, Donnelly GB, Reisman AB, Sepkowitz KA, Callahan MA. Resident expectations of morning report: A multi-institutional study. *Archives of Internal Medicine.* 1999; 159(16): 1910-1914.

6. Razavi SM, Shahbaz Ghazvini S, Dabiran S. students' benefit rate from morning report sessions and its related factors in Tehran University of Medical Sciences. *Iranian Journal of Medical Education*. 2012; 11(7): 798-806. [Persian]
7. Yazdani Sh. Main messages of determination of clinical medical education standards project. Student and Education Deputy of Iranian Ministry of Health and Medical Education. Medical Education Research and Development Centre 2009. [Persian]
8. Moharari RS, Soleymani HA, Nejati A, Rezaeefar A, Khashayar P, Meysamie AP. Evaluation of morning report in an emergency medicine department. *Emergency Medicine Journal*. 2010; 27(1): 32-36.
9. Arab M, Emadi Sh. Study of obstetrics and gynecology training program in Hamadan University of Medical Sciences and Health Services. Hamadan: Hamadan University; 1999. [Persian]
10. Yazdani S, Arab M, Hosseini F, Mansouri B, Yaghmaei M, Khoshgoftar Z, et al. Evaluation of the structure of morning report sessions of the wards of type one educational hospitals and comparison with announced standards of the Ministry of Health and Medical Education. *Qom Univ Med Sci J*. 2013; 7(S1): 43-50. URL: <http://journal.muq.ac.ir/article-1-600-fa.html> [Persian]
11. Gharibi F. A survey on morning report conduct and effectiveness in cardiology department of educational hospitals in Mashhad University of Medical Sciences in 2012-2013 (Dissertation). Mashhad University of Medical Sciences. Iran, 2013. [Persian]
12. Banks DE, Shi R, Timm DF, Christopher KA, Duggar DC, Comegys M, McLarty J. Decreased hospital length of stay associated with presentation of cases at morning report with librarian support. *Journal of the Medical Library Association: JMLA*. 2007; 95(4): 381-387.
13. Scott KM, Caldwell PH, Barnes EH, Barrett J. "Teaching by humiliation" and mistreatment of medical students in clinical rotations: A pilot study. *Med J Aust*. 2015; 203(4): 1-6.
14. Schwartz A, Hupert J, Elstein AS, Noronha P. Evidence-based morning report for inpatient pediatrics rotations. *Academic Medicine*. 2000; 75(12): 1229.