

*Original Article*

**Knowledge of Medical Records Staff of Mazandaran University of Medical Sciences Regarding the Maintenance of Patient Records after the Hospital Closure, 2009-2011**

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**ABSTRACT:**

**Objective:** The objective of this study was to evaluate the Knowledge of Medical Records Staff of Mazandaran University of Medical Sciences Regarding the Maintenance of Patient Records after the Hospital Closure

**Methods:** This is a descriptive and cross-sectional study. There are 103 employees at the medical records department in the province of Mazandaran, 21 of whom did not agree to participate in the study. Therefore, 82 questionnaires were analyzed.

**Results:** Of the 103 employees of the medical records department of hospitals run by the Mazandaran University of Medical Sciences, those not wishing to participate in the study were omitted. Thus, 82 questionnaires were analyzed. Results showed that two respondents (2.6%) had M.Sc. degrees, 37 (45.7%) had B.Sc. degrees and 42 (51.9%) were technicians of medical records. Eight respondents (10.1%) were trained in HIM responsibilities during a hospital closure, and 71 respondents (89.9%) had no training in this topic.

**Conclusion:** Based on the answers provided, the results showed no significant relationship between general work experience and specific work experience in medical records. The correct answers are probably attributable to the fact that respondents received training related to other aspects of medical records and used that knowledge inferentially to give correct answers. Clearly, this training can reduce the chances of mistakes. Furthermore, results from this study indicate it is necessary to pass laws concerning the above-mentioned files, and that priority must be given to such legislation.

**Keywords:** Medical records; Health information management; Facility closure; Legal aspect; Iran.

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## 1. INTRODUCTION

Many experts in health information management (HIM) have probably never experienced the closure of a healthcare facility. However, in recent years, some hospitals in Iran have either closed down or been diverted to other uses (1-5). When a healthcare facility temporarily or permanently closes or is used for other purposes, the two basic duties of HIM professionals are to maintain the confidentiality and accessibility of this information (6-7). Obviously, there are many reasons to do so, including the continuation of the treatments, insurance requirements, medical-education purposes, legal issues, and accreditation standards. HIM records cannot be legally destroyed without conforming to strict retention requirements (8-10). Therefore, the facility closure must be anticipated and necessary instructions prepared beforehand. On the other hand, according to the current directives in Iran, patient medical records must be retained for at least 15 years after the last patient encounter. Furthermore, if the patient's record is a special case or problematic (in regard to either medical-education or legal purposes), the record must be kept until it is replaced by another more suitable record or until legal issues are fully addressed and resolved (11-13). Of course, for records and documents such as master patient indexes (MPI) that must be kept permanently, other plans must be developed to respond to patient requests, since this is one of the key duties of the HIM director. In a review of sources on the Internet, specialized scientific journals, and current directives, it became apparent that there is no authoritative reference in Iran about how to organize patient records after the closure of a hospital. Moreover, this topic was not sufficiently addressed within specialized Persian textbooks and it appears that HIM experts have not been trained in this respect and lack sufficient knowledge about this subject. Therefore, this study was carried out to determine the extent of the knowledge of HIM professionals at the Mazandaran University of Medical Sciences. Results obtained can be used by the executives and officials to draw up a guide to deal with this important matter so that the information needed by authorized HIM professionals are provided adequately. Furthermore, these results may illustrate the need for planning educational programs for both university deliberations and for on-the-job training of related personnel.

## 2. MATERIAL AND METHODS

This is a descriptive and cross-sectional study. There are 103 employees in the medical records department of the province of Mazandaran,

21 of whom chose not to participate in the study. Therefore, a total of 82 questionnaires were analyzed. To assess the extent of employee knowledge, a questionnaire was prepared based on a review of relevant journals and brainstorming by experts at the headquarters of the Mazandaran University of Medical Sciences. This questionnaire was tested in a pilot study on 30 undergraduate students majoring in HIM, and its defects were corrected. After plotting the difficulty coefficient, none of the questions in this study were found to be ambiguous or difficult, nor were any unanswered. Cronbach's alpha showed the final coefficient to be 70%. There were 15 multiple-choice questions, each worth one point. The quorum was 15 and the respondents answered the questions in an exam session. The grading was based on the descriptive scheme of the educational system: weak for grades less than 9, average for grades 9 to 10, good for grades 11 to 12 and very good for grades 13 to 15. To assess correlations, the chi-square and Spearman tests were used at the significance level of  $P < 0.05$ .

## 3. RESULTS

Of the 103 employees of the medical records department of hospitals run by the Mazandaran University of Medical Sciences, those not wishing to participate in the study were omitted. This left 82 questionnaires to be analyzed. Results showed that two respondents (2.6%) had M.Sc. degrees, 37 (45.7%) had B.Sc. degrees and 42 (51.9%) were technicians of medical records. Eight respondents (10.1%) were trained regarding HIM duties during a hospital closure, and 71 respondents (89.9%) had no such training. None of the 82 respondents (100%) had any experience in a facility closure.

**Table1.** Age of Medical records Staff (HIM) in Mazandaran University of Medical Sciences in the year 2009

Age	Frequency (%)
22-26	13(16/7)
27-31	23(25/9)
32-36	20(25/6)
37-41	7(9)
42 and upper	15(19/2)
Total	78(100)*

\* Four responders didn't answer to the question for age.

The age range of respondents was from 22 to 49, with an average of 33 and standard deviation 6.5. The range of general work experience was from 1 to 25 years, with an average of 9 and standard

deviation 6.1. HIM work experience was from 1 to 25 years, with an average of 8 and standard deviation 5.5. The rest of the information regarding age, general work experience, and work experience in medical records is shown in Tables 1 and 2.

**Table 2.** Frequency distribution, general work experience, and experience in medical records department (HIM) of the Mazandaran University of Medical Sciences in the year 1388(2009)

	general work experience	experience in medical records department(HIM)
1-5	25(32/1)	32(39/5)
6-10	25(32/1)	22(27/2)
11-15	15(19/2)	17(21)
16-20	8(10/3)	9(11/1)
21-25	5(6/4)	1 (1/2)
Total	78(100)*	81(100)\$

\* The 4 responder didn't answer.

\$ The 1 responder didn't answer.

According to the findings, the average of the grades obtained in this assessment was 6.2 with a standard deviation of 1.5. The range of the grades was from 3 to 9. This showed that, in general, HIM employees in the province of Mazandaran had a low level of knowledge in this topic. The average and the range of grades obtained are shown in table 3. The relationship between the grades obtained and the degrees held was not statistically significant in the Spearman test ( $r_s=0.008$ ,  $p$ - value = 0.94). In other words, those with higher degrees did not get better grades. Moreover, in the Spearman test, there was no statistically significant relationship between work experience and grades obtained ( $r_s = 0.13$ ,  $p$  - value = 0.221). In the chi-square test, the relationship between having been trained in the topic and grades on the questionnaire was not statistically significant either ( $X^2 = 0.432$ ,  $df = 1$ ,  $p$ -value = 0.037).

**Table3.** Average and range of grade obtained in this assessment by the Medical records Staff in Mazandaran University of Medical Sciences in the year 2009

Education	Median±Standard deviation	Range	
		min	max
Technician	6±1/5	3	9
BSc	6/2±1/6	3	9
MSc	6±1/4	5	7

#### 4. DISCUSSIONS

Results of this study show that, although most (79.6%) HIM employees had degrees relevant

to their jobs, only 10.1% received training concerning necessary steps during a hospital closure. Their knowledge of this topic is at a low level, despite the fact that, in many sources, there have been reports of hospital closures with no reference to the fate of patient records (1-5). Therefore, hospitals must take necessary precautions beforehand to protect the patient records from being lost, destroyed, worn out, or falling into unauthorized hands (9). If regulations require these records be destroyed, patients can be notified to come to the hospital to obtain their own records, if desired (14). They should also announce in local newspapers how patients can obtain their records (15). It must be reminded that medical records are the physical property of the relevant healthcare facility (16).

Results from this study showed no significant relationship between academic degrees and the grades obtained. This could be attributed to the syllabuses of courses offered at universities. Since most medical-records courses refer to the value, importance, and legal significance of medical records, it might be said that HIM employees have inferential knowledge of medical records. Although they have not received specific instruction concerning this aspect of medical records (i.e., the closure of treatment centers), they have extrapolated their knowledge and furnished correct answer to the questions asked.

#### 5. CONCLUSION

Results obtained show no significant relationship between general work experience and HIM work experience with the grades on the questionnaire. Their correct answers could be attributed to the fact that they have received related HIM training and have used this training to inferentially give the correct answers. Based on our analysis of the results in this study, we conclude that HIM employees need further training related to their professional needs, because the level of their knowledge has been assessed to be low. This training could be offered in an on-the-job format. Clearly, this training can reduce potential mistakes. Furthermore, results in this study indicate it is necessary to enact legislation concerning patient records, and that the passage of such laws must be a priority.

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