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Original Research Article

Assessment of medical records management practice at Al-Wahda Hospital in Derna city, Libya

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ABSTRACT

Background: Medical records support patient's care, provide continuity in the event of a disaster and protect the interests of the organization and the rights of employees. The aim of the study was to assess medical records management at Al-Wahda hospital in Derna, Libya.
Methods: A cross-sectional design was conducted using various health professions including records officers, medical doctors, nurses for various department and the admitting clerks. A sample of 71 participants was selected using convenience-sampling technique. Data was collected using a questionnaire from August to October 2019.
Results: The study showed that there was poor management of medical records at Al-Wahda hospital. The study revealed that the medical records were found in paper format. It indicated that the policy in place is record management policy, and findings confirmed that the policies are not communicated to healthcare workers and professionals. Furthermore, control measures were mentioned by the hospital records administrator was storing of records in locked cabinets. Similarly, the hospital records administrator confirmed that patient records were kept for above 12 months, and methods of patient records disposal is manually by burning. The study also indicated that failure to have a computerization processes.
Conclusions: The findings of the study recommended the use of policy guidelines in relation to the best practices of how medical records are managed; the use of electronic systems for opening, tracking and indexing of files; further a need to increase the number of record officers, training of records staff; and conducting regular records awareness workshops.

Keywords: Derna, Libya, Management, Medical records, Practice

INTRODUCTION

Records have a long history and use in decision making from various spheres of life. Records have always been a good source of information for decision making as such, have existed since man acquired the ability to record information in writing.[1]

Health record is a collection of clinical information pertaining to a patient's physical and mental health, compiled from different sources.

Health record management practice is imperative in any health service providing institution in ensuring quality service delivery. Health records are among the vital tools that hospitals require in order attaining the missions and visions of the respective hospitals. The purpose of health record management is to ensure quality, accuracy, accessibility, authenticity and security of information in both paper and electronic, systems.[2]

Medical service delivery does not only depend on the knowledge of doctors and nurses but also records-keeping processes in the hospital. Health records are in of

different types depending on the size and activities of the given hospital. Records managed in hospitals include patient case notes, x-rays, pathological specimens and preparations, patient indexes and registers, pharmacy and drug records, nursing and ward records.[3] The health records management program is run in diverse ways in different parts of the world, although differences depend on the needs and scope of service of the specific hospital or health institution.[4] Health care provider ensures competent service provision and proper health information management to keep costs down, secure patient data, and maintain compliance in rapidly expanding regulatory environment.[5] This means that hospitals determine the priorities rolled by the record management policy. The role of the health record manager is to develop policies for health records management and procedures in order to promote better health records management practice in the hospitals as working together with heads of departments.[6,7]

General objective

To assess the management of medical records at Al-Wahda hospital in Derna, Libya.

Specific objectives

Understand the policies and regulatory framework for managing medical records at Al-Wahda hospital. Determine whether there were methods in place for securing medical records. Assess staffing requirements for managing medical records.

METHODS

A cross- sectional design was used to conduct the study at Al-Wahda hospital in Derna city.

The study population consisted of various health professions including records officers who are directly involved with the creation, storage, management, appraisal and disposal of medical records at Al-Wahda hospital, the health professionals included medical doctors, nurses from various department and the admitting clerks, from August to October 2021.

The random sample was used to select 71 participants from the healthcare workers. However, all medical recorder staff was included to provide the information on medical recorder management.

A self-administered questionnaire was chosen to gather data for this study. However, the data were collected from the manager of medical recorder office by interview.

The questionnaire comprised of 29 questions divided into seven categories namely: demographics data, record management practices, policies in place relevant to records management practices, security and confidentiality of patient records, patient records disposal, and patient records computerization and patient records management problems at Al-Wahda hospital.

Statistical analyses

Statistical analysis was done using SPSS software version 26 (IBM, Ottawa, Canada). Descriptive statistics were performed, and the results were presented using frequency tabulations and percentages for categorical variables. Proportions were compared using Chi-square test and p value ≤0.05 were considered statistically significant.

RESULTS

A total of 71 respondents from the various departments and units at Al-Wahda hospital were included, 38 (53.5%) females. Most of respondents 34 (47.9%) in age range from 25 to 35 years and 31 (43.7%) had bachelor degree. 71 respondents, 23 (32.4%) were nurses, 22 (31%) were doctors, followed by 21 (29.6%) were record officers, and 5 (7%) were admitting officers. The responses were from different units and departments in the hospital, 18 (25.4%) were from surgery ward, followed by 15 (21.1%) from pediatric ward, 12 (16.9%) from medical records unit, 11 (15.5%) of gynecology ward, 9 (12.7%) from admission office (Table 1).

Table 1: Distribution of study sample according to sociodemographic characteristics.

Characteristics	N	%
Gender		
Male	33	46.5
Female	38	35.5
Age (years)		
<25	14	19.7
25-35	34	47.9
<35	23	32.4
Job title in the hospital		
Doctor	22	31.0
Nurse	23	32.4
Record officer/clerk	21	29.6
Practices admitting officer	5	7.0
Qualification		
Diploma	25	31.0
Bachelors	31	32.4
Postgraduate	10	29.6
Other	5	7.0
Department/unit/ward		
Medical record unit	12	16.9
Admission office	9	12.7
Surgery ward	18	25.4
Pediatrics ward	15	21.1
Gynecology ward	11	15.5
Medicine ward	1	1.4
Orthopedic ward	2	2.8
Ophthalmology ward	1	1.4
Radiology unit	2	2.8

Table 2: Distribution of study sample according to training courses and involving with creation of patient records.

Items	Frequency	Percent
Have you received any special training in the maintenance of medical records?		
Yes	15	21.1
No	56	78.9
Were you involved with the creation of patient records?		
Yes	30	42.3
No	41	57.7

More than half of participants said did not receive any training 56 (78.9%), while 15 (21.1%) had training. Concerning involving with creation of patient records, 30 (42.3%) were involved in the creation of patient records, while more than half of them reported no involving (57.7%) (Table 2).

Table 3: Distribution of study sample according to patient records management.

Items	Frequency	Percent
How is a medical record created or received in this hospital?		
This process carried out by clerks who would register a patient and assign the clinic for examination	22	31.0
- Not from my specialists.	49	69.0
What type of patient records were found within this department?		
Patient records	68	95.8
Drug records	2	2.8
X-ray records	1	1.4
In what format were patient records found?		
Paper	64	90.1
Electronic	4	5.6
Paper and electronic	3	4.2
Other (explain)		

The interview conducted with the hospital records administrator, revealed that he was involved in the creation of records, and had training in medical records management practices.

In addition to the procedures followed in managing medical records at Al-Wahda hospital, this study also determined how is a medical record created or received in this hospital, 49 (69%) of participants said this not from our specialty. While 22 (31%) of them described that process carried out by clerks who would register a patient and assign the clinic for examination.

To verify the information obtained from participants, we asked the hospital records administrator about the creation of records. The hospital records administrator confirmed that the medical records are created manually and the entry point is the registration desk where registration is done or verified.

A total of 71 respondents, 68 (95.8%) indicated that medical records found in the form of patient files. Most of respondents indicated that, the records were paper format 64 (90.1%), while 3 (4.2%) of them indicated that records were a combination of paper and electronic format (Table 3).

According to policies in place relevant to record management practices, the responses were asked if there were people responsible for the collection of medical records from different hospital departments. 34 (47.9%) respondents indicated that the records administrator was responsible for the collection of folders from different units of the hospitals, while 21 (29.6%) said that the administration clerks are responsible for collecting patient folders from the wards and returning them to the central storage records unit. 10 (24.1%) participants pointed out that the collection of folders is the responsibility of nurses.

According to staffing level of record officers at Al-Wahda hospital and whether the number was sufficient to carry out the responsibilities related to patient records management. The findings revealed that there were above from 9 record officers managing the MRU and there were suggestions by these officers and other units that there was need for more record officers (Table 4).

With regards to where were patient records kept and how were the records filed, the results revealed that, 12 (16.9%) of participants said the patient records kept in medical records unit, and 31 (43.7%) of them mentioned that patient records filed by alphanumeric, while other participants said by numeric 16 (22.5%) (Table 4). Similarly, from the interview conducted with hospital records administrator indicated that patient records filed by numeric.

Furthermore, we asked the participants about what policies in place relevant to record management practices within their department, 35 (49.3%) of respondents stated that there is a policy for the records creation and this was not confirmed by the hospital records administrator. The hospital records administrator indicated that the policy is record management. Respondents were asked if they were aware with such a policy, 44 (62%) respondents were not sure if they were aware with this policy, while 27 (38%) respondents indicated that were aware. The hospital records administrator confirmed that the policies are not communicated to healthcare workers and professionals. Also, as regards to patient file borrowing, the participants were asked is there any system to keep track of borrowed patient folders by other hospital unit. 73.2% said no, while 26.8% said yes (Table 4).

Table 4: Distribution of study sample according to policies in place relevant to record management practices.

	Frequency	%
Who is responsible for collecting medical records from different hospital units?		
Records manager	34	47.9
Administration clerk	21	29.6
Nurse	10	24.1
Other	6	8.5
How many records officers/clerks work within your department?		
3-6	12	16.9
9-6	8	11.3
9 and above	22	31.0
I don't know	9	40.8
Is the number of records officers/clerks sufficient?		
Yes	33	46.5
No	28	39.4
Which type of records management system does the hospital use?		
Centralized	19	26.8
Decentralized	0	0
Not sure	9	12.7
Where were patient records kept in your department?		
Medical records unit (MRU)	12	16.9
Wards	10	14.1
MRU and Wards	6	8.4
How were the records filed?		
Alphanumeric	31	43.7
Numeric	16	22.5
Other	24	33.8
What policies were in place relevant to record management practices within your department?		
Record creation policy	35	49.3
Record management policy	20	28.2
Record disposal policy	7	9.9
Other	9	12.7
Are all hospital staff conversant with such a policy?		
Yes	27	38
No	44	62
Is there any system to keep track of borrowed patient folders by other hospital units?		
Yes	19	26.8
No	52	73.2

The interviews with the hospital records administrator, revealed that medical records must not be borrowed from the hospital except under court order, in which case a copy should be prepared.

Concerning security of patient records, the respondents were asked to indicate if there were any rules that restrict unauthorized access. 29 (40.8%) respondents said that there were rules that govern access to medical records, whilst 13 (18.3%) respondent was not sure about such regulations. When the hospital records administrator was interviewed on this matter, he wase stablished that there were regulations restricting unauthorized access to medical records. Furthermore, control measures, 40.8% of responds said denied access, followed by 29.6% of them said oath and 22.5% said locked cabinet. Also, mentioned by the hospital records administrator was storing of records in locked cabinets (Table 5).

Table 5: Distribution of study sample according to security and enhancement of confidentiality of patient records.

	Frequency	%
Do you have rules governing access to medical records in this hospital?		
Yes	29	40.8
No	29	40.8
Not sure	13	18.3
Who accesses patient records?		
Health Professionals	18	25.4
Administration staff (AS)	24	33.8
Medical records staff (MRS)	14	19.7
HP and AS	2	2.8
HP and MRS	2	2.8
HP, AS, MRS	10	14.1
Other	1	1.4
Patient information is confidential. What measures were in place to ensure that third parties do not gain access to patient information?		
Oath	21	29.6
Denied access	29	40.8
Locked cabins	16	22.5
Other	5	7.0

Regarding patient records disposal, we asked the participants about for how long were patient records kept in hospital. Out of a total of 71 respondents, 24 (33.8%) mentioned that the hospital preserves medical records for above 12 months. Also were asked how were patient records disposed and who authorizes patient records disposal. 20 (28.2%) respondents indicated methods of disposing records as a combination of both manual and electronically, followed by 19 (26.8%) said manually.

Respondent who mentioned disposal through the manual system indicated the use of burning. Concerning who authorizes patient records disposal. 18 (25.4%) of participants said medical records staff, while 44 (62%) of them said don't know.

Similarly, the hospital records administrator confirmed that patient records were kept for above 12 months, methods of patient records disposal is manually, and authorized officials for patient records disposal were medical records officers and administration officers (Table 6).

Table 6: Distribution of study sample according to patient records disposal.

	Frequency	%
For how long were patient records kept in your custody?		
0-3 months	5	7.0
3-6 months	4	5.6
6-12 months	13	18.3
Over 12 months	24	33.8
How were patient records disposed of?		
Manually	19	26.8
Electronically	16	22.5
Manually and electronically	20	28.2
Don't know	16	22.5
Other		
Who authorizes patient records disposal?		
Health professional (HP) staff	4	5.6
Medical records staff (MRS)	18	25.4
Administration staff	5	7.0
Don't know	44	62.0
Other		

Concerning status on computerization of patient records, 44 (62%) of the respondents indicated that there was no computerization of patient records in this hospital, 16 (22.5%) of them stated that computers were being used for patient record keeping, while 6 (8.5%) indicated that computerization of patient records was partly in use. On the interview conducted with the hospital records administrator, it indicated that failure to have a computerization process had a negative bearing on the availability of storage for records.

Regarding patient record management problems at Al-Wahda hospital, insufficient storage facilities for patient records had been cited as the most common problems by 11 respondents each. Missing records, failure to discharge patient records by doctors, and overstaying of files in wards have equal percent by 8 respondents. Other problems mentioned included need for a system for keep of medical records electronically and attention to the medical records department and respect his employees by doctors, provide sufficient number of staff in MRD and train them with medical records management, and difficult to retrieve files from MRD and don't retrieve borrowed files (Table 7).

Table 7: Distribution of study sample according to patient records computerization and patient records management problems at Al-Wahda hospital.

	Frequency	%
Do you have enough storage facilities?		
Yes	38	53.5
No	19	26.8
Is your medical record keeping systems computerized?		
Yes	16	22.5
No	44	62.0
Partly computerized	6	8.5
In progress	5	7.0
What problems do you have with regards to record management practices?		
Missing records	8	11.3
Lack of storage facilities	11	15.5
Failure to discharge patient records by doctors	8	11.3
Overstaying of files in wards	8	11.3
Slow retrieval of records	3	4.2
All of them	26	36.6
Missing records+ lack of storage facilities	2	2.8
Missing records+ slow retrieval of records	2	2.8
Lack of storage facilities+ failure to discharge patient records by doctors	1	1.4
Lack of storage facilities+ overstaying of files in wards	2	2.8
Is there any other information that you would like to share?		
Provide a system for keep of medical records electronically and attention to the medical records department and respect his employees by the doctors	7	9.9
Provide sufficient number of staff in MRD and train them with medical records management	6	8.5
Difficult to retrieve files from MRD and Don't retrieve borrowed files	3	4.2
No something	55	77.5

DISCUSSION

69% of participants said this not from our specialty. While 31% of them described that process carried out by clerks who would register a patient and assign the clinic for examination. The hospital administrator confirmed that the medical records are created manually and the entry point is the registration desk where registration is done or verified. This finding in disagreement with study conducted by Williams et al which indicated that paper-based records consume much space, notwithstanding that refiling them is labour intensive.[6]The study also revealed that most of participants indicated that, the records were paper format (90.1%), while (4.2%) of them indicated that records were a combination of paper and electronic format. This result is in disagreement with Ngidi et al which found out that the records were in three different formats namely; paper; electronic and photographic record.[8] The findings revealed that there were above from 9 record officers managing the MRU and there were suggestions by these officers and other units that there was need for more record officers. This result in harmony with Ngidi et al that revealed the number of record officers was not sufficient to carry out duties related patient records.[8] With regards to where were patient records kept and how were the records filed, the results revealed that, (16.9%) of participants said the patient records kept in medical records unit, and (43.7%) of them mentioned that patient records filed by alphanumeric, while other participants said by numeric (22.5%). Similarly, from the interview conducted with hospital records administrator indicated that patient records filed by numeric. These findings different with findings the study conducted in South Africa by Pyrene 2015, which revealed that all medical records are kept in the out-patient-department. But agreement with it in the system in place uses a numerical sequence.[9]

Furthermore, we asked the participants about what policies in place relevant to record management practices within their department, (49.3%) of respondents stated that there is a policy for the records creation and this was not confirmed by the hospital records administrator. The hospital records administrator indicated that the policy is record management. This result similar with result of Pyrene et al, which indicated that Victoria hospital, operates within recognized policies for the management of medical records.[9] Respondents were asked if they were aware with such a policy, (62%) respondents were not sure if they were aware with this policy, while (38%) respondents indicated that were aware. The hospital records administrator confirmed that the policies are not communicated to healthcare workers and professionals. This finding is in disagreement with finding of a study conducted by Pyrene et al which revealed that records administrator indicated that the policies are communicated amongst all healthcare professionals to ascertain that everyone is conversant with them.[9] Also, as regards to patient file borrowing, the participants were asked is there any system to keep track of borrowed patient folders by other hospital unit. 73.2% said no, while 26.8% said yes. The interviews with the hospital records administrator, revealed that medical records must not be borrowed from the hospital except under court order. This finding agreement with finding of a study conducted by Shepherd and Yeo which revealed that hospital does have tracking and tracing measures in place to safeguard the protection of medical records against any loss or misplacement.[10]

Concerning security of patient records, the respondents were asked to indicate if there were any rules that restrict unauthorized access. (40.8%) respondents said that there were rules that govern access to medical records, whilst (18.3%) respondent was not sure about such regulations. When the hospital records administrator was interviewed on this matter, he was established that there were regulations restricting unauthorized access to medical records. Furthermore, control measures, 40.8% of responds said denied access, followed by 29.6% of them said oath and 22.5% said locked cabinet. Also, mentioned by the hospital records administrator was storing of records in locked cabinets. This result is in harmony with Ngidi et al that confirmed a level of restrictions with regard to who should access patient records by putting in place measures denying loose access on patient records. These measures included the use of password, locked cabinets.[8] Regarding patient records disposal, we asked the participants about for how long were patient records kept in hospital. 3.8% mentioned that the hospital preserves medical records for above 12 months. This result different with result Pyrene et al Which confirmed from the hospital record administrator whom he confirmed and indicated that medical records are preserved for a specified period after that they are disposed of according to the requirements by the HPCSA (2008) medical records are disposed of after a certain number of years.[9]

Also were asked how were patient records disposed. (28.2%) respondents indicated methods of disposing records as a combination of both manual and electronically, followed by (26.8%) said manually. This finding similar to Ngidi et al which revealed that respondents indicated three methods of disposing records as manual, through the computer and a combination of both.[8] Concerning status on computerization of patient records, (62%) of the respondents indicated that there was no computerization of patient records in this hospital, (22.5%) of them stated that computers were being used for patient record keeping, while (8.5%) indicated that computerization of patient records was partly in use. On the interview conducted with the hospital records administrator, it indicated that failure to have a computerization processes. This result support result of Ngidi et al that revealed there was a need for a fully-fledged computerization of processes relating to patient records.[8] Regarding patient record management problems at Al Wahda hospital, insufficient storage facilities for patient records had been cited as the most common

problems by 11 respondents each. Missing records, failure to discharge patient records by doctors, and overstaying of files in wards have equal percent by 8 respondents.

Other problems mentioned included need for a system for keep of medical records electronically and attention to the medical records department and respect his employees by doctors, provide sufficient number of staff in MRD and train them with medical records management, and difficult to retrieve files from MRD and don't retrieve borrowed files. This finding was similar to finding a study conducted by Ngidi et al which revealed some crucial information regarding the problems and measures necessary towards the improvement of patient records management at Princess Marina Hospital.[8] There was an urgent need to have fully-fledged computerization of patient records including electronic filing system. Storage facilities for patient records were not sufficient and this resulted in a lot of challenges among which included loss of patient records. The number of records staffs was not sufficient considering the amount of work at hand with regards to management of records. and medical records unit staff training needs to be furthered in order to handle the challenges associated with management of patient records.

CONCLUSION

In conclusion, the storage of patient medical records mostly uses a paper based manual medical records management system, that process carried out by clerks who would register a patient and assign the clinic for examination, the patients records were secure and kept confidential in locked cabinets, the disposal of records were manually by use of burning. However, there were some prevailing problems, insufficient storage facilities for patient records, missing records, failure to discharge patient records by doctors, need for a system for keep of medical records electronically and attention to the medical records department, provide sufficient number of staff in MRD and train them with medical records management, and difficult to retrieve files from MRD.

Recommendations

Provide system for computerization of patient medical record keeping. This will greatly improve service delivery on a number of activities carried out. For example, retrieval of files will be fast and patients attended to promptly. There is also a need to increase the number of record officers from 9 to be able to cope with other work demands at the RMU involving the computerization of all records in their unit. Skill training and development forms an important part in any career development and service delivery in any institutions such as the hospital. This is also because patient record management requires multi skilled personnel especially in the area of information technology.

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