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Assessment of Healthcare Data a Retrospective Review of Data Quality

Adikwu Joseph, Unuh Joseph Morro, Uko Michael A.
Department of Mathematics Statistics, Benue State Polytechnic, Ugbokolo.

Abstract:- Documented records are veritable tool for good health care management. Their reliance depends on accurate, prompt and proper documentation of the care provided and periodic analysis of such data. This study centered on available records at the General Hospital, Ijadoga, Otukpa, A review of existing information was carried out to assess the documentation of 357 paper-based health records of inpatients discharged in 2014. 357 patient records were reviewed from the Out Patients department(OPD) (45.90%), Female Ward (24.32%), and other specialties (29.78%). Record keeping was very good (98.49%) for promptness recording care within the first 24 hours of admission, fair (58.80%) for proper entry of patient unit number (unique identifier), and very poor (12.84%) for utilization of discharge summary forms. Overall, surgery records were nearly always (100%) prompt regarding care documentation, Out Patients department(OPD) were followed a regular pattern (80.65%) in entering the vitals of patients and consultations/examinations with/of Doctors/Nurses was properly done (100%).Of all (62.02%) folders were alphabetically/chronologically arranged, (62.29%) were properly held together with file tags, and most (80.60%) discharged folders reviewed, analyzed and appropriate code numbers were assigned. Some short comings on the part of administrative staff in charge of record keeping were noted. Some of the entries were properly done which shows that some of the hospital staff know what to do but the zeal to do it was not there. Findings indicates that further training is very necessary for better performance.

Keywords:- *Medical coding, software, data quality, discharge summary, quality assurance, Clinical documentation, electronic medical records, patients' health records, medical informatics.*

I. INTRODUCTION

Health records documents basic information of patients' diagnosis of present and/or past record of health and administered treatment(s), such records are kept by experts in the hospital. Such information should be put together in a way that all data needed about a particular patient and that will help in treatment of such a person when healthcare is needed for referencing in times of need. When this is done properly, it is an indicator to the clinical works and results. Since these are the foundation for establishing health centers, the records and recordings of a patient's information should be comprehensively recorded and easily available for referencing by researchers.(Cora et al 2001).

Proper health documentation is an indication of proper healthcare, the reverse also holds. That is, lack of proper documentation is an indication of lack of proper healthcare. (Donald, 2002). It is possible for a patient to have a proper healthcare and documentation will be done thoroughly. However, the opposite is commonly noticed; a properly administered healthcare that is poorly recorded. Healthcare records could be considered to be of high quality depending on the facts documented by the expert involved. Quality of data or information is dependent on what makes up the records, such as definition, accuracy, relevance, etc. Problems with data quality make the health record linkage process cumbersome, unreliable, and of little value to organizations, providers, and patients. (Ibrahim T. A. et al)

When form for documentation is prepared, the facts on the form are very necessary and important but some of the health care expert in-charge of documentation does not take the process seriously. Sometimes health experts (Physicians) could be so engaged that wrong records could be used for a different patient. This affects the quality of healthcare records which depends mainly on their timely completeness and professionalism in keeping the records. The accuracy of data could differ depending on the information available to the healthcare giver, the atmosphere under which the information is provided, the disposition of the patient and most importantly, the approach used by the experts to obtain the information. The manner in which the information is coded during healthcare is dependent on the physicians/recorder's training and experience. (Doyal 1997). In addition, inadequate physician documentation may also affect accurate interpretation of medical charts by coders and consequently the validity of administrative data. Clinical documentation in computer-based records has been found to be more complete and more appropriate for clinical decisions than that in paper-based records. Health information should by now be recorded electronically, but we observed that this is not the case as many healthcare givers still uses the old style of manually recording and the use of paper records is very much in use. Where electronic method has been adopted, it has not been fully put into use or implemented.

When the quality of healthcare information is good, it helps policy and decision makers to plan properly for

development and prompt maintenance of hospitals and other healthcare facilities.

Health record review is important for quality assessment and clinical epidemiology research as researchers can access data on previous events. According to Dimick, 2008; Improving the quality of healthcare data in patient health records can affect clinical and administrative decision making in many ways and impact on health economics, increase patient safety, provide evidence to support clinical decision making through healthcare research, and improve the information provided to patients on their illness and care, and the effectiveness of clinical care pathways.

Patient health record review has improved the chart documentation of care by medical house officers and the quality of healthcare record keeping has been affected. It has enhanced communication among healthcare teams resulting in improved patient care. Health record review offers an attractive mechanism for evaluating clinical competence because of its ease of implementation relative to other methods.

Ensuring quality patient care information is challenging in light of complex and ever changing healthcare delivery systems (Durking 2006). Responsibility devolves to all healthcare providers as many healthcare administrators recognize that quality improvement can enhance services offered, when the roles of leadership is taken by those at the herm of affairs in healthcare institutions like the administrators, senior physicians and other senior clinical and supporting staff in the various department. One duty of these senior staff is to make sure the healthcare records are of good quality round the clock. The job of these senior staff most importantly is to make sure the records are available as at when needed and properly documented. Therefore, healthcare institutions must facilitate regular analysis of health records so that good patient care information systems are maintained.

Inadequacies in clinical documentation have been reported at the General Hospital, Otukpa by staff interviewed unknown to them that the information they were given was going to be used. This work aims at studying scientifically the information obtained by checking the quantitiative aspect of the records of patients who were on admission at a point in the hospital.

II. METHODOLOGY

A. Objective of the research

This work aims at studying scientifically the information obtained by checking the quantitative aspect of records of patients who were on admission at a point at the General Hospital, Otukpa.

B. Materials

A sample of discharge files of patients from all wards (Male and Female) was used for the study.

The paper-based health records of patients admitted and discharged between January 1 and December 31, 2014 were reviewed. A health record review form designed by Abdelhak and published by WHO was modified and used. Health record material used is made up of twenty three set of questions, followed by options and sought to evaluates issues that boarders on timeliness of recording of data obtained from contributors, quality of health facilities and detailing; every other aspect of healthcare administration including follow ups after discharge, etc.

A method of Simple Random Sampling (SRS) method was used to obtain the documents the patients giving a total sample size of 357.

C. Statistical tool and analysis

The statistical software SPSS V.17.0 was used for data analysis with results presented as simple frequency, cross-tabulation, a bar chart, means, SDs, and correlation coefficients.

All direct identifiers of patients were removed before data abstraction and subsequent transfer of information onto the computer system. The only possible identifier left was the unit number which was used to track duplication and monitor abstraction processes. However, as patient unit numbers are not given in the study, all patients' health records were essentially de-identified and the individuals cannot be identified.

III. RESULTS

A. Demographic patterns of separated records

A total of 335 records (93.85%) were abstracted from the 357 identified; the remaining 22 records were missing from the shelves. Eleven(3.28%) of the total files analyzed were on admission for more than once.

Separated documents came from the two departments of Etymology and gynecology (154, 45.90%), pediatrics (81, 24.32%), accident and emergency (64, 19.13%), medicine (17, 5.19%), surgery (14, 4.09%), and psychiatry (5, 1.37%). These percentages reflected the following hospital discharge patterns given in the hospital statistics for 2008: Etymology and gynecology (36.80%), accident and emergency (27.30%), medicine (6.01%), surgery (7.7%) pediatrics (20.21%), psychiatry (0.89%) of all those that were discharged. There is a significant relation between the statistics of the hospital and

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the information studied: r (4) = 0.96, p < 0.05 with a critical value of 0.84.

B. Information obtained from professionalism

The table below shows information on consistency of record, reliability and information on responsibility for care. During the first day of being admitted, 330 (98.49%) records had documentation by clinicians and 287 (85.66%) by nurses. Patients' names were correctly documented on the first page of progress notes in 252 (75.27%) records and unit numbers in 197 (58.88%) records. Daily progress notes were written in 308 (91.80%) records, 322 (95.98%) of which were signed and dated. Finally, investigation orders were signed and dated in 242 (72.13%) of the records.

Documentation standards	N	n(%)
Record keep within the first day of admission	335	330 (98.49)
Nursing care recorded within the first day of admission	335	280 (83.58)
Vital information of Patient recorded properly on the first page attached papers	335	259 (77.31)
Patient's identification number properly recorded on attached papers	335	197 (58.88)
Progress notes documented each day	335	308 (91.80)
Progress notes signed and dated each day	335	322 (95.98)
Laboratory examination form duly signed	335	242 (72.13)

Table 1. Information obtained from professionalism

C. Details of Clinical and quality assurance

The table below shows that 294 (87.70%) records contained information on past medical history, 316 (94.26%) recorded the provisional diagnosis, and 293 (87.43%) had discharge notes recorded. However, it was observed that the discharge information was available in a complete form for only (46, 13.73%) of the records. The other subsections (three of them) on the discharge forms studied were mostly documented properly. That is, hospitalization detailing (41, 95.75%), treatment and medication administered (41, 94.68%), and follow-up details (40, 93.62%).

Documentation standards	N	n (%)
Record contains past medical history	335	294 (87.70)
Provisional diagnosis documented in the records	335	316 (94.26)
Discharge notes recorded	335	293 (87.43)
Discharge summary completed	335	43 (12.84)
Discharge summary contains summary of hospitalization	43	41 (95.34)
Treatment and administration of medications	43	39 (90.70)
Forms with follow up after discharge	43	40 (93.02)

Table 2. Details of Clinical and quality assurance

D. Basic documentation via professionalism

The table below shows the distribution of documentation from various departments. For instance, it was observed that in the first day of admission, surgery recorded the highest percentage and psychiatry has lowest percentage value for prompt record taking.

Ward	% prompt recording on the first day	% main examination result recorded in discharge form	% of discharge recorded properly	% Patient's particulars documented	% Unit numbering done properly	% examination done properly recorded
Etymology and gynecology	98.91	94.3	15.77	80.7	61.9	91.1
Psychiatry	91	0	0	80	60	40
Surgery	99.90	85.7	23.33	76.7	70	86.7
Accident and emergency	97.9	90	7.69	75.7	58.6	71.4
Medicine	97.4	100	18.42	68.4	68.4	84.2
Pediatrics	97.8	88.2	8.43	65.7	49.4	83.1

Table 3. Basic documentation via professionalism

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IV. DISCUSSION

The separated records show the discharge patterns at the General Hospital, Otukpa 2014. Virtually all departments and sub departments in the health facility were studied in the course of this work, in variance to the work of O'Neil et al which examined only a department. This work of research recorded almost one half of the records to be made up issues related to women and children healthcare; that is, (153, 45.81%)of all records surveyed.

Compared to the work and findings of Durkin, our findings shows consistency and timeliness in record keeping of healthcare which is similar to that of Durkin but in sharp contrast to that of Gunningberg and co. which indicated the quality of information on patients' health was poor generally. Nonetheless, this work showed that request for laboratory examination were not always endorsed as it should have been, pagination and numbering of items were mostly not done correctly, we also noticed and observed that forms for discharge were not always used maximally. It could be concluded that, failure of personnel to endorse laboratory examination form could be because of lack of willingness to accept responsibility for any unprofessional act and the issue of not numbering records according to patients may lead to mixing up of different patients' documentation since the numbering was used to identify patients in most casesparticularly in the study area (Otukpa) where more than one member of a family may share the same name.

In all, the failure of personnel to complete documentation as it ought to be impede on proper planning by management as the basic information needed are not always available as they should, like poor documentation of numbering used to identify patients, improper documentation of discharge forms. We also noted that when discharge forms are available they are properly completed showing that the healthcare giver are well knowledge in the act of record keeping but are not always willing.

Our findings suggest that the department of surgery were better off in terms of data or record keeping, most times; the staff in this department does it promptly and were always correctly completed.

Anytime a patient's discharge summary is not properly documented, it can lead to serious setback in case of a follow – up or re-occurrence of such a health challenge and we further found that if management would make it a point of duty to carryout regular review of healthcare documentation, a lot will still be observed to be wrong with the process of healthcare documentation. Such review will boast the patients' healthcare processes and expose staff inadequacies:- both senior and supporting staff

V. CONCLUSION AND RECOMMENDATIONS

Having done this research, we conclude as follows

- The review of the documentation process should be at regular basis
- There were serious lack of utilization of discharge forms among the physicians and other staff
- Programmes that will improve the staff attitude towards proper documentation should be encouraged
- Seniorstaff that are well experienced in documentation and record keeping should be encouraged to act as mentors to junior and other supporting staff.

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