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Improving the Completeness of Medical Records at Inpatient department of Dalefage Primary Hospital, west Afar, Ethiopia.

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A capstone project submitted to School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the degree of Masters of Hospital and Health care Administration

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Addis Ababa, Ethiopia

DECLERATION

The undersigned declare that this thesis is my original work and has not been presented for a degree in this or other university and all sources of materials have been fully acknowledged.

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This thesis work has been submitted for examination with our approval as university advisors

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ABBREVATIONS

EHRIG	Ethiopian hospital reform implementation guideline
HPMI	Hospital performance monitoring and improvement manual
KPI	Key performance indicator
IPD	Inpatient department
MR	Medical record
HMIS	Health information management system
CHAI	Clinton health access initiatives
FMoH	Federal ministry of health
ARHB	Afar regional health bureau
DOT	Direct observed treatment

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OPERATIONAL DEFINITIONS

Completeness of medical record - presence of all the necessary information of patients based on the standard formats and all entries are dated and signed.

Availability of inpatient medical record completeness formats – the availability of standardized inpatient medical record formats.

Completeness of inpatient medical record is calculated based on the following equation:

% of completeness = Total Score (yes`s) / (Number of cards checked for completeness times five) times 100 (Source Federal hospital performance monitoring and improvement manual)

Variables

Dependent variable: the completeness of the five indicators. It is calculated based on the above equation.

Independent variables: availability of resources, interventions designed to improve completeness of medical records.

Contents

ABSTRACT

Introduction: The completeness of medical records is an outstanding problem that affects the quality of health services in many hospitals of Ethiopia. Enhancing the completeness of patients records is inexpensive that can be implemented with the involvement of health workers.

Objective: To improve the completeness of patient's card admitted to Dalefage hospital.

Design; Pre - post interventional study from January - August, 2013 GC uses inpatient medical record review form and focus group discussions.

Setting; Dalefage district hospital, west Afar, Ethiopia.

Participants: Medical director, matron and other clinical staffs.

Implementation: The interventions implemented were avail inpatient medical record completeness format, facility based inpatient medical record completeness guideline and procedures were developed and onsite training was provided. The work plan progresses of implementation were monitored by check list.

Main outcome measures: Availability of inpatient medical record completeness format, provision of onsite training, development of facility based guideline and procedure and enhancement of inpatient medical record completeness report.

Evaluation: inpatient medical record format availability and completeness improved significantly from 0% to 100% and from 0% to 73.6% respectively.

Lesson learned: our findings indicate that a well-organized inpatient medical record completeness enhancement can improve the quality of available inpatient information, helps to know our reporting status of inpatient medical record completeness which is crucial to plan improvement strategy and development of facility based guideline and procedure was required to accomplish sustainability. Lastly, onsite training was the best strategy for resource limited countries like Ethiopia to improve health care quality service delivery.

Key words: medical record, availability, completeness, Dalefage hospital, Ethiopia.

INTRODUCTION

Dalefage primary hospital is one of the five hospitals found in Afar regional state which was upgraded from health center to primary hospital by the year 2009 GC. The hospital has 70 employees among them 30 are technical and 40 are supportive staffs. The hospital has 65 bed capacity and currently with 16 functional beds. The average length of stay is 3 days and the hospital serves for 15,000 patients in average annually whereas, the catchment area population is around 100,000.

Dalefage primary hospital has three major service areas outpatient, inpatient and emergency including pharmacy, laboratory, mother and child health, oral therapeutic feeding unit, vaccination and health education.

The Ethiopian`s federal ministry of health has been leading a sector-wide reform effort aimed at significantly improving the quality and accessibility of services at all levels of the countries decentralized health system. As part of this reform, health facilities throughout the country has been streamlining their operational process and building their capabilities with a view to making their services more effective and efficient. The ongoing hospital reform is reorganizing the hospital services in to emergency, outpatient and inpatient services.

On the other hand the hospital key performance indicators are a way to measure specific issues and help to understand a system to compare and understand. In Ethiopia there are 36 key performance indicators nationally to be reported from government hospitals.

At Dalefage primary hospital in general the Ethiopian hospitals reform implementation guide line (EHRIG) medical record check list assessment showed 5 met out of 7 which shows 71 % met regarding the overall medical record management, whereas, the key performance indicator (KPI) 18 totally was not implemented during the baseline assessment.

The practice at Dalefage primary hospital was using a health management information system (HMIS) form that developed only for OPD use only. Besides that, they were used the HMIS form inappropriately at IPD mostly for progress notes, rarely discharge order and very rarely for medication order updates to be written on it, so that, this is not the standard based on the health reform. The KPI-18 which shows the completeness of IPD MR completeness have the inpatient

physician or health officer note, physician order, nursing care plan, medication administration and the discharge summary formats which is specific to each indicators which does not practiced. So that, based on the health reform the standard was not practiced the baseline could be 0 %.

Statement of the problem

Inpatient medical record was not complete in Dalefage primary hospital, besides, medical record (MR) is multipurpose document of patient and client that is used to document and communicate all necessary information about health care seekers, medical care among health professionals and it is a corner stone in providing acceptable and quality service for patients and clients. Medical record (MR) is used as resources in case of surveillance and audit of hospital activities. Especially, at inpatient department registering all necessary information related to inpatient services including physician or health officer order, physician note, medication administration record, nursing care plan and discharge summary notes. All the above in formations are important in managing patient condition, follow up, legal issues and useful for any relevant condition related to patient. Dalefage primary hospital MR management system is paper based single central register for all patients or clients and the facility not yet started with electronic based registration system and tracer system.

Study on patient MR completeness from different aspects would be conducted in different countries worldwide showed in developing world including our country poor medical record management system compromises patient and client care at different level. Completed patient record is an important tool to monitor performance of quality health service delivery for patients or clients, report activities and to know and manage the gap. Additionally, it is important for researchers to get complete data of patients that will contribute to the improvement of health service delivery and quality improvement.

Like Dalefage primary hospital many hospitals in the rural area of Ethiopia which serves as primary health care unit for most of the people`s were lack the facilities of the computerized MR system, regular staff awareness creation to manage and update patient information accordingly. As result, the newly introduced EHRIG and hospital performance monitoring and improvement manual (HPMI) are expected to bring real and sustainable change in the health worker`s knowledge who working in the health facilities needs to be create awareness for them accordingly.

Therefore, conducting the study on MR completeness at inpatient department of Dalefage primary hospital was an important issue at which the inpatient and the overall medical record system managed poorly and needs an action to manage the problem and fill the gap.

OBJECTIVES

General objective

- Improving the completeness of medical records at inpatient department of Dalefage hospital.

Specific objectives

- Improve inpatient MR completeness from 0% to 60% at the end of September, 2013.
- Availing 100% inpatient completeness format by the end of March, 2013.

The achievement plans after base line to be achieve 60%. Because, the procedure needs resources that were not in place at that time like that of trained and experienced human resources, money to train staffs and avail or print formats to be implemented and the time to search the above resources and to implementation. By considering the target should be as much as achievable so the maximum could be planned to achieve 60% without the mentioned resource.

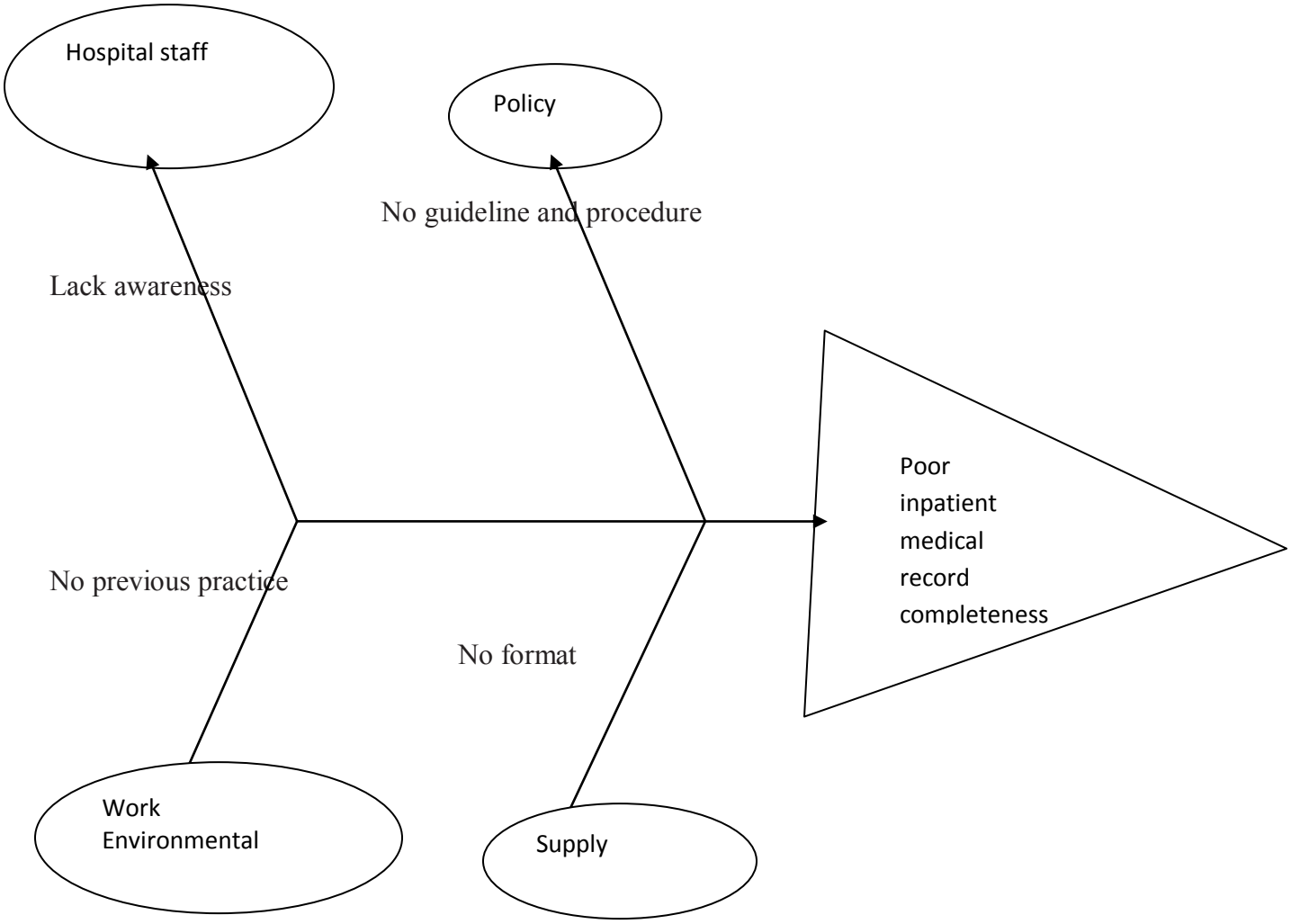
ROOT CAUSE ANALYSIS

We worked in a collaborative team of staff members to apply problem solving and quality improvement techniques to define the problem, understand its root causes, set objectives, consider alternative strategies to address the problems and fulfill the objectives and select strategy to implement a set of planned tasks.

After we discussed in detail regarding the root cause, we state the root cause as lack of awareness of staffs from the peoples` factor, lack of guideline and procedure for inpatient department (IPD) MR Completeness from procedures` factor, from the supply factor total absence of formats that are important for inpatient MR completeness and the KPI is not implemented before (environmental factor). We identify the root causes and scope of the problem after the baseline assessment conducted at January, 2013. The pre-intervention assessment showed that the hospital had not created awareness, not avail important formats, no facility based guideline and procedures developed and KPI 18 not implemented. Whereas, hospital reform launched four years before throughout the hospitals in the country and there are expected to report EHRIG and KPI performance at the time not yet reported because of lack of awareness on how to implement and report. The main root cause is lack of awareness of staffs on hospital reform which leads to the hospital not concerned to avail inpatient formats goes through inpatient staffs no implement (report) it, as a result the facility based guideline and procedure not developed. In general the hospital does not work on completeness of MR at inpatient department.

In addition we conduct focus group discussion with 4 staffs (physician, matron and 2 nurses) regarding inpatient MR completeness we agreed upon that there is lack of awareness, no facility based guideline and procedure, no supply of inpatient formats at all. After detail discussion, the activity on inpatient department regarding MR completeness was not done at all which results in lack of patient information affect reporting and compromises inpatient department service quality. This leads to drop in the overall hospital performance.

Figure1. Fishbone diagram



Then we agreed up the root cause as follow:-

1. The IPD staffs have lack of awareness on inpatient medical record completeness.
2. The KPI is not implemented before.
3. The IPD does not have facility based guideline and procedure for IPD MR Completeness.
4. Total absence of important formats in the department

After the root causes identified then planned on the way the intervention to be implemented create awareness of IPD staffs on the way to complete MR, avail IPD formats necessary for MR completeness and develop policy and procedures for IPD MR Completeness.

Intervention for the root causes of the problems

The following interventions are designed to implement in order to impact the causes of the problem.

S.No.	Root cause	Intervention
1	There is no previous practice	Implement the KPI 18
2	The IPD staffs have lack of awareness on inpatient medical record completeness.	Create awareness by providing training
3	The IPD does not have policy and procedure	Develop facility based guideline and procedure
4	Total absence of important formats in the department	Avail all important formats

Rationale of the project

To strengthen and improve the quality of the overall health care service delivery and quality of patient care.

LITERATURE REVIEW

Medical record is an account compiled by physicians and other health professionals of a patient`s medical history, present illness, findings on examination, details of treatment and progress notes and it is a legal record of care. Primary records are the original records established to document the continuation of care given to a beneficiary and three categories for primary records health record, out patient record and inpatient record (1).

Medical record is complete if it includes the following items; medical record number on each page, patient information in the record, physician note, nursing note for inpatient, medication record if ordered, laboratory result if ordered and radiology result if ordered (2).

Admission clinician's name and signature are important in terms of follow up patient and medico-legal issue. However, these parts are often forgotten. On many records, the highest rate name and signature documentation belonged medical record must be filled completely and correctly, in order to patients get their rights in the information gathering and the physician should carry out their obligations in the provision of information related to the treated patient. Moreover, medical records are also useful for management and planning facilities as well as medical services, health research and statistical purposes. Completeness of medical data must be written and recorded correctly for diagnosis, treatment, insurance and the best results (3).

The study conducted in ST. Elisabeth general hospital, Yogyakarta, state there are three main components associated with the completeness of medical records; hospital personnel (human resource), organization and technology. To produce completed medical records, these three components must work well together respondent's characteristics varied in age, sex, education, and working period. These different characteristics would influence the completeness of medical records. For example, a new doctor who worked at the hospital would fill up the medical record more complete than specialists who work longer (3).

A quantitative analysis result for a total of 306 inpatient medical records is 96.4% of medical history 95.8% of medication history and 76.1% of anamnesis were not documented. Incomplete name and signature of the physicians in MR was also a common phenomenon. Only 56.2% of physical examination sheets and49.7% early diagnosis documented both of name and signature.

Unconventional abbreviations were used mostly in physical examination 8.2%, discharge summary 5.2% and anamnesis 4.9% (3).

According to AAOHN journal, the documentation and recordkeeping requirements of the direct observed treatment (DOT) fall into two major categories: medical examinations and certifications; and drug and alcohol testing. Recordkeeping requirements are uniquely specified by each of the DOT agencies, although some standardization exists across agencies from the DOT Office of Drug and Alcohol Policy and Compliance for drug and alcohol testing records. Medical examinations or medical certifications are required by several of the DOT agencies, including the Federal Aviation Administration, the Federal Motor Carrier Safety Administration (4).

The future of medical recordkeeping is electronic way to improve the quality of care, improve patient safety and lower costs (4).

A prospective study conducted in Netherlands, patients admitted to the general internal medicine ward of two acute care hospitals, shows that the medication history in the hospital medical record is often incomplete, as 26% of the prescription drugs in use is not recorded and 67% of all patients has one of more drugs that are either not registered in the hospital medical record or registered but not in use (5).

On the other hospital, medication history record is often incomplete, as 25% of the prescription drugs in use are not recorded and 61% of all patients have one of more drugs not registered. Pharmacy records from the community pharmacist can be used to obtain more complete information on the medication history of patients admitted to the hospital (5).

The study conducted in America state that, regarding the completeness and safety of medication lists recorded in outpatient notes, admission notes, and discharge summaries. It shows that, 28.5% of notes were complete including a medication name, dose, route, and frequency. Of the incomplete notes, 74.0% were judged to be safe by two clinical experts, and 26.0% were judged to be potentially harmful. On other hands discharge summaries had the highest rate of completeness 44.4% and admission notes had a lower rate of completeness 22.9% (7).

The prospective study conducted in the general internal medicine ward of two acute care hospitals Netherlands shows, medication history in the hospital medical record is often incomplete as 25% of the prescription drugs in use not recorded and 61% of all patients have one or more drugs not registered (8).

The article reviewed from White and Glazier BMC Medicine shows that, hospitalists are efficient providers of inpatient care on the basis of reductions in their patients' average length of stay (69%) and total hospital costs (70%); however, the clinical quality of hospitalist care appears to be comparable to that provided by their colleagues (9).

The study in America on prescription analysis and survey results showed that the majority of issues centered on illegible handwriting (especially for signatures) and failure to provide necessaryinformation.72%of the respondents indicated that they saw prescriptions with signature stamps being used. When stamps were not used, however, 89% of respondents reported illegible signatures and failure to print name legibly (10).

Patient Safety and Quality, state that nursing documentation was limited and inadequate for evaluating the actual care given. Care plans, goals, diagnoses, planned interventions, and projected outcomes were absent between 18 % and 45 % of the time (11).

In a related study in Lillibridg, found that when nurses were asked to list the type of data they would normally collect using specific examination techniques, 23 % provided nursing assessment details. It can be argued that if nurses were provided with an explicit nursing language to document and communicate about their care that nurses and the interdisciplinary team members would more readily understand the importance and impact of nursing care and patient outcomes (11).

The study conducted in, Crittenton Hospital Medical Center to improve inpatient discharge shows that, discharge completeness improved from 64% patients not having a complete discharge to 30% patients having a complete discharge (13).

METHODOLOGY

Study setting

The study was conducted at six years old hospital found in afar regional state, west afar Dalefage woreda, Dalefage town named Dalefage district hospital.The study was conducted in Dalefage district hospital with average daily admission of 1 patient and the only hospital serving for more than 100,000 populations in west afar. The study was approved by senior management team and study unit was inpatient department.

Study design

We used a pre- post interventional study to access the accessibility, completeness and reporting of inpatient medical record completeness format to enhance and get accurate report after intervention, also to access staff knowledge towards inpatient medical record completeness by conducting focus group discussion and in order to accessibility of format we use yes/no questionnaire.

Sample size and Sampling procedure

The sample size of the surveyed medical records were taken from the HPMI manual which is 50 as minimum or 5% of the discharged patients medical records to be reviewed based on the protocol to assess the completeness of inpatient medical records. For the hospitals like Dalefage primary hospitals with low patient flow better to use minimum standard sample size of 50 samples. Based on the protocol we reviewed 50 discharged patients medical record each for pre-post interventional study using standardized pre prepared check list to assess the completeness among from those admitted and discharged patients medical record using pre-prepared standardized checklist by using simple random sampling method and assessed for completeness. The sample size determination and calculation mechanism was taken from hospital performance monitoring and improvement manual. We conduct focus group discussion to assess the knowledge of physicians and nurses and the result was they could not had enough knowledge especially nurses were to engage in inpatient medical record completeness. The availability of inpatient format was assessed in inpatient department and all formats were absent in the hospital.

Data collection

The baseline data were collected from December 5 – 11, 2012 GC among from 131 patients, who were admitted at inpatient department of Dalefage hospital from July to November, 2012.

Post intervention data collection was held from September 1- 15, 2013 and collected by three nurses. We asses availability of inpatient format by using yes/no questioner and completeness of inpatient medical record completeness also by using pre-prepared standardized checklist. The staff awareness was assessed by focus group discussion as previous.

Data management and analysis

After the data was collected by assigned personnel, the checklists collected and put together for processing. The data quality was checked during data collection process by assigned super visor. Data is calculated manually. Excel and manual calculators were used to calculate percentages. After the data collected from the 50 samples among patients admitted to wards and the checklists collected, counted, checked for quality and tallied. The data calculated manually and the result of completeness of medical records at inpatient department displayed in percent and displayed by charts and graph.

Data quality management

The data collection team would be have oriented on the checklist that used for data collection and the way to collect data. The study unit the inpatient department would be assessed for inpatient medical record completeness after the cross check done for the admission of study item against abstract register and on spot check would be done.

Ethical consideration

Ethical clearance letter would be obtained from Addis Ababa University College of health sciences school of public health and health service management unit. Letters would be written to hospital from board chair to senior management team and the study was conducted after concerned bodies are informed.

Plan for dissemination of results

The purpose of the study would be to improve inpatient medical record completeness. After completion the study, finding would be disseminated to Addis Ababa University, Dalefage hospital, Afar regional health bureau and other concerned bodies.

INTERVENTION

Among the root causes identified the intervention was planned and implemented. The best intervention was selected based on the political feasibility, cost effectiveness, time required and impact on productivity from May to September, 2013 GC to achieve pre planed target. Initially the hospital would avail and introduce the inpatient medical record formats that are physician note form, physician or health officer order sheet, nursing care plan formats, medication administration record and discharge summary sheet.

On intervention plan the main focus was to create staff awareness on inpatient medical record completeness as well in hospital reform by providing onsite training to solve lack of awareness and knowledge gap on the overall hospital reform. The training was given for all technical and concerned supportive staffs. The training materials were Ethiopian hospitals reform implementation guideline and Ethiopian hospitals performance monitoring and improvement manual which are the main and the only resource materials for Ethiopian hospitals reform. The training cost was covered by Clinton health access initiatives and it was given by the support of the federal ministry of health and Afar regional health bureau.

Lastly, on the way to strengthen and sustain the inpatient medical record completeness we developed facility based guide line with specific role and responsibility for all technical staffs (physicians, nurses, KPI focal person and data owners) working in Dalefage primary hospital.

Inpatient medical record completeness format contains many information patient history, diagnosis, treatment order, nursing diagnosis and care plan and at last the patient`s health condition upon discharge.

Finally, the facility based guideline and procedure is an important tool to sustain the activities of inpatient medical record completeness in the hospital.

IMPLEMENTATION

There was no trend before this project were initiated so, there was a challenge to initiate because there was no format at all and staffs were not aware of it. Inpatient medical record completeness formats contain details of date of admission, ward, bed number, identification, socio-demographic data, disease history, investigations, diagnosis, nursing diagnosis, nursing care plan, nursing outcome, treatment and other important orders, details of ordered medication, drug administration times and discharge summary notes. The medical record review form contains 5 indicators physician notes, physician/health officer order sheet, nursing care plan, medication administration record and discharge summary. The 3 main categories of questions to be addressed in review form were presence of all 5 formats, with all entries, dated and signed so, this needs awareness creation and format supply and the inpatient staffs were oriented and formats availed before onsite training held. Therefore all staffs in inpatient department were given responsibility to initiate, register and complete inpatient medical record completeness and the data were kept in a single central unit and put out the data during reporting period by hospital reporting team and. The onsite training was given early on June, 2013 to all technical staff members of Dalefage hospital for 1 week duration. The overall implementation was lasted from May up to August for 4 months duration.

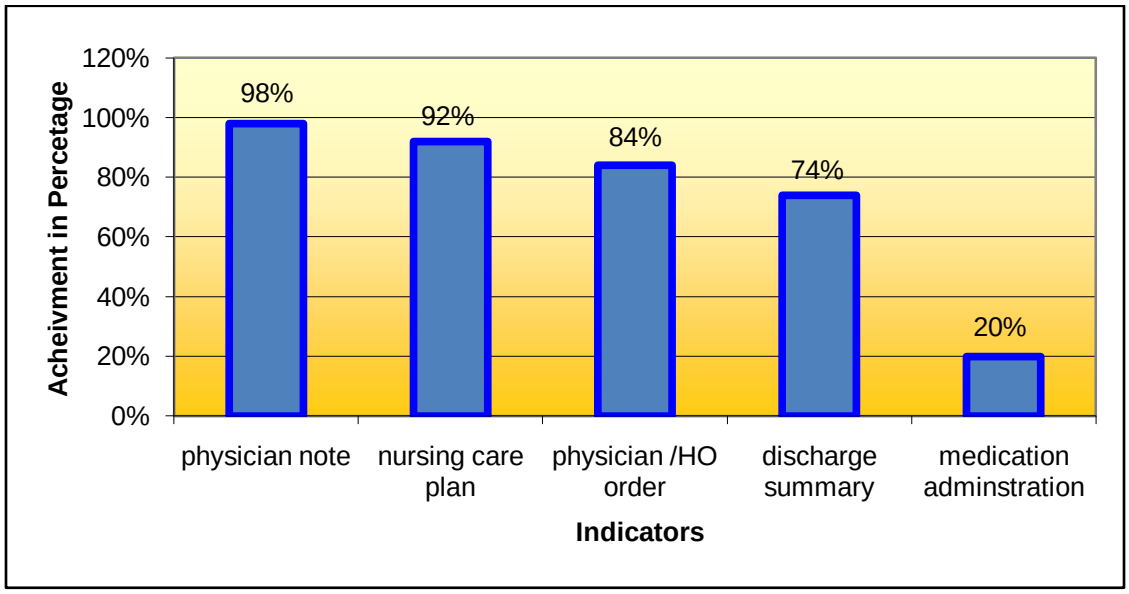
Indicators

- **Processes indicators:-**
    - Availability of necessary formats.
    - Development of guideline and procedures.
- **Outcome indicators:-**
    - Percent score of completeness of inpatient medical records during post intervention evaluation.
    - % of availability
    - % of completeness of medical records

Results

Availability of pre-prepared standardized inpatient information registration formats in the hospital significantly increased the utilization of formats from the baseline 0% to 78.8% after intervention besides the availability of formats is 100%. An enhancement of completeness and reporting of inpatient medical record completeness improved significantly from the baseline 0% to 73.6% during post intervention evaluation. In analysis of each survey indicator showed that physician note format attached and completed for 49(98%), Physician order sheet was attached for 44(88%) and completed for 42(84%) of patient cards, Nursing care plan formats was attached for 49(98%) and completed for 46(92%) of admitted patients. We found Nurses complete and attached medication administration sheet for 10(20%) and lastly discharge summary form were attached for 45(90%) and completed for 37(74%) of discharged patient cards.

Figure 2: Show the achievement in specific indicators in medical records* completeness in *Dalefage Hospital, Afar Region.



There are five pre-prepared standardized formats and of them three were completed by physicians (inpatient physician note, physician order and discharge summary) and two of them by nurses (nursing care plan and medication administration sheet). The study showed that almost all entries were written clearly and completely including dates and signatures. The hand writing

of nursing care plan was 74% fair to read and the proper usage of nursing terminology were 41% among from the completed. Regarding the medication administration forms 100% all entries was clearly written, dated and signed.

Table1: Pre and post intervention changes in medical records* completeness in *Dalefage Hospital, Afar Region.

Activities	Pre-intervention From 5 – 11 Dec, 2012	Post-intervention From 1 – 15 Sep, 2013	Variation
Inpatient physician note	0%	98%	98%
Physician order	0%	84%	84%
Nursing care plan	0%	92%	92%
Medication administration record	0%	20%	20%
Discharge summary	0%	74%	74%
Total	**0%**	**73.6%**	**73.6%**

Discussion

We found that a simple set of interventions could be accomplished to improve staff awareness, accessibility of all important inpatient formats and enhancing completeness and reporting of inpatient medical record completeness (KPI-18) in resource limited setting could bring a big change in the inpatient medical record completeness in the department as well as help in improving hospital performance. The simplicity and in expensiveness of this project produces results that demonstrate a well awareness creation on EHRIG (Ethiopian Hospitals Reform Implementation Guideline) and HPMI (Hospital Performance Monitoring and Improvement Manual) and accessibility of important formats in the hospital inpatient department medical record completeness intervention could significantly improve patient management and system operations that can facilitate better enhancement of inpatient medical record completeness and improve the overall staff awareness towards EHRIG, HPMI and specific KPI.

Additionally, the intervention that designed to sustain the inpatient medical record completeness was the development of facility based guideline and procedure was critical to the system to complete and report of inpatient medical record completeness for staffs with clear specific role and responsibilities (physicians, nurses, specific KPI owners and KPI focal person).

This study showed that the inpatient physician note had high rate of completeness as 98% in Dalefage hospital whereas, the study in America showed admission note completed as 22.9% (10) so, the study in Dalefage hospital shows higher rate of inpatient physician note completed. The same study in Dalefage hospital showed the discharge summary completed as 74% whereas the study in America on the other hand showed the discharge summary completed as 44.4%. And another study conducted in Crittenton hospital medical center (13) showed discharge summary were completed as 66%. Still the study in our hospital showed higher rate of completeness than the study in the two hospitals.

The same study in Dalefage hospital showed that the handwriting on the inpatient medical record was 74 % legible to read whereas, 26 % was illegible to read. On the other hand the proper usage of nursing terminology was 41 % and among the completed medication administration records almost all entries was completed and written legibly, whereas the study in St. Elisabeth general hospital showed about 71.9 % of medication records had illegible hand writing and this was

caused due to high work load and fatigue. The hand writing in patient`s medical record always should be read easily not only for medical personnel but also to whom interested to read.

The higher rate of completeness was seen in inpatient physician note which was completed as 49 (98 %), where as the higher rate of non- completeness seen in inpatient medication administration record 10 (20 %) was only completed. This was due to physicians` had better experience and committed for their responsibilities and nurses had less experience and commitment.

The study done in one rural hospital in Ethiopia regarding the development of patient registration and medical record management post intervention evaluation showed the physician satisfaction increases from 11.3 to 15.2 whereas, the study in our hospital does not include physician satisfaction. It is clear that pre-registered patient or client information is important to evaluate, manage, to follow up and help in the need for planning further management for patients.

The mechanism to standardize inpatient medical record completeness data completing and handling procedures at inpatient department of Dalefage hospital creates conductive environment and made data easily accessible for patient management, reporting and other purposes. The study creates opportunity for our staffs to gain knowledge, develop skills and helped the hospital for over all human resource development. Sustainable and regular completing and reporting and updating were very important to beat the target point of the project.

Strengths of the study

Initially the capstone project was an interventional study to identify problem based on the baseline assessment, plan to solve the identified problem and intervene to solve the identified problem. In general it is problem solving study. The utilization of pre-determined standardized sample size and data collection tools avoids the problem related to sample and content of the study.

Limitation of the study

Because, the study needs different resources there was lack of resource and reference materials.

Conclusion and Recommendation

Conclusion

The overall completeness of inpatient medical record completeness in Dalefage district hospital was 73.6 % and the higher rate of completeness was seen in inpatient physician note 98 % completed where as the least completed was inpatient medication administration record 20 % completed. Because, the intervention was implemented before the onsite training held on the hospital reform so, it could affect the outcome. Of the 5 inpatient medical record completeness formats 4 are attached on the patient's folder on admission. Whereas, the medication administration record sheet are used separately and attached to patient folder upon patient discharge so, most of the time they could forgot and did not attached. Because of the above reasons the maximum target could not be achieved.

The facility based guideline and procedure was helpful to implement, strengthen and sustain the reform and other routine activities in the hospitals like the development of it still helpful to sustain the inpatient medical record completeness at Dalefage primary hospital.

Recommendation

Some inputs like onsite training on hospital reform improves the inpatient medical record completeness and also, the training could be an input for human resource development. Additionally the development of facility based guideline were helps to sustain the medical record completeness. The above simple set of intervention could bring real change and it may be helpful for the hospitals in the rural area of Ethiopia like Dalefage primary hospital.

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Annexes

Annex -1. Check list for inpatient medical record completeness

Medical Record Review Form		
MR Number:		
Date patient discharged from hospital:		
Ward:		
Inpatient Medical Record Checklist		
Section	**Yes**	**No**
1.Patient Card(Physician Notes): - Is this present? - Are all entries dated and signed?	☐	☐
2.Physician/HO Order sheet: -Is this present? - Are all entries dated and signed?	☐	☐
3.Nursing Care Plan: - Is this present? - Are all entries dated and signed?	☐	☐
4.Medication Administration Record: - Is this present? - Are all entries dated and signed?	☐	☐
5.Discharge summary: - Is this present? - Are all entries dated and signed?	☐	☐
Total number of ``Yes`` and ``No`` Checks		
MR reviewed by: Name of Reviewer: _____ Date of Review: _____		

Annex -2. Facility based inpatient medical record completeness guideline and procedure

Section; Clinical policy

Subject; Inpatient medical record

Policy No.; 1

Inpatient Medical Record Management Policy

Definition: Inpatient Medical Record (IPt MR); the official record of patient that contains information of admitted patients to general ward.

Importance: To collect and avail all important information related to admitted patients for the purpose of patient care, reporting, legal issue, surveillances, research …etc.

Content: The inpatient medical record folder minimally contains;

1. Order sheet
2. Nursing assessment and care plan formats
3. Progress note sheet
4. Medication administration sheet
5. Discharge summary sheet and
6. Other formats as necessary

**Staffs` role** Nurse`s role

1. The inpatient Nurses attach the above listed and other formats as necessary for newly admitted patients.
2. Conduct Nursing assessment, plan, implement and evaluate accordingly.
3. Administer medication as prescribed, record information and attach medication administration information sheet to patient medical record upon patient discharge.
4. Give any relevant care for patients and record accordingly.

Doctor/Health Officer role

1. Complete order note on admission and as necessary.
2. Complete progress note after admission.
3. Complete discharge summary upon discharge.

KPI-owner role

1. Conduct survey report quarterly (minimum number of 50 cards and 15% cards as maximum).
2. Look for problem with patient medical record completeness and give feed back to department.

Policy and procedure for inpatient medical record management

Importance: in order to avail patient data (information) that is important for reporting, research and other purposes by register accurate and real information about patient condition and care given by our hospital inpatient departments.

1. during admission(enter all necessary formats for patient care)
    - ✓ medication administration sheet
    - ✓ nursing assessment formats
    - ✓ order sheet
    - ✓ progress sheet
    - ✓ discharge summary sheet
    - ✓ other format as necessary
2. after admission
    - ✓ fill formats through provision of patient care as necessary
3. during discharge
    - ✓ fill discharge summary sheet
    - ✓ attach medication administration sheet to the medical record of patient
    - ✓ return medical record to medical record room

Annex -3. Inpatient medical record completeness formats

Item 4: History and Physical Examination Assessment

History and Physical Examination Assessment				
Name:			**Ward:**	
MRN:			**Bed Number:**	
Date of Admission:				
Presenting Complaint:				
History of Presenting Complaint:				
Past Medical History:				
Drug History:				
Family History:				
Personal/Social History:				
PHYSICAL EXAMINATION				
General Appearance:				
Vital Signs:	**Temp:**	**BP:**	**Pulse:**	**Resp:**
HEENT:				
Glands:				
Chest:				
CVS:				
Abdomen:				
Genito-Urinary:				
Musculo-Skeletal:				
Skin:				
Central Nervous System:				

Motor:	
Sensory:	
IMPRESSION:	
DIFFERENTIAL DIAGNOSIS:	
PLAN OF ACTION (investigations, treatments and medication ordered):	
Name of physician:	**Signature:**
Date of assessment: / /	**Time of assessment:**

Item 18: Medication Administration Record

Name:_____
MRN: _____
Ward: _____Bed: _____

Diagnosis:					Allergy:							
#	**Date**	**Medications** (Name, dose, route, freq)	**Time to give** one time each line	Signature of Transcriber	Date Given by	Date Given by	Date Given by	Date Given by	Date Given by	Date Given by	Date Given by	Date Given by

Item 21: Hospital Discharge Summary Sheet

HOSPITAL DISCHARGE SUMMARY SHEET	
Name:	**MRN:**
Ward: **Bed number:**	**Date of admission:** **Date of discharge:**
Hospital Course:	
Diagnosis/Diagnoses:	
Diagnostic procedures and laboratory findings:	
Condition on discharge: **Cured** ☐ **Improved** ☐ **No change** ☐ **Worse** ☐ **Left against medical advice** ☐	
Instructions for home: **Diet:** **Activity:** **Specific care needs:** **Sick leave recommended (if relevant):**	
Medications: **Drug:** **Dosage:** **Frequency:** **1.** **2.** **3.** **4.**	
Follow up care: **Appointment date:** **Place:** **To be seen by:** **1.** **2.**	
Form completed by:	
Designation/Position:	**Patient/Care giver name:**
Signature:	**Signature:**
Date:	**Date:**
One copy of form should be given to the patient or caregiver and a second copy should be filed in the patient's Medical Record.	

Appendix A Sample Nursing Admission Assessment Form

Nursing Admission Assessment Form	
Please Complete or Affix Label	_____ HOSPITAL
Name: Father's Name: Address: City: Sub city: Kebele: House no. MRN: Age: Tel. No.:	Ward: _____ Bed No.: _____

Personal Details

☐ Male ☐ Female Mr / Mrs / Miss / Ms / Other	Nationality: Ethnic group: Language:
Marital Status:	Religion:
Disabled: ☐ Yes ☐ No	Occupation:
Please detail any existing disability that the patient may have; including learning disability and incorporate into nursing care and treatment plan.	Previous Occupation if Retired:

Next of kin

1. Name: Relationship: Address: Tel No.: City: Sub city: Kebele: House no.	2. Name: Relationship: Address: Tel No.: City: Sub city: Kebele: House no.

Practitioners

Admission Date: Time:
Admitted / Transferred from:
Consultant/Case Team Leader:
Named Nurse:

Reason for Admission / Referral:
Presenting Symptoms:
Medical Diagnosis / Surgical Procedure:

Relevant Medical History

Please detail any existing disability that the patient may have, include learning disability and incorporate into Nursing Care and Treatment Plan.

Perception
Patient's understanding of the reason of admission:
Family or next of kin's understanding of the reason for admission:

Medication Patient is Currently Taking (incl. "over the count")					
Drug name	Dose	Freq.	Drug name	Dose	Freq.

Known Allergies	
	Special diet required: ☐ Yes ☐ No

NAME OF ACCEPTING/RECEIVING NURSE: _____ DATE: _____ TIME: _____

SIGNATURE AND DESIGNATION OF ADMITTING NURSE: _____

DATE: _____ TIME: _____

Countersign if applicable:

Investigation / Procedures at the Admission				
Date	Investigations / Procedures	Specimens	Signature	Results

Environmental & Social Assessment

Home Environment

☐ Owner
☐ Tenant
☐ No Permanent Home

Number of occupants: Adults: _____
Children (<= 15 yrs): _____

Comments:

_____

_____

Toilet Facilities

☐ Pit latrine (Single household) ☐ Flush toilet
☐ Pit latrine (Shared/Communal) ☐ None of above

Electrical Supply

Does the household have mains electricity? ☐ Yes ☐ No
Does the household have solar power? ☐ Yes ☐ No

Water Supply

☐ Household piped water
☐ Communal/Shared piped water — Distance from household: _____ km
☐ Collected rainwater to household
☐ Collected rainwater communal/shared source — Distance from household: _____ km
☐ Household well
☐ Communal/Shared well — Distance from household: _____ km
☐ River source — Distance from household: _____ km
☐ Other _____

Discharge Arrangements and Other Social Details

Lives alone?	☐ Yes ☐ No Comments: _____
Employed?	☐ Yes ☐ No Comments: _____
Self-employed?	☐ Yes ☐ No Comments: _____
Dependents?	☐ Yes ☐ No Comments: _____
Is patient independent?	☐ Yes ☐ No If no, please state who helps with the following & the number of times per week:

Cooking: _____ Washing / Dressing: _____
Shopping: _____ Cleaning: _____
Other: _____ Other: _____

Comments:

_____

_____

_____

Patient Assessment for Activity of Living

1. Maintaining a safe environment

Orientated to Person: ☐ Yes ☐ No
Orientated to Place: ☐ Yes ☐ No
Orientated to Time: ☐ Yes ☐ No
Appears Rational: ☐ Yes ☐ No
History of Confusion: ☐ Yes ☐ No
Glasgow Coma Scale _____
History of Falls: ☐ Yes ☐ No
Epilepsy: ☐ Yes ☐ No
Dizziness: ☐ Yes ☐ No

Additional Information:

2. Breathing

Respiratory aids used:	☐ Yes ☐ No	Chronic Obstructive Pulmonary Disease:		☐ Yes ☐ No
At risk of obstruction:	☐ Yes ☐ No	Breathless:	at rest:	☐ Yes ☐ No
Asthma:	☐ Yes ☐ No		on exertion:	☐ Yes ☐ No
Dry cough:	☐ Yes ☐ No		orthopnea:	☐ Yes ☐ No
Productive cough:	☐ Yes ☐ No			

Current smoker:	☐ Yes ☐ No	Advice given to stop: ☐ Yes ☐ No
Ex-smoker: if yes, stop date: _____	☐ Yes ☐ No	Date advice given: _____
Comments:		

3. Circulation

Pulse regular:	☐ Yes ☐ No Comments: _____
Oedema present:	☐ Yes ☐ No Comments: _____
Pedal pulses present:	☐ Left ☐ Right (Tick if present)
Blood pressure at time of admission:	_____
Hypo/Hypertensive:	☐ Yes ☐ No
Other comments:	

Patient Assessment for Activity of Living

Communication 4. Sight

Blind:	☐ Yes	☐ No	☐ L	☐ R	
Partially sighted:	☐ Yes	☐ No			
Wears glasses	☐ Yes	☐ No			
Wears contact lenses:	☐ Yes	☐ No			Glasses/lenses with patient: ☐ Yes ☐ No
Has cataracts	☐ Yes	☐ No	☐ L	☐ R	

Other comments:

Communication 5. Hearing

Hearing impairment:	☐ Yes	☐ No	Profoundly deaf:	☐ Yes ☐ No	☐ L ☐ R
Hearing aid with patient:	☐ L	☐ R	Lip-reads:	☐ Yes ☐ No	
Hearing aid in working order:	☐ Yes	☐ No	Sign language:	☐ Yes ☐ No	
If no, action taken:	☐ L ☐ Yes	☐ R ☐ No			

Other comments:

Communication 6. Speech and language

Native Language: _____			Laryngectomy:	☐ Yes ☐ No
Speaks Amharic:	☐ Yes	☐ No	Tracheostomy:	☐ Yes ☐ No
Understands Amharic:	☐ Yes	☐ No	Communication aids given:	☐ Yes ☐ No

Other comments (special needs e.g. : dyslexia & learning difficulties)::

7. Eating and drinking

Difficulty swallowing:	☐ Yes	☐ No
Difficulty chewing:	☐ Yes	☐ No
Wears dentures:	☐ Yes	☐ No
Dentures with patient:	☐ Yes	☐ No
Consumes alcohol:	☐ Yes	☐ No

How many units per day: _____

1. Ask the patient: Have you lost weight recently?	☐ Yes	☐ No
2. Have you had any change in appetite or food intake?	☐ Yes	☐ No
3. Is a special diet required?	☐ Yes	☐ No

Other comments:

Diet Required:

Nil by mouth:	☐ Yes	☐ No
P.E.G/N.G. feed:	☐ Yes	☐ No
Fluids only:	☐ Yes	☐ No
Pureed diet:	☐ Yes	☐ No
Soft diet:	☐ Yes	☐ No
Vegetarian/vegan:	☐ Yes	☐ No
Halal (Muslim):	☐ Yes	☐ No
Fasting:	☐ Yes	☐ No
Diabetic diet:	☐ Yes	☐ No
Salt free:	☐ Yes	☐ No
How controlled:	_____	
Supplements:	☐ Yes	☐ No
Please specify:	_____	

Patient Assessment for Activity of Living

8. Personal Hygiene and Dressing	
Condition of Skin:	
Condition of Hair/Scalp:	
Condition of Mouth:	
Other comments:	

9. Elimination-Urine		10. Elimination-Bowels	
Urine elimination problem?: ☐ Yes ☐ No		Usual habits: Colostomy present?:	☐ Yes ☐ No
Catheter: ☐ Yes ☐ No Type: Size: Date of insertion:		Diarrhea: ☐ Yes ☐ No Frequency:	
Dysuria:	Frequency:	Constipation:	☐ Yes ☐ No
Urgency:	Urinalysis:	Incontinence:	☐ Yes ☐ No
Stress incontinence: ☐ Yes ☐ No			

How is incontinence being managed?

11. Mobility	
Is the patient able to walk on his/her own? ☐ Yes ☐ No If No, restricted by:	
Aids used: ☐ Yes ☐ No If yes, specify	Supervision required:
Comments:	

12. Psychological Care
Altered body image: ☐ Yes ☐ No If No, restricted by:
Anxiety and Emotional requirements:
Other:

Patient Assessment for Activity of Living

13. Spiritual/Dying

Religion: see Personal Details Would patient like to see: Cultural/Religious Representative: ☐ Yes ☐ No Please state if yes:	Anxieties/Issues:

14. Sleeping

Usual pattern:	
Sleep interrupted by: Pain: ☐ Anxiety: ☐ Nocturia: ☐ Other: ☐	Required night sedation: No. of pillows used: Able to lie flat: ☐ Yes ☐ No

15. Cardiovascular Risk Factors

Risk Factor:		Advice given:
Smoking:	☐ Yes ☐ No	Smoking cessation
Overweight:	☐ Yes ☐ No	Low fat diet, reduce alcohol intake, and increase physical activity.
Hypertension: B/P > 140/90	☐ Yes ☐ No	Weight loss, reduce salt intake, stress management, and stop smoking. Importance of good B/P control and compliance with medication.
Diabetes:	☐ Yes ☐ No	Importance of good diabetic control, regular attendance at clinic.
Raised Cholesterol:	☐ Yes ☐ No	Diet and exercise.
Serum cholesterol level: _____ Date: _____		Low cholesterol diet, use of statins.
Comments:		Comments:

Name of Assessing Nurse: _____ Date: _____ Time: _____

Signature and Designation of Assessing Nurse: _____ Date: _____ Time: _____

Countersign if applicable: _____

Appendix B Sample Nursing Problem Index List

Nursing Problem Index List	
Please Complete or Affix Label	_____ **HOSPITAL**
Name: Father's Name:	
Address: City: Sub city:	Ward: _____
Kebele: House no.	Bed No.: _____
MRN: Age:	
Tel. No.:	

Nursing Problem Index List

Date Identified and Time	No	Problem	Signature and Designation	Date Resolved and Time	Signature and Designation

Nursing Problem Index List

Date Identified and Time	No	Problem	Signature and Designation	Date Resolved and Time	Signature and Designation