Addis Ababa University

College of Health Sciences

School of Public Health

Improving Outpatient Medical Record Completeness in Enchini Primary Hospital, Oromia, Ethiopia

By: - Dereje Bokan

Advisor: - Dr. Mesfin Addissie

Ms. Adiam Nega

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Declaration

I am hereby to declare, that except for references to other people's work which have been accordingly acknowledged, this capstone project is my own composition and neither in whole nor in part has this capstone project report been presented for the award of a degree or masters in this university or else.

Principal Investigator: ----------

Signature.....… Date…….

Advisor: ----------

Signature.....… Date…….

Co-Advisor: ----------

Signature.....… Date…….

Examiner: ……..

Signature.....… Date…….

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Acronyms and Abbreviations

AA- Addis Ababa

AIDS- Acquire Immune Deficiency Syndrome

ALOS- Average Length of Stay

ART- Antiretroviral Therapy

BOR- Bed Occupancy Rate

COHSASA- Council for Health Service Accreditation of Southern Africa

EFY- Ethiopian Fiscal Year

EHSTG- Ethiopian Hospital Service Transformation Guideline

G.C- Gregorian Colander

HIV- Human Immune Virus

HPMI- Hospital Performance Monitoring Indicators

IESO- Integrated Emergency Surgery Officer

IPD- Inpatient Department

Km - Kilometers

KPI- key performance indicator

MR- Medical Record

NICU- Neonatal Intensive Care Unit

OPD - Outpatient Department

SMT- Senior management team

WHO- World Health Organization

ABSTRACT

Background: *Medical records management is one of the components of health information system that documents information related to a patient generated during patient-to-health care provider encounters at a health care facility. A well-managed medical records system is critical to improve the provision of quality health care services to ensure safe medical practice, efficient and effective services and improve the patient's experience and satisfaction with their medical encounter.*

Objective:-*To improve outpatient medical record completion from 37% to 90% in Enchini Hospital at the end of June 2019GC.*

Methods:*A pre- post intervention design was used in this project to examine the completion rate of outpatient medical record. The pre-intervention assessment was conducted in the outpatient department of Enchini hospital. Base line data were collected between January and March 2019. The baseline data showed the completeness of outpatient medical records was low. Only 37% of the 50 audited patient folders were completed. A questionnaire was developed to assess knowledge gabs of all workers who were working at outpatient department such as nurses, general practitioners and medical record workers, whether supportive supervision was conducted by senior management team and availability of printing formats and materials. The root cause analysis was conducted to identify the root cause of the problem. Based on the verification, lack of awareness about outpatient medical record completeness was identified as a real root cause and a two day's staff training on medical record completeness was conducted.*

Results: *the outpatient medical record completion rate increased from 37% pre intervention to 89% post-intervention. Specifically, Summary sheet of all visit dates practice and International disease code practice were considerably improved by 90 and 80 percentage points respectively.*

Conclusion: *The result of this project suggests that a simple set of intervention providing training on the awareness of medical record improves of outpatient medical record completeness.*

Recommendation: *The hospital, the regional health bureau and FMoH need to give emphasis for the completeness of outpatient medical records as it contribute to good quality of healthcare*

CHAPTER ONE

Back ground

1.1 organizational description use new lines for new ideas

Enchini primary hospital was built in the year 2015 G.C, by Oromia regional state. It is located in Oromia Regional state, West Shoa Zone Adea Bega woreda in Enchini Town 68Km from Addis Ababa. The Hospital provides services a population of 500,000.. The hospital is staffed by 188 personnel that include 12 physicians, 4 Integrated Emergency Surgery Officers (IESO), 60 nurses, 26 other clinical staff, and 86 administrative staff The hospital, is a 50 bed capacity hospital and the 2017/18 annual average outpatient department (OPD) attendance was about 42, 653 and annual average inpatient department (IPD) admissions was 2,396 with an average length of stay(ALS) of 4.8 days and bed occupancy rate (BOR) was 61.2%. Enchini Hospital provides health services through its different clinical departments which are General surgery, Internal Medicine, Obstetrics and Gynecology, Pediatrics, Neonatal Intensive Care Unit, Emergency ,Psychiatry, Ophthalmology , and Dentistry surgery. In addition the hospital provides; Radiology, Anesthesiology, ART, (HIV/AIDS care), Laboratory and pharmacy services.

1.2 INTRODUCTION

Medical record as a compilation of pertinent facts of a patient's life and health history, including past and present illness and treatment(s), written by the health professionals contributing to that patient's care. The health record must be compiled in a timely manner and contain sufficient data to identify the patient, support the diagnosis, justify the treatment, Accurate, timely and accessible health care data play a vital role in improvement of the quality of health [1,2].

Medical records management (MRs) is one of the components of health information system that documents information related to a patient generated during patient-to-health care provider encounters at a health care facility [3]. A well-managed medical records system is critical to improve the provision of quality health care services to ensure safe medical practice, efficient and effective services and improve the patient's experience and satisfaction with their medical encounter. A strong medical records system is also equally important to make clinical and public health evidence based practices as well as making informed decisions. In addition, medical records may serve as a reliable source of information for medico-legal issues and medical/ public health researchers [3,4,5,6].

The information which is documented on the Medical Records must be accurate, valid and updated. The documentation task is usually performed by physicians, nurses and/or clerical staff and the whole treatment provider team has responsibility to secure the accuracy of the record [7].

1.3 STATEMENT OF PROBLEM

Incomplete or non-credible document may result in communication failures that could result in harm to a patient [8]. Incomplete documentation cannot provide the necessary foundation for provision of quality care, quality improvement or effective decisions on allocation of resources. [9]. Studies in developing countries have observed their record keeping systems to be inadequate with about half (52.2%) of the records retrievable within one hour, some of the records were poorly designed and there is use of multiple patient health records by patients [10].Currently, most hospitals in Ethiopia do not fulfill the basic purposes of a MR system. The MR system of most hospitals is incomplete and contains inaccurate information. Rarely does a standardized clinical documentation process exist and the handling process is ineffective. The MR tracking mechanism also tends to be nonexistent, resulting in MRs that often cannot be located [4].

Despite the importance of medical records to high quality and efficient care management of patients' medical records, especially in developing countries like Ethiopia, it has not been a priority, generally inadequately supported and poorly managed. The study done in a rural hospital in Ethiopia shows that only 45.7% of medical records were complete [11].

A facility based cross-sectional study was conducted in Ayder Referral Hospital and six-month data have been assessed and showed that 36.7% was inaccurate [12].

Similarly, the MR completeness at outpatient department of Enchini Hospital is still below the expected criteria (as indicated in baseline assessments 37%) incomplete record of outpatient medical component in Enchini Hospital. These problems are manageable if the staff can properly implement medical record by understanding of the outpatient medical standards. This project aim to improve outpatient medical record completeness in Enchini primary hospital by addressing those major cause of the problems.

1.4 SIGNIFICANCE OF THE STUDY

The study is planned to carry out a hospital based on pre and post interventional and the results of this study will provide very good improvement on medical records documentation, accessibility and utilization. It will improve quality of healthcare and patient satisfaction as well though improving continuity of care and reinforcing professional informed decision making power.

The result of this finding will be alleviate to certain extent the problem related to outpatient medical record completeness in the hospital and help the hospital administration to closely monitor their medical record information system management to maintain the requirements its standards. The staffs have also acquired knowledge of overcoming medical record completeness related problem through conducting such training on awareness on medical record completeness. On the other hand, this study has enhanced the improvement of quality of care by suggesting focus areas for supportive supervisions and monitoring and evaluation of patient medical records at public health facilities by local and national health authorities. Identified areas of intervention by this study has enabled relevant partner organizations to implement professional and facility capacity building activities. Finally, the study findings have been suggested to serve as an input for prospective researchers investigating various aspects of medical records at public health facilities and has also benefited patients through improvement of quality of care there after ensure their medical record complete.

CHAPTER TWO

OBJECTIVES

2.1 General objective

To improve the completeness of medical records at outpatient department of Enchini hospital from 37% to 90% by the end of June 2019.

2.2 Specific objectives

- To improve out-patient medical record completeness for the variable summary sheet of visit dates from 0% to 95%
- To Improve out-patient medical record completeness for the variable demographic sheet from the 70% to 90% by the end of June 2019.
- To Improve international disease code from the 0% to 90% by the end of June 2019.
- To Improve out-patient medical record completeness for the variable progress note (date, clinical detail, signature of attending clinician) from the 60% to 95% by the end of June 2019.
- To Improve out-patient medical record completeness for the variable report of tests and procedure from the 58% to 95% by the end of June 2019.
- To Improve out-patient medical record completeness for the variable referral information from the 32%to 95% by the end of June 2019.

CHAPTERTHREE

ROOT CAUSE ANALYSIS

To identify the root cause for the low outpatient medical records completeness in Enchini Hospital a root cause analysis was conducted by using four thematic factors: - people, equipment, process/policy and environment

3.1. Collection of information on the causes of the problem

To identify the possible causes of the outpatient medical record incompleteness problem, Focus Group Discussions (FGDs) were held with selected staffs from hospital OPD, and matrons. FGDs were held totaling 8 employees (for pre- intervention). The possible root causes were presented below & verified using Fishbone diagram (Figure 1). To identify the possible causes of the problem, all the participants were asked to list the most important causes of the problem after the discussion.

3.2. Possible root causes of the problem

Low awareness aboutmedical record

Lack ofmedical record supportive supervisors

Low commitment ofstaffs

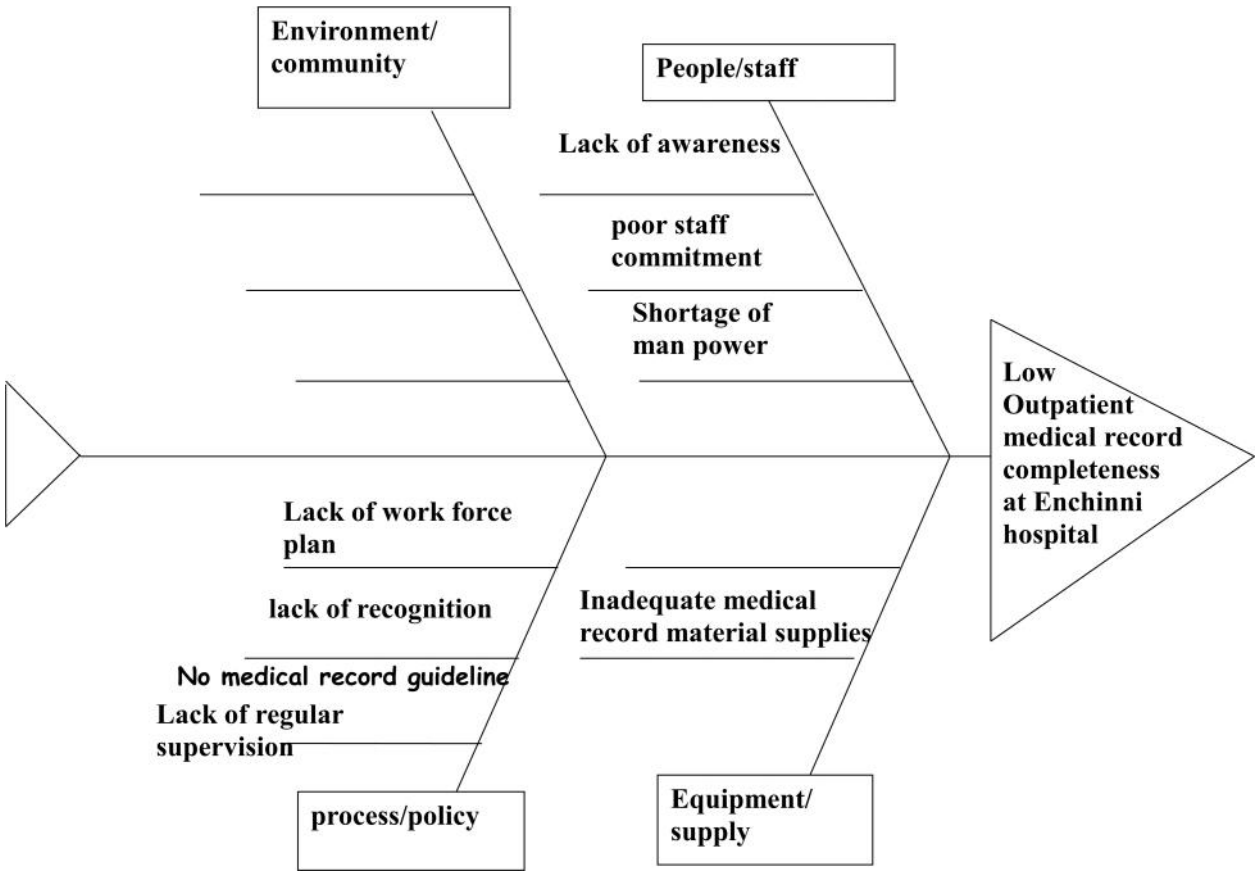
Lack of work force plan for staff

Inadequatemedical record service material supplies

Lack of recognition/motivation for modelstaff

Lack of medical record guide line

Shortage of man power



3.3. Verification of possible root causes the problem

It is well documented that fishbone does not tell the real cause of the problem so it needs further analysis in order to know the real cause of the problem. Therefore, through observation, discussion & interview questionnaires with key stakeholders at Enchini hospital the possible root causes were verified. Possible root causes were selected, verified & prioritized by interview questionnaires all workers who were working at outpatient department such as nurses, general practitioners and medical record workers totally 24 staffs to identify knowledge gabs, whether supportive supervision was conducted by SMT and availability of printing formats and materials and focused group discussion participants by voting in the fish-bone (fig. 1 above)

Lack of awareness: According to interviewed staff most of nurses and physicians were newly employed and training had never been given to most of the staffs who were working in any of the outpatient department.

Therefore lack of awareness contribution to real root cause.

No regular supportive supervision/Lack of monitoring system. There were assigned personnel who should check whether each of the components of outpatient medical record is completed and evidence show that irregularly supportive supervision conducted and there were available written feedback. Therefore lack of regular supportive supervision contribution to real root cause but it is not real cause.

S**hortage of Clinical forms** when this is not contribute to a real root cause because clinical format available in store and outpatient folder without complete. Therefore shortage of Clinical format did not contribution to real root cause.

No work force plan all staff has their job description and plan with hard copy and soft copy. Therefore it is not contribute to real root cause.

Lack of commitment/motivation even though format available in patient folder no sign of learning from each other and. Therefore lack of commitment in few of them (about 8 out of 24 showed lack of commitment) so that it contribute to cause but not real cause.

No Medical Record guide lines unavailability of medical record seems real root cause it can be solved when training provided. Therefore shortage of medical record guide lines are not real cause.

Shortage of man power It has no contribution to real root cause because there is enough staff as per standards that is one physician and two nurses in one OPD room. Therefore shortage of manpower is not real cause.

3.4 After verification these are identified as real root causes

Then we agreed up the root cause as follow:-

1. The OPD staffs have lack of awareness on outpatient medical record completeness.
2. No regular supportive supervision/Lack of monitoring system.
3. Lack of commitment/motivation

After the root causes identified then planned on the way the intervention to be implemented create awareness of OPD staffs on the way to complete MR completeness this project has concluded that all nurses and physician who were worked had low or no awareness on outpatient medical record completeness, training and supervision. Therefore, providing training plays important role.

Regarding the questionnaire which was done with twenty four (24) persons, seventeen of them stated that lack of awareness & supervision are the main cause for the incompleteness of outpatient medical record.

The other seven of mentioned lack of commitment of nurses & physicians are the reason for the incompleteness of outpatient medical record.

But observed for the existence of the problem and had confirmed there is no lack of logistics related to medical records. So that giving training on health management information system (HMIS) could resolve the problem.

CHAPTER FOUR

LITERATURE REVIEW

A medical record is a file containing records and documents about the patient's identity, examinations, medications, actions and other services that have been provided to the patient. In the medical aspects, medical records are used as a basic for planning care provided to a patient and in order to maintain and improve the quality of care through medical audits, clinical risk management and patient safety. Good documentation will protect the patient. So, good documentation in medical record is an important aspect in realizing patient safety. The completeness of medical records is very important in the implementation of health services, especially to improve the quality of patient care and safety [13].

All entries in the medical record must be complete. A medical record is considered complete if it contains sufficient information to identify the patient; support the diagnosis/condition; justify the care, treatment, and services; document the course and results of care, treatment, and services; and promote continuity of care among providers. All entries in the medical record must be dated, timed, and authenticated, in written or electronic form, by the person responsible for providing or evaluating the service provided [14].

So, in this study completeness of medical records in outpatient setting is assessed in terms of some data that needs to be collected, including: - patient identification as for inpatients, family health history, relevant history of presenting illness and physical findings, clinical observations, reports of tests and procedures performed, the outcome of the visit. For example, follow-up for further treatment, admission to hospital ,no further treatment etc. Referral information such as correspondence from a local doctor or community nurse and the doctor/nurse seeing the patient should sign the medical record to indicate [1].

The information contained in the medical record allows health care providers to determine the patient's medical history and provide informed care. The medical record serves as the central repository for planning patient care and documenting communication among patient and health care providers and professionals contributing to the patient's care [15].

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 [16].

The study was descriptive and 100 patient records were conducted in Imam Khomeini Hospital, Tabriz, Iran. The study shows, of the records, only 18.2% had every four vital signs on the admission order sheet, and 8.1% had no vital signs. Of the records, 22.2% had no summary sheet, and there was not follow- up plan in 59.6% of the records which had summary sheet. The student's history sheet did not exist in 56.6% of the records, and it didn't follow the standard order in 42.4% of the records which had that sheet. Interns' history sheet didn't exist in 25.3% of records, and 68.7% of them were in standard order. The sequence of visits was right on 74.7% of the records, and the sequence of orders was appropriate on 76.8% of the records. The final diagnoses were documented on 50% of summary sheets, and 80.8% of the admission and discharge summary [17].

A retrospective study was carried out to assess the documentation of 780 paper based health record of inpatients discharged in 2009 at a Nigerian tertiary hospital the conclusion of the study showed there were inadequacies in clinical documentation especially gross underutilization of discharge summary forms .the finding of the study shows that the hospital health care providers possess the necessary skills for quality clinical documentation but lack the will. There is a need to institute clinical documentation improvement program and promote quality clinical documentation among staff [18].Pre- and post-intervention study conducted in 23 hospital departments Butare Teaching Hospital of Rwanda took part in the monthly clinical documentation audits, the completion rate of monthly audit reports increased from 57% (pre-intervention) to 96% (post-intervention), $P < 0.000$. 287 patient files were audited pre-intervention and 1193 patient files post-intervention. The hospital-wide average Council for Health Service Accreditation of Southern Africa (COHSASA) standards compliance rate for clinical documentation also significantly improved from 27% to 60%, $P = 0.000$ [19].Pre and post intervention study was conducted at inpatient department of Dalefage district hospital the result of base line assessment of inpatient medical record completeness was 0% there were

different root causes that are contributed the problem that are:- There is no previous practice, The IPD, staffs had lack of awareness on inpatient medical record completeness,. The IPD did not have policy and procedure, Total absence of important formats in the department .a simple interventions implemented such as: - Implement the KPI 18, Create awareness by providing training Developed facility based guideline and procedure, Avail all important formats. After these simple interventions the completeness of inpatient medical record significantly improves from the base line 0% to 73.6% [20].

Pre- and post-intervention study was conducted at inpatient departments of Menelik II Referral Hospital. During pre-intervention time, inpatient physician note 96%, physician order sheet, 96%nursing care plan 70%, medication administration sheet 40%, and discharge summary 64% total

73% after simple set of intervention availing inpatient medical record format and training healthcare provider improves the inpatient medical record completeness from the base line 73% to84%during post intervention. This project indicates that applying strategic problem solving to medical record completeness can be effective in improving quality of healthcare [21].

Pre- and post-intervention study was conducted at inpatient departments of Paul's Hospital Millennium Medical College .Accordingly, the total result showed that physician note format was attached during pre-intervention for190 (94%)and completed for89(43.8%) post intervention 73(97.3%) and completed for 72(96%),physician order sheet was attached during pre-intervention for198(98%) and completed111(54.9%) post intervention 69(92%) and completed for 67 (89.3%), nursing care plan was attached during pre-intervention for160(79.2%) and completed 66(32.5%)

Post intervention 48 (64%) and completed for 43 (57.3%), medication administration format was attached during pre-intervention for 193(95.5%) and completed 50(24.6%) post intervention 48 (64%) and completed for 43 (57.3%), discharge18 summary was attached during pre-intervention for156 (76.8%) and completed 156(76.8%) post intervention 73(97.3%) and completed for 72 (96%). After simple set of intervention availing inpatient medical record format and training health care provider improves the inpatient medical record completeness from the base line 46.48% to78.6% [22].

Pre- and post-intervention study was conducted at out-patient department of Dilchorahospital. Accordingly, the total result showed significant improvement of Patient identification from 30% to 87%,Family medical history from 16% to 74%,Clinical observation from 28% to 92%,Outcome visit from 16% to 89%,Date and signature of the clinician from 20% to 89%,International disease code from 0% to 71%,Attachment of report of tests and procedures from 36% to 82% and Attachment of referral information from 4% to 24%Very importantly a collective improvement of the variables; patient identification, clinicalobservation, report of tests & procedure performed and date &signature of the clinician from24% baseline to 80% post intervention [23].

CHAPTER FIVE

METHODS AND MATERIALS

5.1. Project area and period

The project was conducted at Enchini Hospital found in Oromia Regional state west Shewa Zone Adea Berga Woreda Enchini town from January 2019 to June 2019

5.2 Project design

A pre- post intervention design was used in this project to examine the completion rate of outpatient medical records. The pre-intervention assessment was conducted in the outpatient department of Enchini hospital base line data's were collected in January 2019.

5.3 Population

5.3.1 Source population

All outpatient medical records of patients treated from Enchini Hospital

5.3.2 Project population

An individual folder of outpatients treated at Enchini Hospital from October 2018 to December 2018 for pre intervention and from March 2019 to May 2019 for post intervention.

5.4 sample size determination and Sampling technique

5.4.1 Sample size determination

The sample size of the surveyed medical records were taken from the HPMI manual which is 50as 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 Enchini primary hospitals with low patient flow better to use minimum standard sample size of 50samples. Based on the protocol we were review 50 discharged patients medical record each for pre post interventional study using standardized pre prepared check list to assess the completeness among from those attained outpatient department medical record using pre-prepared standardized checklist by using simple random sampling method and were assesses for completeness. The sample size determination and calculation mechanism were taken from hospital performance monitoring and improvement manual (25).

5.4.2 Sampling technique

Simple random sampling technique was applied. After identifying the sample size simple random sampling technique select patients from the treated outpatient list of all patients who were been discharged from an outpatient department this information was obtained from outpatient department. The Medical Records of these patients were obtained from the Medical Records Department.

5.5 Project variable

5.5.1 Independent variables

Availability of human resource, availability of necessary clinical forms, staff willingness and commitment, staff awareness, supportive supervision.

5.5.2 **Dependent variables**

The completeness of outpatient medical record.

5.6 **Operational definition**

Medical Record: papers that document the care and treatment a patient received.

Complete outpatient medical records: are essential clinical formats used for outpatient care which includes: summary sheet of visit dates, demographic sheet, international disease code, progress note (date, clinical detail, and signature of attending clinician), report of tests and procedure and referral information

5.7 Data analysis procedure

Data collection instrument (check list) adapted from national hospital performance monitoring and improvement manual survey protocol used by the hospital. After the appropriate number of medical records was reviewed and collected all completed outpatient medical record format was reviewed and put together for Processing and analyzed by manual and excel and the result of outpatient medical record completeness displays in percent using Table and Graph by the principal investigator.

5.8 Data quality management

From the very beginning, a thorough training of data collectors and Supervisor was undertaken.

The principal investigator and supervisor have made a day to day on site supervision during the whole period of data collection. At the end of each day, the questionnaires were reviewed and checked for completeness, accuracy and consistency by supervisor and investigator.

5.9. Ethical Considerations

Ethical approval for the capstone project were obtained from institutional review board and research committee of Addis Ababa University before conducting the project given to Enchini Hospital administrative office. Permission to conduct the study was obtained from administrative offices to the respective Departments; the objective of the project was explained to the project subjects and informed verbal consent was obtained from each project subjects prior to data collection. The confidentiality of the obtained data was kept in very careful manner.

5.10. Dissemination plan

The findings of this study will be disseminated to local and external partners including Enchini Hospital, AA University and any other concerned bodies

CHAPTER SIX

INTERVENTIONS

6.1. Alternative interventions

After discussion with all staff (nurse, general practitioner and medical record unit worker) as total of 18 staffs, comparative analyses of alternatives were carried out to select the best interventions for the root cause of the problem. The followings were comparative analysis of alternatives:

Training ofOPD staff for medical record standard

Experiencesharing with other neighbor hospital

Delegation of supportive supervisors among trainedstaff

Recognition and motivation of modelstaff

Table 1: Alternative interventions at Enchini Hospital, 2019.

Root cause	Interventions
Lack of awareness of outpatient medical record completeness standard	Training of OPD staff for medical record standard
	Experience sharing with other neighbor hospital
	Delegation of supportive supervisors among trained staff
	Recognition and motivation of model staff

6.2. Selection of the best interventions

Lack of awareness of OPD medical record completeness standard was an identified root cause of the problem. The hospital CEO, matrons, quality officer, OPD head physician, Monitoring & Evaluation officer, plan officer, the head nurses, and nursing & physician audit committee with a total of 16 staffs had listed the alternative interventions as indicated below (see table-2 below). The best intervention had been selected based on the following four Evaluative Criteria, namely:

A. impact on the problem,

B. resources (cost),

C. time required to implement, and

D. Political feasibility

Table 2: Selection of the best intervention at Enchini Primary Hospital, 2019. 5- highest & 1 – least point

Interventions	Criteria				Total Score
	Impact	Feasibility	Cost	Time	
Recognition of model staff	4	4	5	3	16
Training staff	5	5	4	5	19
Delegation of trained staff for supportive supervisors	4	4	4	4	16
Experience sharing	4	5	4	4	17

ONSITE TRANINIG

Impact; majority staff doesn't know about what is medical record completeness, what are the necessary clinical forms should present in all inpatient folder. So, training is needed to improve their knowledge and skill, increase their long term performance and efficiency.

Feasibility ; this is feasible because the training was provided for the staff at their own premises which did not require much time and money in addition ,the training was given by local staff which minimize time and financial costs rather than bringing trainer from outside. **Cost;** the cost of this intervention was low and could be afforded by the hospital as mentioned above the training was given within the organization.

Time; this intervention needed a two day training for each group and was implemented within the implementation period.

CHAPTER SEVEN:

IMPLEMENTATION

Onsite training: - Two days onsite training was given by developing manual based on the Ethiopian Health Service Transformation Guidelines (EHSTG) for 24 outpatient staffs (nurses, general practitioners and medical record unit workers). The training was given by senior nurses, physicians and HMIS focal person who took training of trainer on medical record standard. The issues discussed during the training consists of the following topics:

- the importance of medical record completeness
- the six medical record Components and
- the challenges that the staffs faced during the implementing period

Indicators

Process indicator

- Number of staffs trained

Outcome indicator

- Percentage of outpatient medical record completed

.

CHAPTER EIGHT

RESULTS

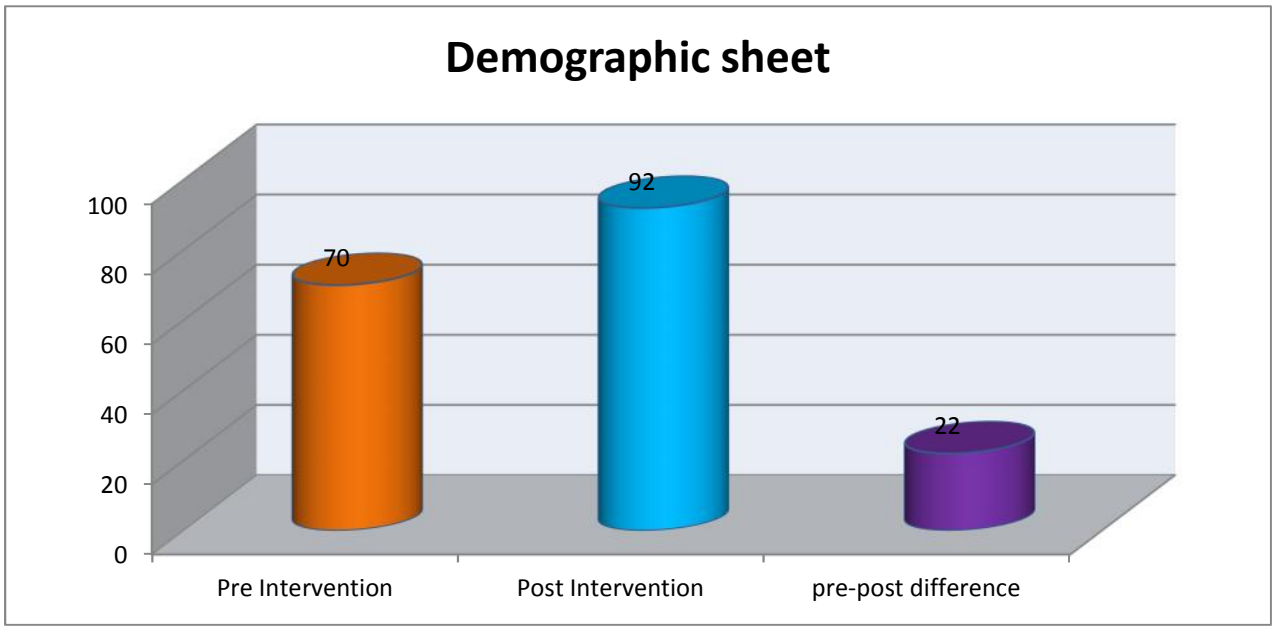
The completeness of out-patient medical record was assessed in terms of demographic sheet, summary sheet of all visit dates, progress note, attachment of report of tests and procedures, attachment of referral information &international disease code. Consequently, the result showed as follows: -

Accordingly, the total result showed Demographic sheet was completed pre intervention 35 (70%), post intervention 46 (92%), Summary sheet of all visit dates was completed pre intervention 0, post intervention 45 (90%), Progress note (date, clinical details, signature of the attending clinician) was completed pre intervention 30 (60%), post intervention 44 (88%),Attachment of report of tests and procedures was completed pre intervention 29 (58%), post intervention 47 (94%), Attachment of referral information was completed pre intervention 6 (32%), post intervention 11 (92%), and International disease code was completed pre intervention 0 (0%), post intervention 40 (80%),

Table 3:- Out Patient Medical Record Completeness, Enchini primary Hospital, Oromia, Ethiopia, 2019.

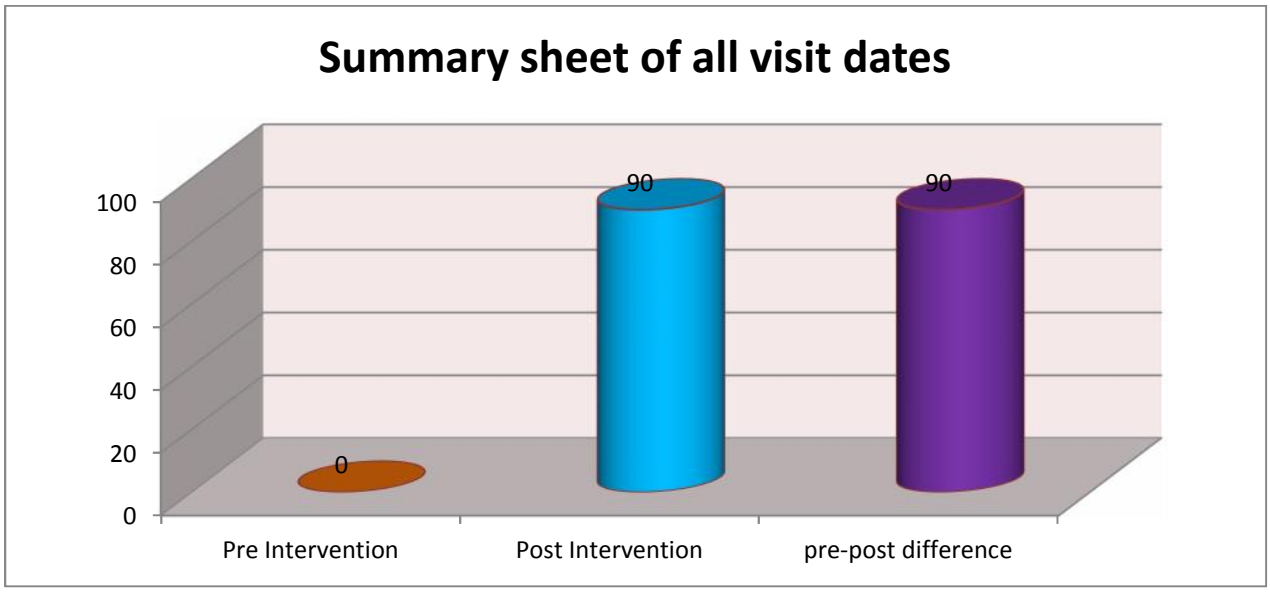
S/ No	Indicators	Category (Yes/No)	Result				Pre-Post Intervention Difference
			Pre Intervention		Post Intervention		
			Frequency	Percent	Frequency	Percent	
1	Demographic sheet	Yes	35	70	46	92	22
		No	15	30	4	8	
2	Summary sheet of all visit dates	Yes	0	0	45	90	90
		No	50	100	5	10	
3	Progress note (date, clinical details, signature of the attending clinician)	Yes	30	60	44	88	28
		No	20	40	6	12	
4	Attachment of report of tests and procedures	Yes	29	58	47	94	36
		No	21	42	3	6	
5	Attachment of referral information	Yes	6	32	11	92	60
		No	13	68	1	8	
		Not applicable	31		38		
6	International disease code	Yes	0	0	40	80	80
		No	50	100	10	20	
	Average Completeness during Pre and posttest Intervention	Yes	110	37	268	89	52
		No	190	63	32	11	

Figure2:- Demographic sheet completeness during pre-post intervention at Enchini primary hospital2019



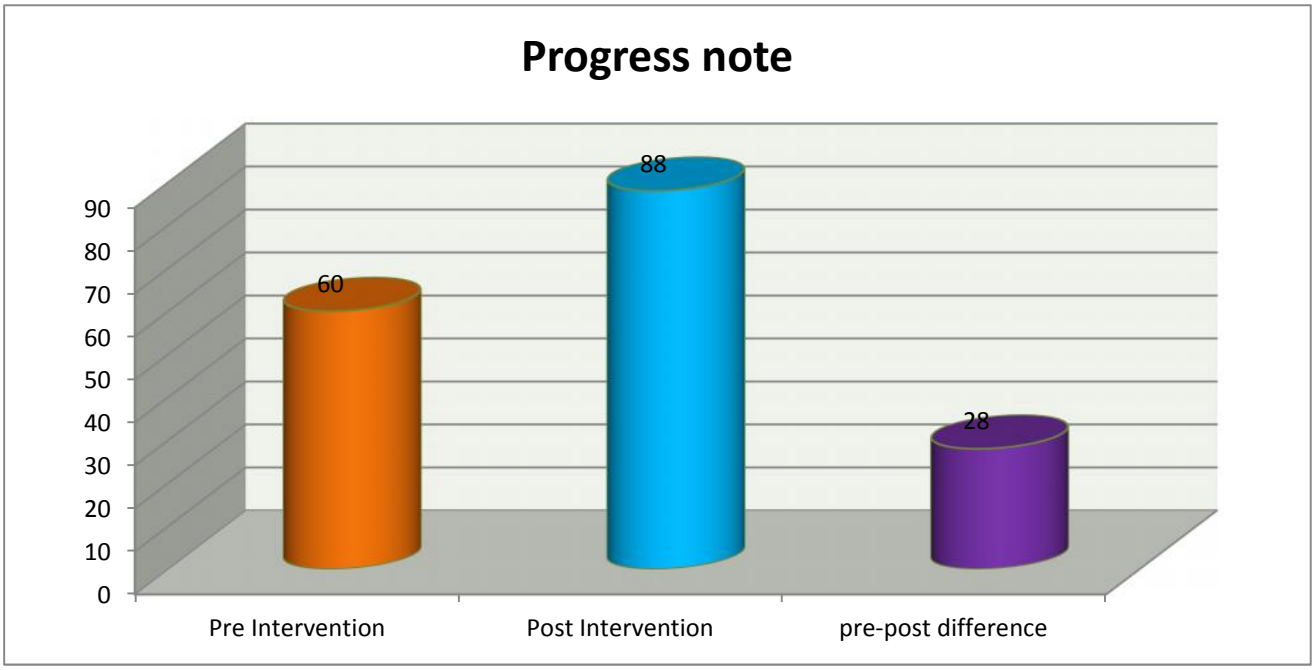
The result of Demographic sheet shows significantly increased by 22% from 70% to 92%.

Figure 3:- Summary sheet of all visit dates completeness during pre-post intervention in Enchini primary hospital 20019.



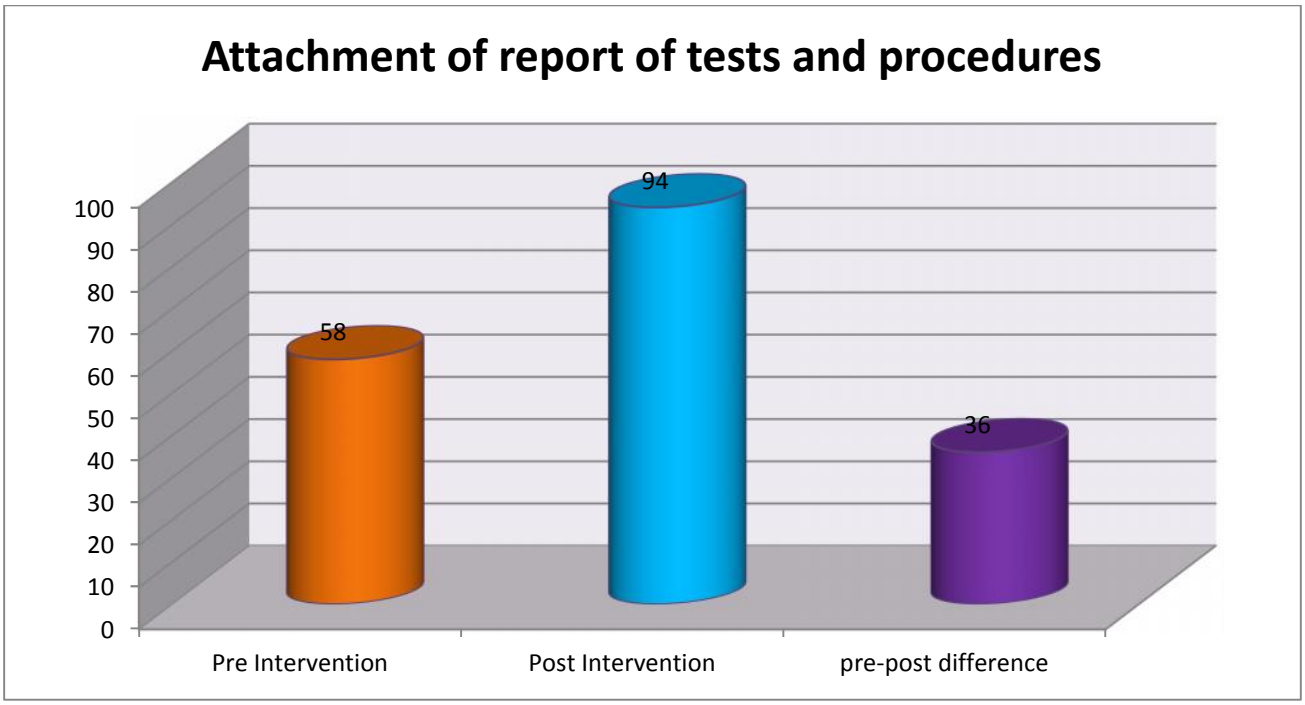
The result of Summary sheet of all visit dates shows significantly increased by 90% from 0% to 90%

Figure 4:- Progress note completeness during pre-post intervention in Enchini primary hospital2019.



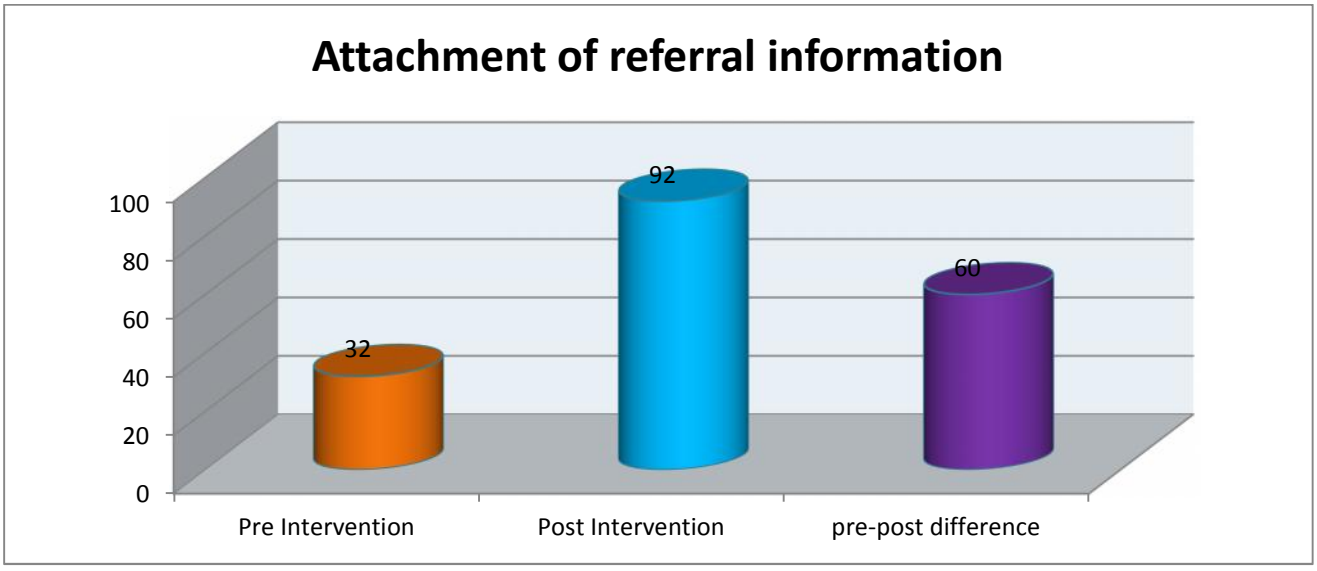
The result of Progress note completeness shows significantly increased by 28% from 60% to88%

Figure 5:- Attachment of report of tests and procedures completeness during pre-post intervention in Enchini primary hospital2019.



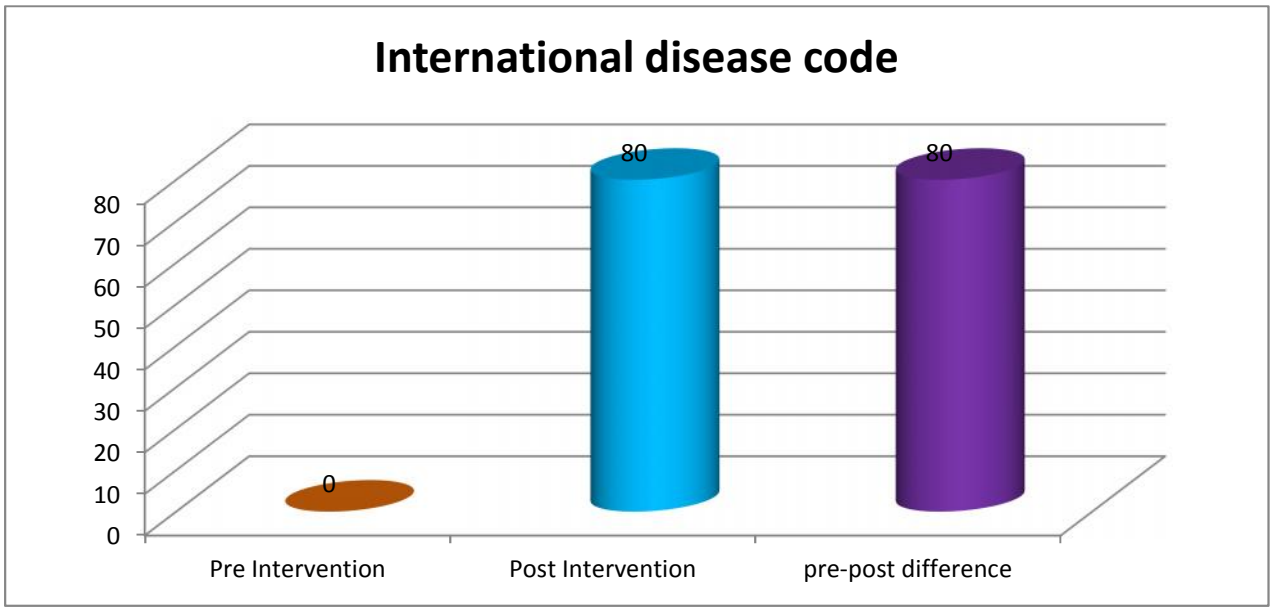
The result of Attachment of report of tests and procedures completenessshows significantly increased by 36% from 58% to 94%.

Figure 6:- Attachment of referral completeness during pre-post intervention in Enchini primary hospital2019.



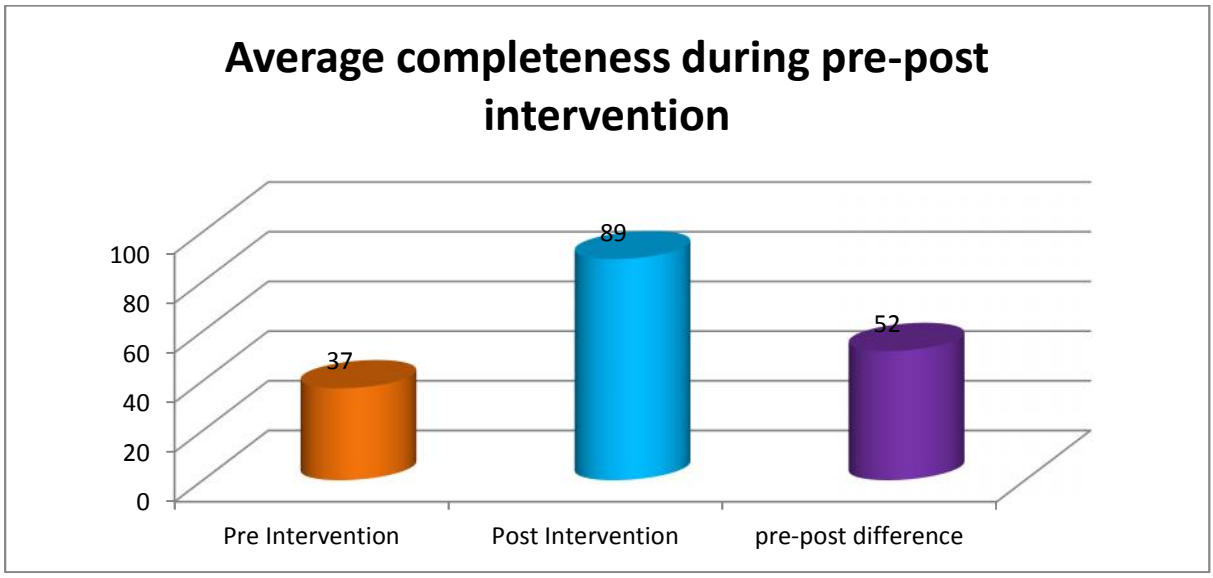
The result of attachment of referral information shows significantly increased by 60% from 32% to 92%

Figure 7:- International disease code completeness during pre-post interventionin Enchini primary primary hospital2019.



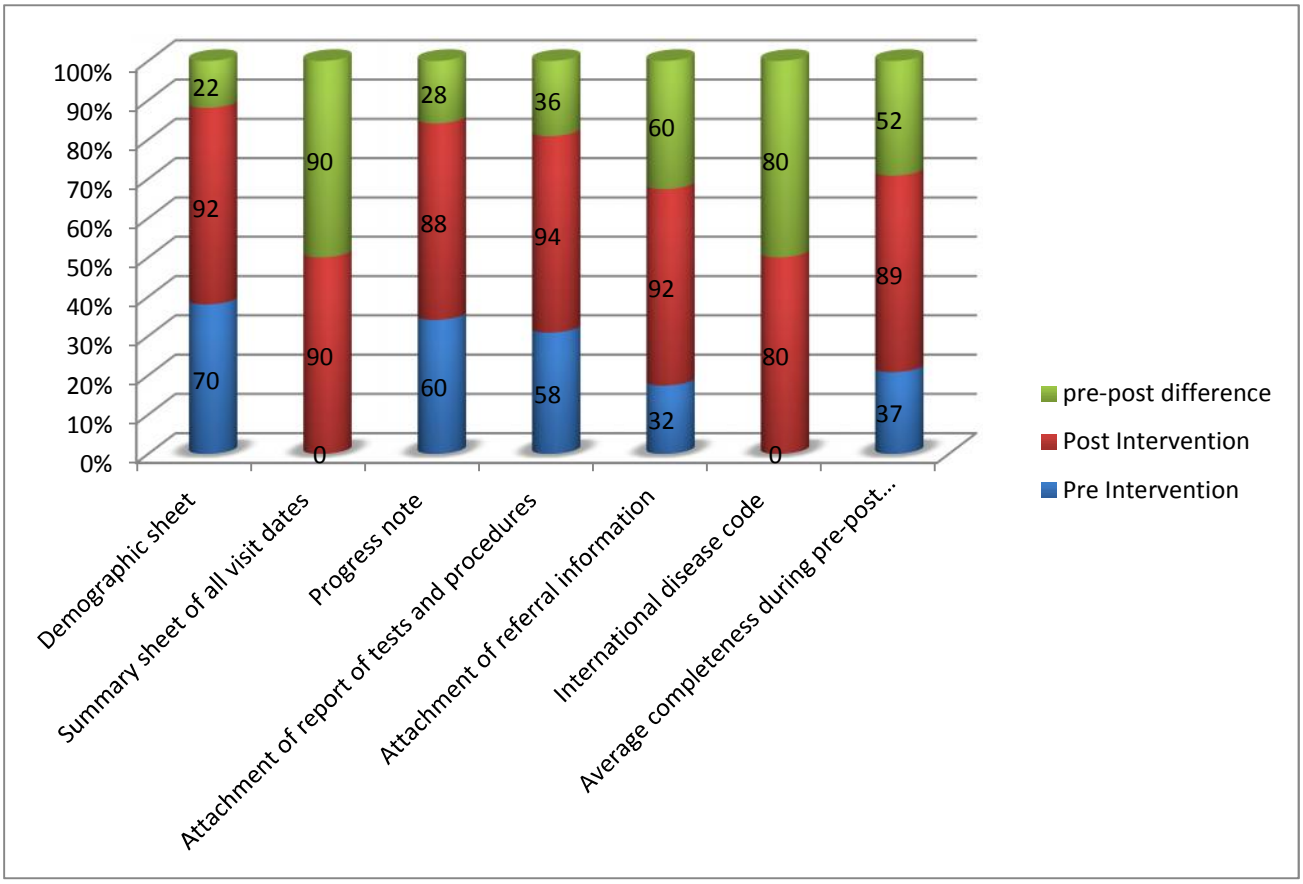
The result of international disease code shows significantly increased by 80% from 0% to 80%

Figure 8:- Average completeness outpatient medical record during pre-post intervention in Enchini primary hospital2019.



The result of average completeness outpatient medical record shows significantly increased by 52% from 37% to 89%

Figure 9:- Overall outpatient medical record completeness during pre-post interventionin Enchini primary hospital2019.



The result of Overall outpatient medical record completeness shows significantly increased by 52% from 37% to 89%

The baseline 37% to 89% during post intervention evaluation the completeness of outpatient medical record was assessed in terms of Demographic sheet, Summary sheet of all visit dates, Progress note (date, clinical details, signature of the attending clinician), Attachment of report of tests and procedures, Attachment of referral information and International disease code.

CHAPTER NINE

DISCUSSION

The importance of medical records to high quality and efficient care management of patients' medical records, especially in developing countries like Ethiopia, it has not been a priority, generally inadequately supported and poorly managed. The study done in a rural hospital in Ethiopia shows that only 45.7% of medical records were complete [11].

This study shows that the intervention I did could accomplished a magnificent improvement in allover medical record completeness in outpatient setting in Enchini hospital from 37% to 89%.Whereas, Pre- and post-intervention study conducted in 23 hospital departments Butare Teaching Hospital of Rwanda took part in the monthly clinical documentation audits, the completion rate of monthly audit reports increased from 57% (pre-intervention) to 96% (post-intervention), $P < 0.000$. 287 patient files were audited pre-intervention and 1193 patient files post-intervention. The hospital-wide average Council for Health Service Accreditation of Southern Africa (COHSASA) standards compliance rate for clinical documentation improved from 27% to 60%, $P = 0.000$[19]. Another study Pre- and post-intervention study was conducted at inpatient departments of Menelik II Referral Hospital improves the inpatient medical record completeness from the base line 73% to84% during post intervention [21].When we compared these two study with my study it shows improvement than the two hospitals.

Other the study conducted in Gedo Hospital the post intervention change of outpatient summary sheet improved by 42.5% from 32% to 74.5% (24) so, the study in Enchini hospital shows higher rate of outpatient summary sheet which was improved by 90% from 0% to 90%completed. The same study in Enchini Hospital showed the Progress note (date, clinical details, signature of the attending clinician) completed as 88 % which comparable with the study done in Dilchora Hospital, that shows the Progress note completed as 86.8 % on other hand the International disease code in this study 80 % of outpatient medical record is completed whereas, the study done in Dilchora Hospitalthe post intervention change showed the International disease code completed 71.5% Still the study in our hospital showed higher rate of completeness than the study in the Dilchora hospitals.

Overall (cumulative) outpatient medical record completeness pre- and post-intervention study was conducted on total of 100 Medical Cards at outpatient departments of Enchini Hospital. Accordingly, the total result showed among the collected cards 19 (37%) of them had a complete outpatient medical record during pre-intervention time.

This had been increased to 45(89%) during the post intervention period. The proportion of patient who completed Attachment of report of tests and procedures was completed pre intervention 29 (58%), post intervention 47 (94%). Similarly, the proportion of patient who had documented Demographic sheet was completed 35 (70%) to 46 (92%),Attachment of referral information was completed 6 (32%), to 11 (92%), Summary sheet of all visit dates was completed 0 (0%), to 45 (90%), Progress note (date, clinical details, signature of the attending clinician) was completed 30 (60%), to 44 (88%), and International disease code was completed 0 (0%),to 40 (80%), pre & post-intervention periods respectively.

The higher rate of completeness was seen in outpatient Attachment of report of tests and procedures which was completed as 45 (94 %), whereas the higher rate of non- completeness seen in outpatient International disease code40 (80 %) was only completed. This was due to base line data were low when compare with other. My project result show better improvement than previously conducted projects this because the previous theoretical and hotel based which were involve few staffs not practical based but, this project included all concerned staff and practical in-service training

CHAPTER TEN

CONCLUSION AND RECOMMENDATIONS

10.2 Conclusion

The intervention showed an improvement in the completion of outpatient medical record in Enchini hospital by providing onsite training was the key contributor to the success of this project.The intervention was simple, effective and utilized resources that were available without additional costs to the hospital by following the strategic problem-solving approach, through identifying the root causes using data and evidence systematically were able to create an intervention that was relevant and effective aligned with the hospital's priorities. Therefore, providing training plays important role in improvement of outpatient medical record completeness.

10.2 Recommendation

The hospital, the regional health bureau and FMoH as well needs to give emphasis for the completeness of outpatient medical records as it contribute to good quality of healthcare.

Furthermore, projects are suggested to be conducted in other health facilities and interventions has to be made depending on the finding.

Strength

- This study used pre post medical card review that helps to compare the reliability of the staff responses to the result of the card review towards the implementation of outpatient medical record completeness standard.
- Data collectors are recruited from staffs of the hospital this decrease biases.

Limitation

- The project design was cross sectional which is used to investigate findings on a single point of time.
- Even though EHSTG recommend 50 sample size it may not resent total population
- Study questionnaire was prone to social desirability bias; because of every one do not want to expose once inability or unwanted attitude.

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ANNEXES-A

Declaration

I am hereby to declare, that except for references to other people's work which have been accordingly acknowledged, this capstone project is my own composition and neither in whole nor in part has this capstone project report been presented for the award of a Masters of Health Care and Hospital administration in this university Principal Investigator: ----------

Signature.....… Date…….

Advisor: ----------

Signature.....… Date…….

Co-Advisor: ----------

Signature.....… Date…….

Examiner: ……..

Signature.....… Date…….

Questioner to assess availability of format, awareness and motivation of OPD staff on medical record completeness of OPD Department

1) Have you ever been assigned and worked in outpatient department in 2010 and 2011 EC?

A) Yes B) No 2)

Have you ever encountered lack of logistics like test request papers, fastener and any formats used for health management information system (HMIS)?

A) Yes B) No

3) If yes to question number 2 which item?

A) Test request paper B) Fastener C) HMIS formats D) All E) None 4) Is checking for the completeness of MR your responsibility? A) Yes B) No

5) How do you feel that patient identification for every attachment?

A) Strongly agree B) Neutral C) Agree D) Disagree E) strongly disagree

6) Do you know that International Disease Code should be written for every visit?

A) Strongly agree B) Agree C) Neutral D) Disagree E) Strongly disagree

7) Do you have International Disease Code Manual at hand?

A) Yes B) No

8) Have you ever been supervised on the completeness of MR in outpatient department?

A) Yes B) No

9) Do you usually check every document?

A) Yes B) No

10) What do you do if you found incomplete MR?

A) Try to trace and make it complete B) Nothing

11) Have you ever trained on medical record keeping?

A) Yes B) No

Table 4:- Check list prepared to assess the completeness of medical record at outpatient department, Enchini Primary Hospital, Oromia, 2019

MRN	Demographic sheet	Summarys heet of all visit dates	Progre ss note	Attachmen t of report of tests and procedures	Attachment of referral information	International disease code