ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

IMPROVINGCOMPLETENESS OFINPATIENT MEDICALRECORDS**IN** AMDEWORK PRIMARY HOSPITAL, AMHARA, NORTH ETHIOPIA.

BY:- BAY NAKACHEW ASMAMAW (BSC.)

A CAPSTONE PROJECT SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE SCHOOL OF PUBLIC HEALTH IN THE PARTIAL FULLFIIMENT OF THE REQUIREMENT FOR THE MASTER OF HEALTH CARE AND HOSPITAL ADMINISTRATION /MHA/ PROGRAMME

ADVISORS**:**DR. DEMEKE ASSEFA(MD, MA)

JUNE, 2019 GC

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

MASTER OF HOSPITAL AND HEALTHCARE ADMINISTRATION

CAPSTONE PROJECT SUBMISSION

Name Of Principal Investigator	Abay Nakachew, MHA Student
Name Of Advisors	Dr.Demeke Assefa (MD,MPH)
Full Title Of Capstone Project	Improving Completeness Of Inpatient Medical Records In Amdework Primary Hospital,
Duration Of The Project	From January 2018, to June, 2019.
Project Area	Amdework Primary Hospital
Total Cost Of Project	24,999.50ETB
Address Of Investigator	Telephone: 0913808866 Email:abaynakachew12@gmail.Com

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

Advisor's Approval Sheet

This is to certify that the project entitled "**Improving Completeness of Inpatient Medical Records in Amdework Primary Hospital**" is submitted in partial fulfilment of the requirements for the degree of MHA (Master of hospital and Health Care Administration) to the Graduate Program of the College of Health Sciences of Addis Ababa University and has been carried out by **Abay Nakachew** under my supervision. Therefore, I recommend that the student has fulfilled the requirements and hence hereby can submit the thesis to the Department.

Dr. Demeke Assefa ________________ _____________

Name of Major Advisor Signature Date

________________ _____________

Name of Co advisor Signature Date

Declaration

I hereby declare that this MHA project thesis is my original work and has not been presented for a degree in any other university and all sources of material used for this thesis have been duly acknowledged.

Name: ____________________

Signature: __________________

Date: ______________________

This MHA thesis project had been submitted for examination with my approval as thesis advisor.

Name: ______________________________

Signature: _______________Date: _________________

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

Examiners' Approval Sheet

We, the undersigned, members of the Board of Examiners of the final open defence by "**Abay Nakachew**" have read and evaluated his/her thesis "**Improving Completeness of Inpatient Medical Records in Amdework Primary Hospital**" and evaluated the candidate. This is therefore to certify that the thesis has been accepted in partial fulfilment of the requirements for the Master's Degree in hospital and health care administration.

____________________	____________________	____________________
Name of Chairperson	Signature	Date
_____Dr.Demeke Assefa______	____________________	____________________
Name of Major Advisor	Signature	Date
______Adiyam Nega_________	____________________	____________________
Name of Internal Examiner	Signature	Date
____________________	____________________	____________________
Name of External Examiner	Signature	Date

Final approval and acceptance of the thesis is contingent upon the submission of the final copy of the thesis to the candidate's Department through the office of the Department Graduate Program Coordinator.

Thesis Approved by

____________________	____________________	____________________
Graduate Program Coordinator	Signature	Date

Certification of the Final Thesis

I hereby certify that all the corrections and recommendations suggested by the Board of Examiners are incorporated into the final thesis entitled "**Improving Completeness of Inpatient Medical Records in Amdework Primary Hospital**" by **Abay Nakachew**.

____________________	____________________	____________________
Department Head	Signature	Date

ACKNOWLEDGEMENT

First of all I greatly acknowledge Addis Ababa University College of Health science for giving this chance to develop this capstone project. I would like to thank my adviser Dr Demeke Assefa. For his advice and support during the project.

Last but not least, I also thank Amdework primary Hospital senior management team, inpatient ward and medical record staffs for there all technical and moral supports.

Table of Contents

Contents Page

ACKNOWLEDGEMENT i

Table of Contents ii

Abstract iv

ACRONYMS vi

List of Annexes viii

List of tables ix

List of figures x

1. Background 1

1.1 Organizational Profile 1

1.2 Introduction 2

1.3 Statement of the problem 2

1.4 Root cause analysis of incompleteness of inpatient medical records 4

1.4.1Methods used to identify the possible root cause 4

1.4.2 List of possible root cause 4

*1.4.*3 Fishbone Diagram showing root cause of incompleteness of medical records 5

1.4.4Verification/test each possible cause using data 6

1.4.5/ Result of data analysis/reasons for accept or reject 6

1.4.6 Identify real root cause 7

1.5 Significance of the Study 8

2. Study objective 9

2.1 General objective 9

2.2 Specific objectives 9

3. Literature Review 9

4.Methodology 11

4.1Study area and Period 11

4.2Study design 12

4.3 Source of population 12

4.4 Study population 12

4.5 Sample size determination 12

4.6 Sampling technique and procedures..13

4.7 Possible interventions..13

4.8 Select best interventions..14

4.9 Intervention 14

4.10 Monitoring and evaluation process 16

4.11 Indicators..16

4.12 Data collection procedure..17

4.13Operational definition 17

4.14Data analysis procedure 17

4.15 Data quality management..18

4.16 Ethical consideration..18

4.17. Plan for dissemination..18

5. Result 18

6. Discussion..20

7.Strength and limitations of the project..22

7.1Strengths of the project 22

8. Conclusion and recommendation..22

8.1Conclusions..22

8.2Recommendations..23

9. Reference 24

10.   Annexes/Appendices..26

Abstract

Back ground: Globally, Medical recording service is a component of all health care system, as it is the entry point of the health service and one of the key areas to have quality service in the health facilities. Clinical record documentation is one of the most basic professional responsibilities even if it is often poorly practiced. Record keeping and information management are the requirement for the provision of quality patient service. They are essential for the patient's present and future healthcare decision making. The information contained in the record is essential, but the process of documenting it is often considered a lesser priority by many health institutions.

Objective: The overall objective of the project is to improve completeness of inpatient medical records from 65 % to 90% in Amdework primary hospital by the end of June,30, 2019.

Method: A pre-post intervention study design was applied to improve inpatient medical record completeness in Amdework Primary Hospital (APH) from January1-5,2019 for pre intervention period and from June1-5,2019 for post intervention period.Data was collected using structured audit tool and by simple random sampling technique a sample of 85 inpatient medical record was taken out of all inpatient medical records in Amdework Primary Hospital. The collected data was cleaned for its completeness and then entered into SPSS version 20 software for analyses and Independent T-test was used for comparing pre and post interventions.

Result

The intervention was associated with improving completeness of inpatient medical record. At the beginning of the project completeness of inpatient medical record in Amdework primary Hospital was 65%, after intervention completeness of inpatient medical record became 93.6%.During post intervention from 85 inpatient cards the result shows that 97.6% has complete progress note, 97.6% has complete order sheet, 98.8% has complete medication administration record, 35.3% records has complete clinical pharmacist record and 100% has complete discharge summary.

Conclusion

The overall completeness of inpatient medical record in Amdework primary Hospital after intervention was 93.6% which have 28.6% improvement from the baseline assessment and the higher rate of completeness was seen in discharge summary 100 % completed and the least completed was clinical pharmacist record 35.3 % completed. Although there is significant improvement in completeness of medical record completeness and clinical pharmacist record still the objective is not achieved because the clinical pharmacist hiring is late and still forgetting to dated and signed to the main card. So in order to meet the objective of the indicator continuous supervision of inpatient clinical staffs should be done.

Key words: Medical record, Incompleteness, Amdework Primary Hospital, Ethiopia.

ACRONYMS

APH	Amdework primary hospital
CEO	Chief Executive Office
EHSTG	Ethiopian hospital service transformation guide line
EOPD	Emergency outpatient department
FDRE	Federal democratic republic of Ethiopia
FP	Family planning
FMOH	Federal Ministry of Health
GOB	Governing board
HR	Human resource
IESO	Integrated emergency and surgeon officer
IPD	Inpatient department
KPI	Key Performance Indicators
MNCH	Maternal neonatal and child health care
MOH	Ministry of health
MPI	Master patient index
MR	medical record
MRN	Medical record number
OPD	Outpatient department
OR	Operation room
PFSA	Pharmaceutical fund supply agency
RHB	Regional Health Bureau
SMT	Senior management team

Operational definition

Completeness of Medical Record-It is the presence of all the necessary information of patients based on the standard formats attached at the annex and all entries are dated and signed.

Inpatient Medical Record- It is the official record of patient that contains information of admitted patients to general ward.

Medication Administration Record-present and all medications given are signed

Discharge Summary-present and signed

Nursing Care Plan-present and signed

Physician/health officer Order Sheet -present and all entries signed

Patient Card (Physician notes) - present and all entries signed

Progress note-present and all entries updated and signed

Clinical pharmacist record-present and all entries dated and signed

List of Annexes

Annex-A: Informed Consent in English ---26

Annex-B: Informed consent in Amharic ---27

Annex-C.Checklist for medical record completeness in APH, 2019-----------------------------28

Annex- D. **በዓምደ ወርቅ የመጀመሪያ ደረጃ ሆስፒታል ተኝተዉ የሚታከሙ ህሙማን የካርድ መዝገብ መረጃ ሙሉነት ማረጋገጫ ቼክ ሊስት**-------------------------------------29

List of tables

Table 1: Problem Prioritization ranking Matrix / 1-5 scale with ratingscale1=not priority, 2=low priority,3 = moderate priority,4 = high priority and 5 =very high priority / 3

Table 2: Verification or test each possible cause using data 6

Table 3: decision matrix qualitative 7

Table 4: Real root cause decision matrix: quantitative 8

Table 5: comparative analysis of possible interventions for incompleteness of inpatient medical records in APH,2019 (1-5 scale; 1 the least possible and 5 stands to maximum priority) 14

Table 6:Evaluation analysis of indicators for completeness of inpatient medical records in APH, 2019... 16

Table 7: result of pre and post intervention on completeness inpatient medical records in APH, 2019... 19

List of figures

Figure1: Fish bone diagram showing root cause for incompleteness of inpatient medical records in APH, 2019. 5

Figure 2: Inpatient medical record completeness training in APH, from february1-3, 2019 GC. 15

Figure3: pre-post interventional analysis on achievement of the seven minimum elements of an inpatient medical record in APH, 2019. 19

1. Background

1.1 Organizational Profile

Amdework primary Hospital was established in May, 2008 E.C as one of primary district hospital in Amhara region in wag himra administrative Zone DhanaworedaAmdework town, which is far from about 798kms from Addis Ababa and 600km from Bahirdar.

Total population served is about 142,541 peoples in the Woreda and around 20 000 peoples came from different catchment rural areas from the past 2 year performance data seen.
The hospital is staffed by 8 general practitioner 20 nurses 4 laboratory technicians and 3technologists, 5 pharmacy, 3 x-ray technicians ,12 midwife and 68 Other none technical staffs.
Currently the hospital has 45 beds. The average length of stay in the hospital is 4.5 days
The number of outpatient visit in 2018G.C was 11,512 patients seen. Ethiopian hospital service transformation guide line /EHSTG/ inpatient medical record completeness assessment result in Amdework primary Hospital was 65% for the last 2 years.

Types of services provided in the hospital

Clinical services :- Out patient department (OPD) and in patient department (IPD) service, Gynaecology & Obstetrics ,Paediatric OPD, neonatal intensive care unit(NICU),Family planning ,Immunization ,Safe abortion and post abortion care ,anti-retroviral therapy(ART) and tuberculosis(TB)
Laboratory service:-Blood chemistry, Haematology, Serology, Parasitological, Urinalysis and HIV screening
Diagnostic services: -Ultra sound and X-ray
Other service:-age determination, voluntary counselling and testing (VCT) and preventing mother to child transmission (PMTCT).

1.2 Introduction

Globally, medical recording service 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 strong medical records system is also equally important to make clinical and public health evidence based practices as well as making informed decisions (1, 2).

Record provides evidence based patient care, hospital accountability, compliance to guideline and support to clinical decision making. The information inside is useful when all needed information is documented properly (3).

The documentation task is usually performed by physician, nurses and/or clerical staff and the whole treatment provider team has responsibilities to secure the accuracy of the record. Since the input information is performed by different persons, at different point of time, and because it is often done after the medical service has been administered, the information sometimes is not as precise as it should be expected (4).

Clinical record documentation is one of the most basic professional responsibilities even if it is often seen poorly practiced. Record keeping and information management are the requirement for the provision of quality patient service. They are essential for the patients present and future healthcare decision making (5).

1.3 Statement of the problem

The medical record is a multifunctional document that is used to communicate and document critical information about patients' medical care among health care professionals and comprehensive medical records are a cornerstone in the quality and efficiency of patient care during the hospitalization. The incompleteness of medical records is a significant problem that affects the quality of health care services in many hospitals of Ethiopia (1).

Over the past 2 years from September 15,2009 to September 15,2011E.C incompleteness of inpatient medical record in Amdework primary hospital was 65% which leads to poor quality patient service and poor clinical and public health evidence. As a result, this project will have its own contribution to improve completeness of inpatient medical record in the hospital which brings about significant improvement in medical record service (1).

After we raise different problems from different service area the hospital senior management team (SMT) done base line assessment based on assessment Tool for Operational Standards of the EHSTG and discussed selected problems based on the prioritization ranking matrix of

severity, feasibility, cost and political acceptability incompleteness of inpatient medical record was selected as the most priority problem using the criteria.

Table 1: Problem Prioritization ranking Matrix / 1-5 scale with ratingscale1=not priority, 2=low priority,3 = moderate priority,4 = high priority and 5 =very high priority /

No	Problem	Evaluation criteria				Total priority score	Rank
		Severity	Feasibility	Political acceptability	Cost		
1	Low referral feedback provision	3	3	4	5	15	2
2	Under performance of liaison, referral and social service	3	3	4	3	13	4
3	Poor maternal, neonatal and child health service	4	3	3	4	14	3
4	Incompleteness Inpatient medical records	**5**	**4**	**5**	**4**	18	**1**
5	Low medical equipment management	3	2	3	2	10	5

The study focuses on the need to improve completeness medical record because of their key role in the coordination of care. If the medical record is not complete it poses big challenge to follow patients during their inpatient stay, discharge and follow up(6).

The one who documents might for instance forget to document some informational elements intentionally or unintentionally; forget to register time and date, and/or sign the document at the end of documentation process. This kind of problem might affect the quality of medical care and is in contrast with the main goal of a medical record, as being a reliable source of

information. Several studies have evaluated medical record from different points of view, and have found various quality problems (7).

Study held in Gonder state that patients were dying and/or getting much suffering as the result of poor quality medical records. Health service provision involves multi professionals. As a team work approach well established and standardized communication is mandatory to ensure quality service. The government and health institution could provide necessary training on data recording, documentation, information processing and communication (8).

1.4 Root cause analysis of incompleteness of inpatient medical records

Though root cause analysis is a difficult but very important, crucial step used to find out the actual or real cause of the problems. Before forming a team data was collected to get baseline, according to the data only 65% of inpatient medical record were complete.

A meeting was made in Hospital for further analysis of the problem and from several management tools that can help leaders in order to find the root causes of the problem we use fish bone diagram. A question was asked ("What do you think is the major cause for medical record incompleteness in Amdework Primary Hospital") to exhaust the potential root causes/contributing factors for incomplete medical records in our hospital.The causes of the problem which got from the brainstorming session or during our discussions has been segregated into direct improvement needed causes.

1.4.1Methods used to identify the possible root cause

- Collect information from EHSTG assessment tool Checklist
- Reviewing the chart
- Focused group discussion with in Quality Assurance, IPD Nurses and physicians
- Discuss with hospital SMT and involved staff.

1.4.2 List of possible root cause

- Shortage of inpatient nursing staffs
- Shortage of sheet
- Poor communication
- High turnover among physician and nurses
- Low commitment
- Knowledge gap
- No facilitator nurse during weekends
- Lack of computer

- New separated nursing care sheet

*1.4.*3 Fishbone Diagram showing root cause of incompleteness of medical records

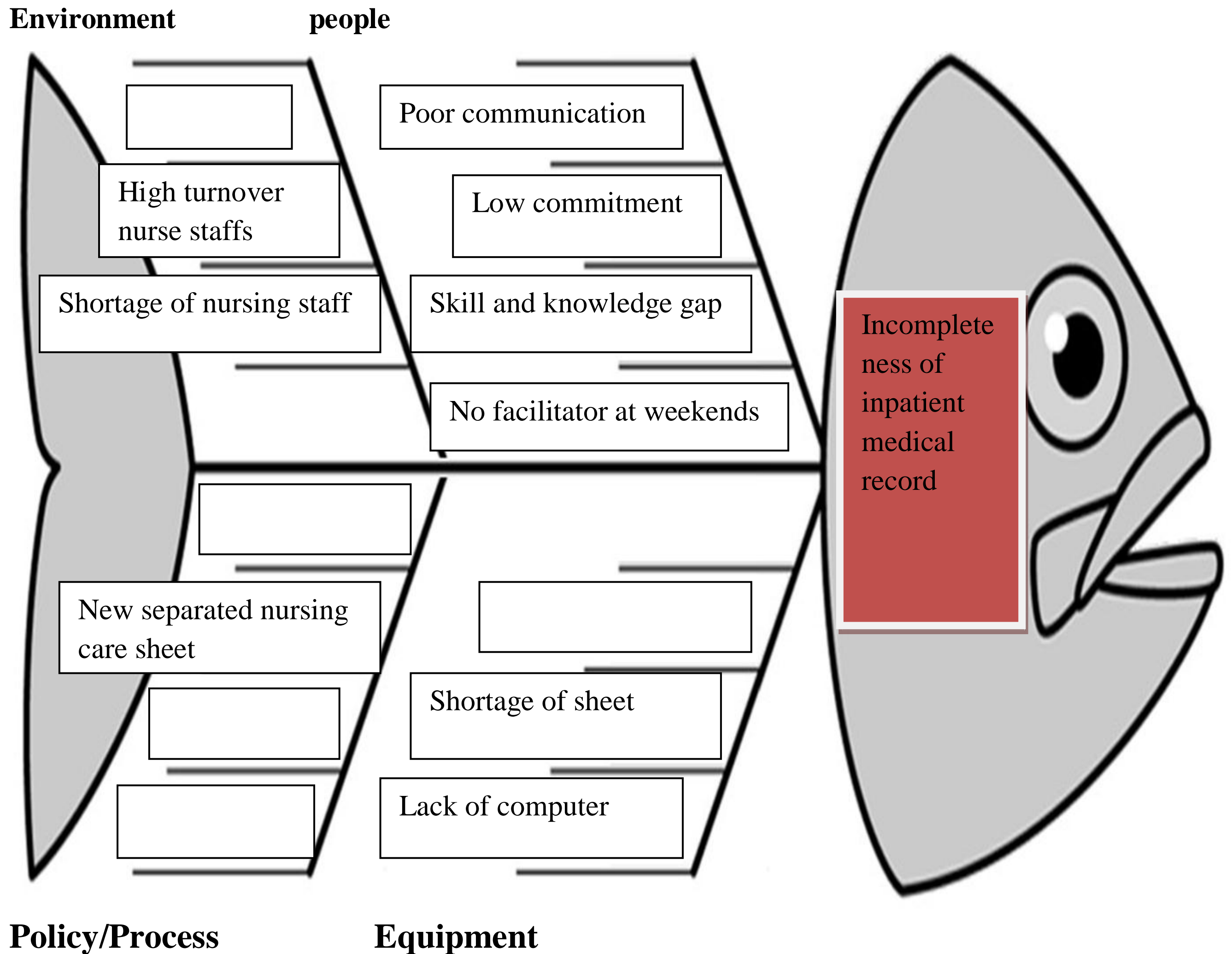

Figure1: Fish bone diagram showing root cause for incompleteness of inpatient medical records in APH, 2019.

Fish bone alone does not tell the real cause of the problems. So it needs further analysis in order to explore the root causes of the problem. Therefore, the possible causes which are thought to contribute completeness of inpatient medical record are identified using the evidence based by various tools such as: patient card review, observation, interview and focused group discussion. The process of identifying the problems was discussed with governing board and senior management team and hospital staff (table 2).

1.4.4Verification/test each possible cause using data

Table 2: Verification or test each possible cause using data

s/no	Suggested possible root cause	Methods of verification	Decisions/Accept or Reject
1	Shortage of inpatient nursing staffs	Interview/Compare with standard	Reject
2	Shortage of sheet	Interview/ Observation	Reject
3	Poor communication	Discussion	Reject
4	High turnover among physician and nurses	Interview/ Discussion	Reject
5	Low commitment	Observation/interview	**Accept**
6	Skill and knowledge gap	Interview	**Accept**
7	No facilitator nurse during weekends	Observation/ Interview	**Accept**
8	Lack of computer	Observation	Reject
9	separated nursing care sheet	Documentation/observation	Reject

1.4.5/ Result of data analysis/reasons for accept or reject

- Shortage of inpatient nursing staffs is reject since In inpatient wards the nurse to patient ratio is 1:6,which competes with standard
- During data collection all the sheet were available, so we reject Shortage of sheet
- Nurses have communication mechanism during shifts due to this reason we reject Poor communication
- Due to hard ship and hard to reach topographic area there is high turnover among physician and nurses reject since it is Out of scope
- Due to new inpatient nursing staffs there is poor understanding how inpatient medical record completeness is crucial and negligence, Low commitment and Skill and knowledge gap are accepted
- The facilitator nurse who is responsible to check the completeness of chart is not available during weekends so it is accepted one.

- In medical recording there is one computer from central medical record room and computer is not important for the completeness of inpatient medical record since there is enough separated nursing care sheet

1.4.6 Identify real root cause

The three identified root causes by using verification criteria are

1/Low commitment.

2/Skill and knowledge gap.

3/No facilitator nurse during weekends.

Table 3: decision matrix qualitative

S. no	**Identified real root cause**	**Evaluation criteria**				**Total**
		Impact on problem	**Expense**	**Feasibility**	**Time**	
1	Low commitment	Very good	High	Medium	3 month	
2	Skill and knowledge gap	Very good	Low	Very high	1 month	
3	No facilitator nurse during weekends	Good	High	High	6month	

Table 4: Real root cause decision matrix: quantitative

S. no	Identified real root cause	Evaluation criteria(1-5 scale ,1 the least possible and 5stands maximum priority)				Total
		Impact on problem	Expense	Feasibility	Time	
1	Skill and knowledge gap.	4	3	4	4	15
2	Low commitment	5	3	3	1	12
3	No facilitator nurse during weekends	2	3	3	2	10

As a result, Skill and knowledge gap is the 1st identified real root cause and after knowing and identifying the real root cause the accepted result of root cause is our concern to make an improvement by generating change ideas and best solutions to intervene on that aria to solve that problem.

1.5 Significance of the Study

The incompleteness of medical records is a significant problem that affects the quality of health care services in many hospitals of Ethiopia.The need to improve completeness medical records is crucial to ensure continuing, optimal quality of care for every patient and provides each clinician responsible for patient care with access to a record of the patient's health status, medical history, investigation procedures (lab tests, etc.), treatments and outcomes. Therefore, This project helps the hospital to know and work on gaps identified based on the root cause analysis and improves inpatient medical record completeness.

2. Study objective

2.1 General objective

To improve completeness of inpatient medical records from 65 % to 90% at the end of June, 30, 2019, at Amdework Primary Hospital.

2.2 Specific objectives

- To improve the practice of compiling separated nursing care sheet format during discharge from 65% to 90%
- To give orientation on medical record completeness to 25 nursing staff who works in inpatient department
- To alleviate inpatient medical record completeness errors and quality of care compromises at the end of June, 30, 2019.

3. Literature Review

Many countries have been complaining for incompleteness, inappropriateness and illegibility of records, therefore creating awareness on the magnitude of the problem has paramount importance. Hence available correct patient information has lots of potential in reducing errors and support roles (8).

In a study done in Canada 90 discharge summaries were assessed for completeness and accuracy. Most items were completely reported with a given items missing in 5% of summaries or fewer, with the exception of the reason for medication changes, which was missing in 15.9% of summaries. Discharge medication lists, medication changes, and the reason for medication changes when present were inaccurate in35.7%, 29.5% and 37.7% of summaries, respectively (11).

Study done in England shows that the medication history in the hospital medical records 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 medical record or registered but not in use (12).

According to a study held in Netherlands, nursing record was unavailable in 108(1%) of the patient records, medical records was unavailable in 104(1%) and the medication list in 21% of the reviewed patient records. The absence of records was negatively associated with the occurrence of AES (adverse events status). Fewer AES were found in patient records with

missing records components. This finding was significant for the absence of nursing records, physician orders, and laboratory/ pathology/anatomy test results (13).

In Nigeria tertiary hospital 732 patient records were reviewed. There was gross underutilization of discharge summery forms. However, some forms were properly documented, suggesting that hospital healthcare providers possess the necessary skill for quality clinical documentation but lack the will. There is need to institute a clinical document action improvement program and promote quality clinical documentation among staff (14).

The study done in a Dalefage Primary Hospital, West Afar, Ethiopia findings shows that 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. The finding shows that 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 (9).

In Menelik II Referral Hospital baseline assessments were collected and inpatient medical record completeness showed 73% which is low against the standard in which medical record completeness is expected to be 100%. In line with this there is a gap of study on medical record completeness particularly inpatient medical records. Knowledge gap and shortage of medical record format were accepted as root cause for existence of incomplete inpatient medical records. Objective of the study is to improve the completeness of inpatient medical records from 73% to 93% at the end of April 30, 2016, at Menelik II Referral Hospital.

A patient medical record provides two important functions; the first helps to support direct patient care by assisting physician on clinical decision making and provides communication. The second provides a legal record of care given and helps as a source of data to support clinical audit, research, resource allocation, monitoring and evaluation, epidemiology, and service planning (10).

Study held in Gonder state that patients were dying and/or getting much suffering as the result of poor quality medical records. Health service provision involves multi professionals. As a team work approach well established and standardized communication is mandatory to ensure quality service. The government and health institution could provide necessary

training on data recording, documentation, information processing and communication. Managers should supervise the quality data, give and/or take moral, ethical, professional illegal responsibilities regarding data completeness timeliness correction (8).

Patient safety and quality state that nursing documentation and evaluation was limited and inadequate for evaluating the actual care given. Care plan, goals, diagnosis, planned intervention and projected outcomes were absent between 18% and 45% of the time (15).

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% (16).

The study done in Ayder Comprehensive Specialized Hospital, Northern part of Ethiopia findings shows that The intervention associated with improving completeness of inpatient medical record at the beginning of the project completeness of inpatient medical record was 69.2% and after intervention completeness of inpatient medical record became 85.6% (17).

4. Methodology

4.1Study area and Period

The study was conducted from January, 2018, to June,30, 2019 in Amdework primary Hospital located in northern part of Amhararegion, Ethiopia. Amdework primary Hospital was established in May, 2008 E.C as one of primary district hospital in Amhara region in wag himra administrative Zone Dhana woreda Amdework town and total population served is about 142,541 peoples in the Woreda and around 20 000 peoples came from different catchment rural areas from the past 2 year performance data seen.

According to Ethiopian hospital service transformation guide line /EHSTG/ inpatient medical record completeness assessment result in Amdework primary Hospital was 65% for the last 2 years.

Mission of the Hospital

The mission of the hospital is to promote health and well-being of the citizens' of Dhana Woreda through providing and regulating a comprehensive package of promotion,

preventive, curative and rehabilitative health service of the highest possible in an equality manner.

4.2Study design

A pre-post intervention study design was applied to improve inpatient medical record completeness in Amdework Primary Hospital during From January, 2018, to June, 30, 2019.

4.3 Source of population

All medical records of inpatients in Amdework Primary Hospital used as source population.

4.4 Study population

The study population was sampled medical records of inpatients, in Amdework Primary Hospital.

4.5 Sample size determination

According to FDRE ministry of health Ethiopian hospital service transformation guide line (EHSTG) which was revised june,2018 G.C stated that 50 medical record should be audited by simple random sampling techniques. But the sample size calculation for comparing proportions was used to make a valid statistical computation and the following sample size calculation for comparing twopopulationproportions formula used to estimate the sample size.

$$n = \frac{(Z\alpha/2 + Z\beta)^2 P(1-P)}{(P - P1)^2}$$

Where n is sample size

P1=65%= 0.65 the base line data surveys p2= 90% = 0.9 planned proportion after the best intervention implemented in Amdework Primary Hospital is expected to be 90 % because

of shortage of resources and time to accomplish the tasks.

$$\text{And } P = \frac{P1 + P2}{2} = 0.65+0.9/2 = 0.775$$

Average population proportion that is between pre intervention and post intervention proportion

$Z\alpha/2$ with 95% confidence interval equal to 1.96, power =80%, and $Z\beta$ = 0.84.

$$n = \frac{(1.96 + 0.84)^2 \times 0.775\,(1 - 0.775)}{(0.775 - 0.65)^2}$$

$$n = \frac{7.84 \times 0.775 \times 0.225}{(0.125)^2} = \frac{1.367}{0.016} = 85$$

then 85 inpatient medical cards used as sample size

4.6 Sampling technique and procedures

In Amdework primary Hospital there are in average 50 discharged inpatient chart per month.85 discharged inpatient medical record randomly selected in January. by using check list 85 inpatients medical record was reviewed. After Reviewing the data was calculated for completeness.

4.7 Possible interventions

1. Hiring clinical pharmacist staff

2. Give training and closed supervision to all inpatient health care providers

3. Orientation for nursing staffs

4. Create controlling mechanism at liaison office

4.8 Select best interventions

Table 5: comparative analysis of possible interventions for incompleteness of inpatient medical records in APH,2019 (1-5 scale; 1 the least possible and 5 stands to maximum priority)

No	Alternative intervention	Cost	Feasibility	Impact on productivity	Time	Total score
1.	Hiring clinical pharmacist staff	4	2	2	4	12
2.	Give training and closed supervision to all inpatient health care providers	4	5	5	4	**18**
3.	Orientation for nursing staffs	3	3	3	4	13
4.	Create controlling mechanism at liaison office	4	3	3	3	13

Select best intervention

1. Give training and closed supervision to all inpatient health care providers

4.9 Intervention

Among the alternative intervention by using cost, feasibility, impact on productivity and time, training and closed supervision to all inpatient health care providers was selected.All nurse in Amdework primary Hospital are already trained on completeness of medical records but still large share of the root cause of inpatient medical record incompleteness was contributed by nursing stuffs. Clinical pharmacist and nurse staffs are the one who maintain and check all the components of inpatient medical chart at the time of admission and discharge, hence prioritizing the nursing stuffs on training and closed supervision would make sense.

25 nursing staffstook training and sensitization on their new assigned responsibilities which was completing and attaching the separated sheet. The training took place at Amdework primary Hospital from february1-3, 2019 GC. These nurses were supervised every one week for their performance on attaching and completing the separated sheet from February-June 1st, 2019. This was done in collaboration with liaison officer, inpatient head nurse and quality officer.

Figure 2: Inpatient medical record completeness training in APH, from february1-3, 2019 GC.

4.10 Monitoring and evaluation process

Monitoring was done by observing inpatient medical record completeness practices using the complete medical record review form checklist used for assessing the base line per a week. The training that was conducted about the medical record completeness practice, attached separated sheet and Oriented nurses was checked by the training registration of the staffs. The existence of regular follow up and closed supervision regular review meeting was evaluated by checking the checklist and minute respectively. The finding of the intervention was reviewed with the staff in the review meeting to strength or to improve the intervention and the practice monthly.

4.11 Indicators

Process indicators

1. Number of trained staff on inpatient medical record completeness
2. Existence of regular follow up and closed supervision
3. Percentage of attached separated sheet

Outcome indicator

1. Percentage of complete inpatient medical records

Table 6: Evaluation analysis of indicators for completeness of inpatient medical records in APH, 2019.

List of indicators	Pre intervention	Post intervention	Plan of the intervention
1.Number of trained staff	No	Yes	Yes
2. Existence of regular follow up and closed supervision	No	Yes	Yes
3.Percentage of attached separated sheet	65%	100%	90%
4. Completeness of inpatient medical records	65%	93.6%	90%

4.12 Data collection procedure

Data was collected using standardised checklist and observation. A pre intervention assessment was collected by three trained persons by using checklist, Data for pre intervention was collected from January 1_5, 2019 GC. After intervention data was collected from June 1-5, 2019 GC by using checklists and the same data collection procedure like the pre intervention was conduct to post intervention.

% of completeness of inpatient medical record was calculated using this formula

=sum total of medical record checklist scores scored yes) ×100

Total number of discharged inpatient medical records surveyed×7 (i.e. the number of items in checklist).

4.13Operational definition

Completeness of Medical Record: - It is the presence of all the necessary information of patients based on the standard formats attached at the annex and all entries are dated and signed.

Inpatient Medical Record:- It is the official record of patient that contains information of admitted patients to general ward.

Medication Administration Record**:**-present and all medications given are signed

Discharge Summary:-present and signed

Nursing Care Plan:-present and signed

Physician/health officer Order Sheet: -present and all entries signed

Patient Card (Physician notes): - present and all entries signed

Progress note:- present and daily updated and signed

Clinical pharmacist record:- present and all entries dated and signed

The checklist describes the minimum set of documents that should be present in the medical record of every discharged patient. Some inpatient records will contain additional documents and forms (e.g. referral forms, laboratory report forms etc). However, for standardization of this indicator, only the items that are listed in the checklist should be included.If one the element is not present and not signed it will be taken as incomplete.

4.14Data analysis procedure

During pre-intervention collected data was analysed by using counting and bar chart. After the intervention data was analysed by using same analysis procedure, independent T test and SPSS (Statistical Package for Social Sciences) software version 20 was also used.

4.15 Data quality management

To maintain the data quality standardized checklist used which is adopted from Federal Ministry of Health (FMOH). The checklist was translated to local language (Amharic) to keep the quality of data. The data was collected by trained persons under supervision of principal investigator and data collector was take training for a 2 day. The filled forms were stored in secured place so that no loss of the data would happen. During the data collection procedures, all the collected data was reviewed and checked daily for its completeness.

4.16 Ethical consideration

An ethical clearance was obtained from institutional review board of Addis Ababa University College of health science school of public health. Official letters will taken from the board to the Amdework primary Hospital medical director office to undertake the study before start of data collection. The data will not use for other purpose other than the objective of the study. Confidentiality of data obtained from chart review is maintained.

4.17. Plan for dissemination

The final report was presented as partial fulfilment of the degree of masters of public health for Addis Ababa university school of public health and copy of it will be offered to of Amdework primary Hospital and for other hospital as required. Attempts will be made to publish the findings of this study in local and international journals.

5. Result

Data from a total of 85 inpatient cards comprised the pre intervention sample, and data from 85 inpatient medical records comprised the post intervention data. The pre intervention data shows that Completeness of inpatient medical records in Amdework primary Hospital was 65% and the post intervention data was 93.6%.Out of the total surveyed inpatient medical records 68(80%) and 84 (98.8%) physician notes were complete in the pre-intervention and post-intervention respectively.

During post intervention from 85 inpatient cards the result shows that 97.6% has complete progressnote, 97.6% has complete order sheet, 98.8% has complete medication administration record, 35.3% records has complete clinical pharmacist record and 100% has complete discharge summary.

Table 7: result of pre and post intervention on completeness inpatient medical records in APH, 2019.

Indicators	No of inpatient cards	Result of pre intervention	Result of post intervention
Physician notes	85	80%	98.8%
Progress note	85	67.06%	97.6%
Physician order Sheet	85	70.6%	97.6%
Nursing care plan	85	72.9%	97.6%
Medication administration record	85	78.8%	98.8%
Discharge summary	85	85.8%	100 %
Clinical pharmacist record	85	0 %	35.3%
% of completeness of inpatient medical record	**85**	**65 %**	**93.6%**

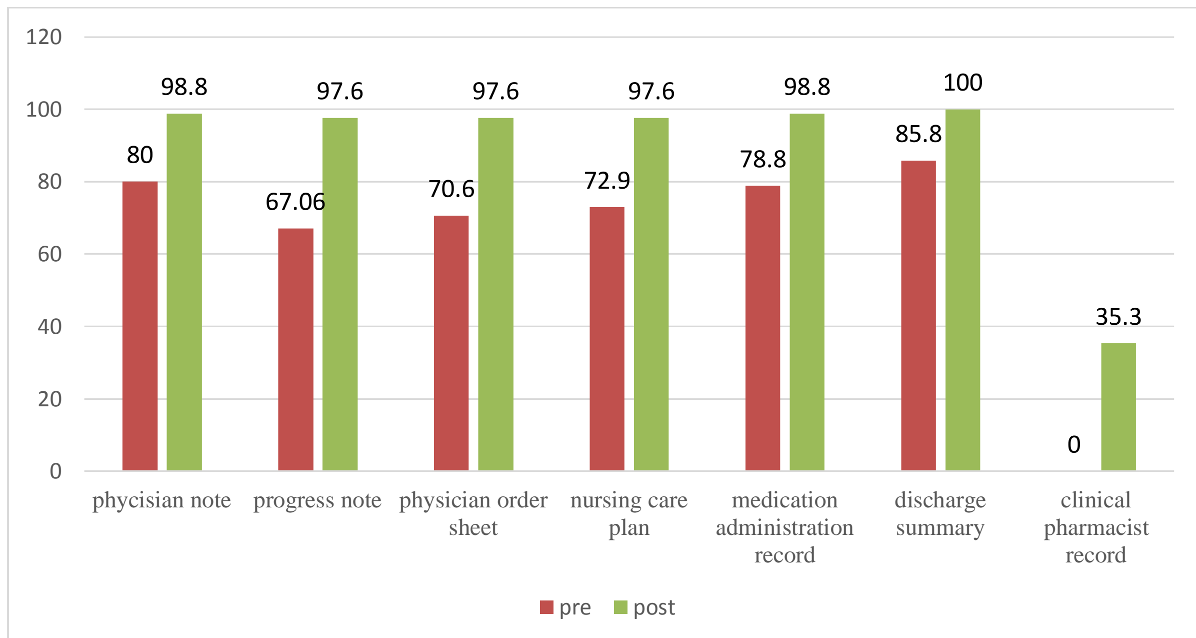

Figure3: pre-post interventional analysis on achievement of the seven minimum elements of an inpatient medical record in APH, 2019.

25 inpatient nurses, 11 general practitioner and 2 IESO physician, 1 clinical pharmacist,3 liaison officer and 14 pharmacy technician took orientation and training. The other objective was to increase practice of attaching separated nursing care sheet and it increased from 65% to 100%.

Independent T- test

To compare two groups if any statistical significance exists t-test measures the differences between two or more group means, and compare if the difference statistically significance we used two independent t-test type and using SPSS version 20 independent t test analysis was calculated for all 7 indicators of inpatient medical records.

The results showed a total of inpatient medical record completeness improved from 65% before intervention to 93.6% after intervention (P value <0.05). Since the calculated t value exceeds the critical value, the null hypothesis has been rejected and the alternative hypothesis has been accepted, implying that intervention done has brought a significant change.

Independent t test for nursing care plan, physician order sheet was done. The calculated t value= 4.653, critical value=0.051

The absolute value of t exceeds the critical value (4.653>0.051), so the means are statically significant at $p<0.05$.

Independent t test for physician note, medication administration sheet, and discharge summery was done. The calculated t value=4.164, 4.338, 3.894 and critical value=0.045,0.046 and 0.039 respectively. As a result, the absolute value of t exceeds the critical value for all indicators so the means are statically significant at $p<0.05$.

6. Discussion

The intervention was associated with significant improvement in inpatient medical record completeness .It was found that a set of interventions could be performed to improve nursing staff practice, accessibility of important inpatient formats and giving orientation to nursing staff on complete medical record could demonstrate significant change in inpatient medical record completeness as well as help in improving hospital performance.

The pre post interventional study done in Menelik II Referral Hospital showed that inpatient medical record completeness improved significantly from base line 73% to 84%after post intervention,(18).Similarly, our study after introduction of interventions

inpatient medical record completeness improved from base line 65% to 93.6% and our capstone interventional study result was high compared with this interventional study.

The inpatient medical record completeness practice has a change in the post interventional time. The Physician notes, Progress note, medication administration record and Clinical pharmacist record practices were improved. The simplicity and inexpensiveness of this study brings results that show orientation on responsibilities of each nursing staff, attaching the nursing processes with the chart, accessibility of nursing process format in the hospital inpatient department, close supervision of inpatient nurses could significantly improve patient management and system operations that can facilitate better enhancement of inpatient medical record completeness.

Patient safety and quality state that nursing documentation and evaluation was limited and inadequate for evaluating the actual care given. Care plan, goals, diagnosis, planned intervention and projected outcomes were absent between 18% and 45%of the time. Our study has explained that the nursing care plan improved from 72.9% to 97.6% (15).

When we compare our study with the study done in Canada in terms of discharge summary,90 discharge summaries were assessed for completeness and accuracy most of the items were completely reported with a given items missing in 5% of summaries. Percentage of incompleteness of discharge summary in our hospital is 14.2% which is higher (11).

The study done showed that the inpatient physician note had higher rate of completeness in Amdework primary Hospital which is 98.8% as compared with the study in Ayder Comprehensive Specialized Hospital, Northern Ethiopia which is 94.7%(49). The same study in Ayder Comprehensive Specialized Hospital showed the percentage of completeness of medication administration is 77 %(25) whereas, the study in Amework primary Hospital showed higher rate completeness in medication administration which is 98.8%.This difference in result could be due to set up difference, root cause and period of intervention.

The overall change was due to the knowledge created on all of the staff what needs to improve inpatient medical record completeness and the facility became assure Patient safety and quality to the staff as well as the clients.

7.Strength and limitations of the project

7.1Strengths of the project

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 a problem solving study. The utilization of pre-determined standardized sample size and data collection tools avoids problem related to sample and content of the study.

- The quantitative study was supported by qualitative approach
- The simplicity and inexpensiveness of this study brings results that show orientation on responsibilities of each nursing staff, attaching the nursing processes with the chart
- Selection of individual's medical record from the sampling frame systematically.
- As a systematic random sampling technique it takes less time consuming to perform data collection.
- Other two components of factors to cause inpatient medical record incompleteness studied from other researches

Limitations of the project

- Though I used systematic random sampling technique it has creating some gap since it requires manual construction of sampling frame.
- The study lacked the identification of factors associated with record completeness.

8. Conclusion and recommendation

8.1Conclusions

Many hospitals have been complaining incompleteness of medical records; therefore creating awareness on magnitude of the problem has paramount importance. The result shows that a well-designed intervention can improve completeness of inpatient medical records. The results and effectiveness thus far out of our intervention suggest that using problem solving methodology to strengthen key process indicator of hospital in resourced limited setting can improve quality of care with relatively small scale financial investment.

The overall completeness of inpatient medical record in Amdework primary Hospital was 93.6% and the higher rate of completeness was seen in discharge summary
100 % completed and the least completed wasclinical pharmacist record from 0% to 35.3 % completed. Although there is significant improvement in completeness of medical record

completeness and clinical pharmacist record still the objective is not achieved because the clinical pharmacist hiring is late and still forgetting to dated and signed to the main card.So in order to meet the objective of the indicator continuous supervision of inpatient clinical staffs should be done.

8.2Recommendations

To obtain improved and sustainable complete inpatient medical record orientation and continuous supervision of individuals with key specific role (nurses, head nurses, liaison officer) should continue. By using subsequent interventional project we can attain improvement in complete medical records and such kind of projects should be undertaken in others hospital.

To health care providers

1. It is advisable to continue their practices to fulfil the admitted patient's medical record completeness

- **To hospital sin ear management team**

1. The senior management teams as well as the inpatient case team of our health facility are recommended to follow the practice in order to establish sustainable completeness of inpatient medical record management practice.
2. The senior management teams as well as the IPD casemanager, matron and ward head nurse of the Hospital arerecommended to provide onsite training to new comers.
3. The hospital governing board and management team are recommended to allocate enough budgets to strengthen the system.
4. The senior management teams as well as the quality unit committee of our health facility arerecommended to provide quarter performance review meeting and annual refresher training to all staff members.

- **To ANRHB**

1. It is advisable to launch intervention programs, develop training to foster the professional knowledge, skills and motivation that makes completeness of inpatient medical record improvement at inpatient department of the hospital

9. Reference

1. FDER, MOH. Hospital implementation guide line. Volume 1, May 2010.
2. FMOH. Operational standards of medical record managementPractice version-2. December, 2011
3. Manias E, Street A; Nurses and Doctors communicating through medication order charts in critical care. austcrit care,14(1);17-23 ,2001.
4. Klapper B, lecher S, Schaeffer D, Koch U; Patient records; supporting inter professional communication in hospital]. Pflege,14(6);387-393, 2000.
5. VonkossKrowchuckH, Moore+ Ml, Richardson L; Using health care records as sources of data for research. J NursMeas,3(1);3-12, 1995.
6. Murphy BJ; Principles of good medical record documentation. J Med pract manage, 16(5); 258-260, 2001.
7. Hajavi A, Azar FE, Median Medical records standards in selected countries and Iran; Acomparativestudy.New J (inst health rec InfManag), 46(1); 4-6.2005.
8. KasawA, DagnachewM and Molla A, processing medical review: systematic review. Adane et al. archives of public health, 71:1-27, 2013.
9. N. M. Dima, Improving the completeness of medical records at inpatient department of Dalefage Primary Hospital, west Afar, Ethiopia, Addis Ababa University, 2014.
10. N. TavakoliM. Jahanbakhsh, M. Akbari, and M. Baktashian, “The study of inpatientmedical records on hospital deductions: an interventional study,” Journal of Education and Health Promotion, vol. 4, article 38, 2015.
11. Legault et al: Quality of discharge summaries prepared by first year internal medicine residents: BMC medical education, 12:1-77, 2012.
12. Hong Sang Lau, Christa Florax, Arijan J Porsius, and Anthonius de Boer. The completeness of medication histories in hospital medical records of patients admitted to general internal medicine wards; British journal of clinical pharmacology 2013.
13. Michael C. Owen, Nancy M. Chang, David M. Chong and David K. Vawdrey. Evaluation of medication list completeness, safety, and Annotations. AMIA Annual symposium proc: Journal, 1055-1061, 2011.
14. Ebrahimtaiwoadeleke et al, Data quality assessment in healthcare: A365 day chart review of inpatients health records at a Nigerian tertiary hospital: am med inform assoc.:19(6)1039_1042, 2012.

15. Gail M. Keenan Elizabeth Yakel, Dana Tschannen and Mary Mandeville. Documentation and the nurse care planning process. An evidence based handbook for nurses: patient safety and quality;3(49)

16. Albert PasangAritonang. The completeness of medical record in ST. Elisabeth general hospital:Medical record management: Yogyakarta, Indonesia. 2011; 10/308473/pku11/702.

17. Sumeya Ahmed. Improving completeness of inpatient medical record Ayder Comprehensive Specialized Hospital, Mekele, Ethiopia(Masters of Hospital and Health Care Administration),School of Graduate Studies of Mekele University, 2016.

18. .Tola K, Abebe H, Gebremariam Y, Jikamo B. Improving Completeness of Inpatient Medical Records in Menelik II Referral Hospital, Addis Ababa, Ethiopia. Advances in Public Health,2017.

10. Annexes/Appendices

Annex-A: Informed Consent in English

Title of the project:" **Improving Completeness of Inpatient Medical Record in Amdework Primary hospital**'' I have been well aware of that this research undertaking is for a partial fulfilment of MHA degree which is fully supported and coordinated by the school of public health, College of health science and the designate principal investigator is **ABAY NAKACHEW ASMAMAW**. I have been fully informed in the language I understand about the research project objective that is to Improve Completeness of Inpatient Medical Record inAmdework Primary Hospital.

I have been informed that all the information I shall provide to the interviewer will be kept confidential. I understood that the research has no any risk and no composition. I also knew that I have the right to withhold information, skip questions to answer or to withdraw from the study any time I have acquainted nobody will impose me to explain the reason of withdrawal. I also enlighten there would have no effect at all in my health benefit or other administrative effect that I get from the refuge.

I have assured that the right to ask information that is not clear about the research before and or during the research work and to contact

Addis Ababa University, College of health science IRB Office

Tel. ______________________________

Principal Investigator's Name: AbayNakachew

Tel: + 251 913808866 Email: abaynakachew12@gmail.com

I have read this form, or it has been read to me in the language I comprehend and understood the condition stated above, therefore, I am willing and confirm my participation by signing the consent.

Name of Data collector _____________

Signature ________________________

Date _________________________

Annex-B: Informed consent in Amharic

የመረጃናየስምምነትዉልቅፅ፤

የፕሮጀክቱ ርዕስ የአምደወርቅ ሆስፒታልን ተኝተዉ የሚታከሙ የካርድ መዝገብ መረጃ ሙሉ እነትን ማሻሻል ነዉ፡፡

ፕሮጀክቱ የሚሰራው ለMHA ሁለተኛ ዲግሪ ማሙዋያ እንደሆነ፤ ስራዉ እሚሰራዉም በጤና ሳይንስ ኮሌጅ የሕ/ሰብ ጤና ት/ቤት ድጋፍ እና አስተባባሪነት በአባይ ናቃቸዉ አስማማዉ ዋና ተመራማሪነት መሆኑንን ተገንዝቢያለሁ፡፡ የሪሰርች ፕሮጀክቱ አላማም የአምደወርቅ ሆስፒታል ተኝተዉ የሚታከሙ የካርድ መዝገብ መረጃ

ሙሉእነትን ማሻሻል መሆኑን በሚገባኝ ቋንቋ ተገልፆልኛል፡፡

የምሰጠዉ ማንኛውም መረጃ ሚስጥራዊነቱ የተጠበቀ እንደሆነ ተገልፆልኛል:: ሪሰርች ፕሮጀክቱ ምንም ዓይነት ጉዳት እና ካሳ እንደሌለው ገብቶኛል፡፡

በዚህጥናትላይመሳተፍ/አለመሳተፍ/ በእኔ ፈቃደኝነት ላይ የተመሰረተ እንደሆነ፤ለጥያቄዎቹም በሙሉም ሆነበከፊል መልስ ያለመስጠት መብትእንዳለኝ፣በፈለኩት ሰዓት ምንም ምክነያት ሳልጠየቅ ከጥናቱ መዉጣት እንደምችል አዉቂያለሁ፡፡ይህ ደግሞ ማንኛዉንም ዓይነት ከሆስፒታሉ እማገኘዉን አገልግሎት ከማግኘት እንደማያግደኝ ተገልፆልኛል፡፡

ከጥናቱ በፊትም እየተካሄደ ምያልገባኝን ነገርየ መጠየቅ መብት እንዳለኝ እና መረጃ ካስፈለገኝም በሚከተሉት አድራሻ መጠየቅ እንደምችል ተነግሮኛል፡፡

ጥናቱን የሚያካሂደው ሰው አድራሻ፡

ስም፡ አባይ ናቃቸዉ አስማማዉ ስ.ቁ 0913808866

ኢሜይል: abaynakachew12@gmail.com

የጥናቱ አላማ በሚገባኝ እና በምረዳው ቋንቋ ተገልፆልኛል፡፡ ከላይ በተገለፀልኝ መረጃ መሰረትም በጥናቱ ለመሳተፍ ተስማምቻለሁ፡፡

መረጃዉን የሰበሰበዉ ሰዉ ስም ______________________

ፊርማ__________

ቀን______

Annex-C.Checklist for medical record completeness in APH,2019

For each of the selected Medical Records complete the following Review Form:

Medical record review form		
MR Number:		
Date patient discharge from hospital:		
Ward:		
INPATIENT MEDICAL RECORD CHECK LIST		
SECTION	**Yes**	**No**
1.PATIENT CARD(PHYSICIAN NOTE)		
Is this present		
Are all entries dated and signed		
2.PHYSICIAN/HO OREDR SHEET		
Is this present		
Are all entries dated and signed		
3.NURSING CARE PLAN		
Is this present		
Are all entries dated and signed		
4.MEDICAL ADMINISTRATION RECORD		
Is this present		
Are all entries dated and signed		
5.DISCHAREGE SUMMERY		
Is this present		
Are all entries dated and signed		
6.PROGRESS NOTE		
Is this present		
Is it daily updated and signed		
7.CLINICAL PHARMACIST RECORD		
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-D.በዓምደ ወርቅ የመጀመሪያ ደረጃ ሆስፒታል ተኝተዉ የሚታከሙ ህሙማን የካርድ መዝገብ መረጃ ሙሉነት ማረጋገጫ ቼክሊ ስት

የታካሚዎች የካርድ መዝገብ መገምገሚያ ፎርም		
የህክምና ካርድ ቁጥር ----------------------		
በሽተኛዉ ከሆስፒታሉ የወጣበት ቀን ------------/--------------------/----------------------		
ዋርድ		
ተኝተዉ የሚታከሙ ህሙማን የካርድ መዝገብ መረጃ ሙሉነት ቼክሊ ስት		
ዝርዝር	አዎ	የለም
1. የህክምና መዝገብ (በሀኪም የሰፈረ ማስታወሻ)		
አለ/አወ		
ሁሉም መረጃዎች ቀን የተፃፈባቸዉ ና የባለሙያዉ ፊርማ ያረፈባቸዉ ናቸዉ		
2.የሃኪሙ የትዛዝ ወረቀት		
አለ/አወ		
ሁሉም መረጃዎች ቀን የተፃፈባቸዉ ና የባለሙያዉ ፊርማ ያረፈባቸዉ ናቸዉ		
3. የነርሶች እንክብካቤ አገልግሎት እቅድ		
አለ/አወ		
ሁሉም መረጃዎች ቀን የተፃፈባቸዉና የባለሙያዉ ፊርማ ያረፈባቸዉ ናቸዉ		
4. እንዲሰጥ የተወሰነ መድሃኒት የተመዘገበ መረጃ		
አለ/አወ		
ሁሉም መረጃዎች ቀን የተፃፈባቸዉና የባለሙያዉ ፊርማ ያረፈባቸዉ ናቸዉ		
5. የታካሚዉ የመዉጫ ማጠቃለያ		
አለ/አወ		
ሁሉም መረጃዎች ቀን የተፃፈባቸዉና የባለሙያዉ ፊርማ ያረፈባቸዉ ናቸዉ		
6.የመሻሻል /ለዉጥ ሁኔታ መረጃ ተመዝቧል		
አለ/አወ		
ሁሉም መረጃዎች በየቀኑ መታየታቸዉና የባለሙያ ፊርማ ያረፈባቸዉ ናቸዉ		
7.በክሊኒካል ፋርማሲስት የተመዘገበ መረጃ		
አለ/አወ		
ሁሉም መረጃዎች በየቀኑ መታየታቸዉና የባለሙያ ፊርማ ያረፈባቸዉ ናቸዉ		
አጠቃላይ የተሟሉና ያልተሟሉ ብዛት		
የህክምና መዝግበ /ካርድ የተመለከተ /ያየዉ ባለሙያ ፡-		
የህክምና ካርዱን ያየዉ ባለሙያ ስም፡-		
የህክምና ካርዱ የታበት ቀን፡-		