

Addis Ababa University  
College of Health Sciences  
School of Public Health



Improving nursing care plan completion in Dambi Dollo Hospital

By: - Yonas Balcha

Advisor: - Dr. Anagaw D.

Mr. Geshaye A.

A capstone project report submitted to the school of graduate studies of Addis Ababa University, college of Health Science, Department of Health Care and Hospital Administration in partial fulfillment of the requirements for the degree of Masters of science in Health Care and Hospital Administration

June, 2019

Addis Ababa, Ethiopia

## 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.

Name of student: Yonas Balcha

Signature..... Date.....

Advisor: -----

Signature..... Date.....

Co-Advisor: -----

Signature..... Date.....

Examiner: .....

Signature..... Date.....

## **Acknowledgement**

Next to My heavenly father, I would like acknowledge Addis Ababa University College of Health science for giving this chance to develop capstone project.

I would like to thank my advisor Dr. Anagaw and Mr. Gashaye A. (BSc, MPH) for his advice and follow up for capstone project.

I would also like to extend my gratitude to Addis Ababa University health Library and ICT staffs for their supporting in providing necessary materials.

I was also grateful to Mr. Kalid Kalifa CEO, Ato Solomon Yadata finance department head, Dr.GemechuWorku medical director, Dr. Bekele Debela quality improvement focal person, and Sr. Birhane, metron of DambiDollo General Hospital who have provided me with the necessary information whatever is at their hand and mind.

At last but not the least, my deep respect and appreciation goes Dambi Dollo Hospital staff

## **Acronyms and Abbreviation**

ADPIE: - Assessment, Diagnosis, Planning, Implementation and Evaluation of care

BPR: - Business Processing Reengineering

BSC: - Balanced Score Card

CASH: - Clean and Safe Hospital

CCO: - Chief Clinical Officer

CEO: - Chief Executive Officer

CPD: - Continuous Professional Development

EFY: - Ethiopian Fiscal Year

EHRIG: - Ethiopia Hospital Reform Implementation Guideline

FMoH: - Federal Ministry of Health

HCF: - Health Care Finance

HMIS: - Health Management Information System

HR: - Human Resource

MW: - Medical Ward

OPD: - Out Patient Department

SMART: - Specific, Measurable, Attainable, Realistic and Time bounded

SMT: - Senior Management Team

SNT: - Senior Management Team

## Table of Contents

Acknowledgement .....	i
Acronyms and Abbreviation .....	ii
Table of Contents .....	iii
List of tables.....	v
List of figures .....	vi
Abstract .....	vii
CHAPTER ONE: BACKGROUND .....	1
1.1 Organizational Description .....	1
1.2 Introduction .....	2
1.3 Statement of the Problem .....	2
1.4. Significance of the study .....	4
CHAPTER TWO: OBJECTIVES.....	5
2.1 General Objectives .....	5
2.2. Specific objectives.....	5
CHAPTER THREE: ROOT CAUSE ANALYSIS .....	6
3.1. Collection of information on the causes of the problem .....	6
3.2. Possible root causes of the problem .....	6
3.3. Verification of possible root causes the problem .....	7
3.4 After verification these are identified as real root causes .....	8
CHAPTER FOUR: LITERATURE REVIEW .....	9
CHAPTER FIVE: METHODS AND MATERIALS .....	14
5.1. Study area and period.....	14
5.2 Project design .....	14
5.3 Population.....	14
5.3.1 Source population .....	14
5.3.2 Study population.....	14
5.4 sample size determination and Sampling technique .....	15

5.4.1 Sample size determination.....	15
5.4.2 Sampling technique .....	15
5.5 Study variable.....	16
5.5.1 Dependent variables .....	16
5.5.2 Independent variables .....	16
5.6 Operational definition .....	16
5.7 Data analysis procedure .....	16
5.8 Data quality management.....	16
5.9. Ethical Considerations.....	17
5.10. Dissemination plan.....	17
CHAPTER SIX: INTERVENTIONS .....	18
6.1. Alternative interventions .....	18
6.2. Selection of the best interventions .....	18
CHAPTER SEVEN .....	21
IMPLEMENTATION.....	21
CHAPTER EIGHT: RESULTS .....	22
CHAPTER NINE: DISCUSSION .....	27
CHAPTER TEN: CONCLUSION AND RECOMMENDATION .....	29
10.1 Conclusion.....	29
10.2 Recommendation.....	29
Strength and Limitation.....	30
REFERENCES .....	31
ANNEXES .....	34

## **List of tables**

Table 1: Alternative intervention at Dambi Dollo Hospital.....	18
Table 2: Create decision matrix qualitative .....	19
Table 3: Selection of the best intervention at Dambi Dollo Hospital. ....	19
Table 4: Nursing process Completeness, Dambi Dollo Hospital, 2019 .....	26

## List of figures

Figure 1: fish diagram.....	7
Figure 2: Nursing assessment completeness during pre-post intervention Dambi Dollo hospital 2019.....	22
Figure 3: Nursing diagnosis completeness during pre-post intervention Dambi Dollo hospital 2019.....	23
Figure 4: Nursing planning completeness during pre-post intervention Dambi Dollo hospital 2019.....	23
Figure 5: Nursing implementation completeness during pre-post intervention Dambi Dollo hospital 2019.....	24
Figure 6: Nursing evaluation completeness during pre-post intervention Dambi Dollo hospital 2019.....	24
Figure 7: average of (five steps of nursing process) nursing process completeness during pre-post intervention Dambi Dollo hospital 2019 .....	25
Figure 8: general pre post intervention and difference of nursing process implementation Dambi Dollo hospital 2019.....	25

## **Abstract**

**Background:** The nursing process has evolved during the past several decades and is now used by nurses throughout the world as an organizing framework for providing individualized person-centred care. Despite the important role of nurses/midwives have for the betterment of the health care, their independent work; the Nursing/midwifery care Practice standards do not get enough emphasis. According to global study approximately 30–40% of patients do not receive health care according to current scientific evidence and some patients receive unnecessary or harmful care. Pre-assessment study in Dembi Dollo general hospital in the beginning of 2019 also shows that the average nursing process completion rate was only 47% which shows considerable gaps in provision of services as compared the standards

**Objective:** - Using onsite training intervention improving nursing process completion from 47% to 75% in Dambi Dollo general hospital at the end of June 2019 GC.

**Methods:** A pre- post intervention design was used in this project to examine the completion rate of nursing process. Base line data were collected from January to March 2019. The baseline assessment indicates low completeness of inpatient medical records. Only 47% of the 84 audited patient folders were completed. After base line assessment root cause analysis was conducted and the real root cause of the problem was identified. Based on the verification, lack of awareness about nursing process completeness was identified as a real root causes and two day nurses training on nursing process completeness and descriptive method of analyzed nursing process standard at facility level Data was analyzed using manual technique and the result was displays in Table and Graph.

**Results:** the nursing process completion rate averagely increased from 47% pre-intervention to 76% post-intervention. Specifically nursing implementation practice and nursing diagnosis practice were considerably improved by 30 percentage points.

**Conclusion:** The results of this project suggests cost efficient interventions such as experience sharing among medical staff and awareness about nursing process improves the implementation of nursing process completeness and there by supports the efforts being made to provide quality health services.

# **CHAPTER ONE: BACKGROUND**

## **1.1 Organizational Description**

Dembi Dollo general Hospital is located 636 km from Addis Ababa (capital city of Ethiopia) and it is established in 1919. At that time it was serving as the beginning it was serving as beginning it was serving as missionary clinic then it had served for many years and gradually became health center. It was renovated by the previous Soviet Union government in 1971 EFY. Since then it gave services as a district level hospital until 2000. In 2002 the Regional Health constructed additional buildings and expanded to a general level hospital. Now the hospital is giving health service for more than 1.2 million people live in one town and 10 districts and its catchment area is around 4,600km<sup>2</sup>. Dembi Dollo General Hospital has 217 Staff, 114 beds with 82.3% bed occupancy rate and 5 day average length of stay, OPD visit 98,685 per year. The hospital is giving many services for respected customers. These are OPD, inpatient services, EOPD, delivery services, minor and major surgery, laboratory services, X-ray & ultrasound services, pharmacy, private clinic, library (broadband supported knowledge center) and special treatment (eye, dental, psychiatry, physiotherapy) services. It plays a basic role to reduce morbidity, mortality and disability and improve the health status of the people in the catchment area through providing comprehensive package of preventive, advanced, rehabilitative and curative health services via integrated collaboration with all stake holders.

## **1.2 Introduction**

The nursing process has evolved during the past several decades and is now used by nurses throughout the world as an organizing framework for providing individualized person-centred care. This process is cyclical and ongoing and is generally used in conjunction with various theoretical nursing models or philosophies. The stages of the nursing process are holistic, in the sense that each stage is intimately interconnected with the other stages and are explicable only by reference to the whole. This process, similar to those used in problem-solving and scientific reasoning, incorporates assessment, diagnosis, planning, implementation, and evaluation phases. (1, 2)

The nursing care process is an organized, systematic and holistic approach through which nursing care provision is organised to achieve **patient/client** centered care. The nursing process involves Assessment, Diagnosis, Planning, Implementation and Evaluation of care (ADPIE). This should be done in collaboration with the patient/client, family and community. Assessment: the nurse collects comprehensive data pertinent to the patients'/client's health or situation. (2)

However, despite the important role of nurses/midwives have for the betterment of the health care, their independent work, but the Nursing/midwifery care Practice standards do not get enough emphasis. (3)

### **1.3 Statement of the Problem**

Poor & inconsistent implementation of nursing process standard practice occurs commonly in health care facilities in developing countries. The outcomes of such poor implementation have been depicted a bad quality of nursing care plan standard practice, disorganization of the health service, conflicting roles among nurses, medication error, poor diseases prognosis, dissatisfaction of customers with the care provided, and increased morbidity & mortality rates. (4, 5, 6)

The gap between research evidence and clinical practice is one of the most persistent problems in the provision of quality healthcare. Approximately 30–40% of patients do not receive health care according to current scientific evidence and some patients receive unnecessary or harmful care (7)

The process accounts for all significant data and actions taken by a registered nurse, the documentation of which is used for critical decision-making. Therefore, nursing documentation of patient care should follow the nursing process, as it ensures systematic care and its documentation. Failure to completely document can have legal consequences. If nursing documentation is incomplete, contains gaps, or is not consistently completed according to the standards and the facility's policies, then it can be used to support an allegation that substandard care was provided. (8)

The other challenges to test to implement the nursing care standard practice were that the establishment of a validated model of nursing records aimed to promote individual care. The results showed limitations of the nursing care standard practice conducted according to the nursing process formats particularly in the identification of problems presented by the patients and, consequently, diagnosis and the possible intervention procedures. (7, 10, 11)

Similarly, the implementation of nursing process standard Practice in DambiDollo General Hospital is still below the expected criteria (as indicated in the baseline assessment 47%) complete record of nursing process components, in Dambi Dollo hospital. These problems are manageable if a nurse can properly implement nursing process by understanding of the nursing care plan /process steps or standards. This project aimed to improve the implementation of the Nursing care plan/process in Dambi Dollo General Hospital by addressing those major cause of the problem.

#### **1.4. Significance of the study**

The findings of this project will help in improving the overall nursing process completion and in decreasing the poor outcomes of the services.

This project can give theoretical as well as practical significance for researchers, policy makers and practitioners in order to use as base line data. The significant of the project in nursing care plan/ process practice is to give a better care by understanding the individual's needs, show compassion and sensitivity, and, provide care in a way that respects all people equally.

## **CHAPTER TWO: OBJECTIVES**

### **2.1 General Objectives**

- To improve the completeness of nursing process of Dambi Dollo general hospital from 46% to 75% by the June 2019GC.

### **2.2. Specific objectives**

- To improve nursing assessment completeness from 52% to 82% by the end of June 2019.
- To improve nursing diagnosis completeness from 50% to 80% by the end of June 2019.
- To improve nursing planning completeness from 46% to 74% by the end of June 2019.
- To improve nursing implementation completeness from 46% to 74% by the end of June 2019.
- To improve nursing evaluation completeness from 40% to 70% by the end of June 2019

## **CHAPTER THREE: ROOT CAUSE ANALYSIS**

To identify the root cause for the low poor nursing care plan completeness in Dambi Dollo general 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 nursing process standard implementation problem, Focus Group Discussions (FGDs) were held with selected nurses from hospital wards, all ward head Nurses and matrons. Two FGDs were held totaling 8 nurses (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 about nursing care plan standards
- Lack of nursing care plan supportive supervisors
- Low commitment of nurse's staffs
- Lack of work force plan for nurses
- Inadequate nursing care plan standard service material supplies
- Lack of recognition/motivation for model nurses

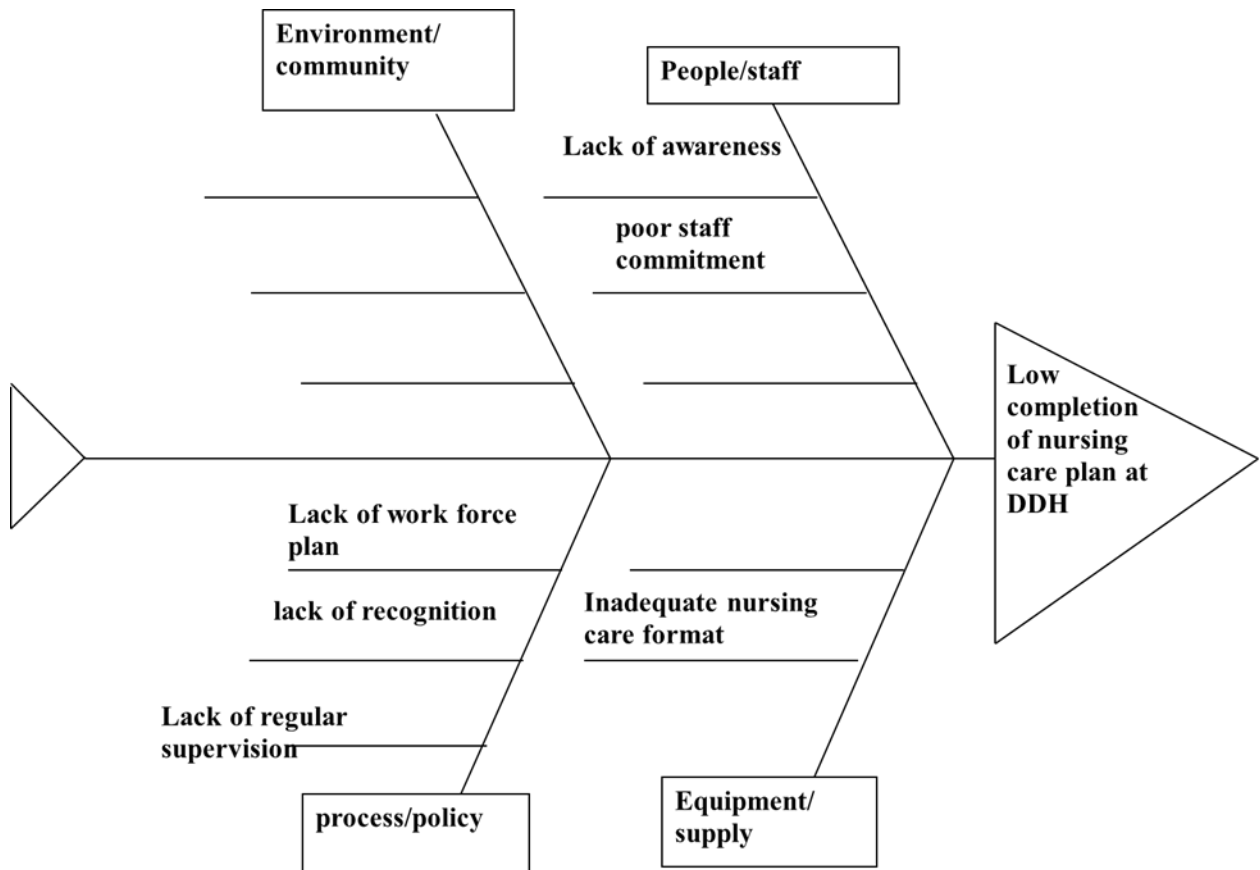


Figure 1: fish diagram

### 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 discussion with stakeholders the possible root causes were verified. Possible root causes were selected, verified & prioritized by focused group discussion participants by voting in the fish-bone (fig. 1 above)

**Lack of awareness:** this is proved to be a real root cause of the problem most of nurses are newly employed from university have no detail information working environment and Training has never been given to most of the staffs who were working in any of the wards at all, related to nursing care plan completeness standard, and nursing care plan as key performance indicator and NANDA

**No regular supportive supervision/Lack of monitoring system.** As Ethiopian Hospital Service Transformation Guidelines (EHSTG); the nursing/midwifery care standards should

be implemented by continuous supervision of nursing supportive supervisors, but there were no any assigned personnel who should check whether each of the components of nursing care plan standard is completed and no evidence that show whether regular supportive supervision conducted like written feedback. Therefore contribute to be real cause of the problem

**Shortage of nursing care plan forms** when this is not contribute to a real root cause because nursing care plan format available in store and patient folder without complete

**No work force plan** this is not contribute to be a real root cause of the problem because all staff have their job description and plan with hard copy

### **3.4 After verification these are identified as real root causes**

Then we agreed up the root cause as follow:-

1. Lack of nursing supportive supervisor
2. Lack of recognition & motivation
3. Low awareness about nursing care plan standards

After the root causes identified then planned on the way the intervention to be implemented create awareness of nurses on the way to complete nursing process standards.

This project has concluded that all nurses who are/has worked has low or no awareness on nursing process standards completeness, training. Therefore, providing training plays important role.

Regarding the focus group discussion which was done with eight (8) persons, six of them stated that lack of awareness is the main cause for the incompleteness of nursing process standard.

The other two mentioned lack of recognition and motivation of nurses is the reason for the incompleteness of nursing process. But all of them has agreed for the existence of the problem and have confirmed there is lack of awareness related to nursing process and they suggested that giving training on nursing care plan could resolve the problem.

## **CHAPTER FOUR: LITERATURE REVIEW**

Tools are needed to support the continuous and efficient shared understanding of a patient's care history that simultaneously aids sound intra- and interdisciplinary communication and decision making about the patient's future care. Such tools are vital to ensure that the continuity, safety, and quality of care endure across the multiple handovers made by the many clinicians involved in a patient's care. A primary purpose of documentation and recordkeeping systems is to facilitate information flow that supports the continuity, quality, and safety of care. Since recordkeeping systems serve multiple purposes (e.g., legal requirements, accreditation, accountability, financial billing, and others), a tension has arisen and is undermining the primary purpose of the record and instead fueling discontinuity of care, near-misses, and errors. Among the more specialized types of documentation is the plan of care, a requirement of the Joint Commission. (11)

Documentation of patient care is a fundamental, yet critical, skill used by nurses to communicate the current health status of the patient's individual needs and responses to care. As professional nurses, we are held responsible for ensuring safe, quality patient care. Documenting completely and accurately is considered a professional standard of nursing practice. For every step in the nursing process, the care delivered must be evident in the medical record. We need to document the patient's progress, condition, needs, treatment, and nursing care. To be recognized as professional nurses who deliver quality patient care, we must ensure documentation that is consistent, clear, and factual. In this way, the nurse validates critical thinking used for the care rendered. The American Nurses Association (ANA) introduced a tool to streamline the nursing documentation process. Principles for Documentation include policy statements, principles, and recommendations to assist nurses with documentation. It also explains how to comply with institutional and regulatory requirements. In addition, professional nurses must review the ANA Code of Ethics for Nurses and the Scope and Standards of Practice to ensure that they are demonstrating contemporary professional nursing care. (8)

The Nursing/midwifery care standard Practice explains a skillful level of nursing /midwifery care as displayed by the critical thinking procedures called the nursing /midwifery process. The nursing/midwifery process includes the components of assessment, diagnosis, planning, implementation, and evaluation. As stated by the nursing/midwifery process, it encompasses significant actions designed by professional nurses/midwives. (12, 13).

Nursing /midwifery care Standard Practice is the professional nursing/midwifery activities that should be carried-out by the nurse/midwife using the nursing/midwifery process. The nursing /midwives process is also an organized, systematic and holistic approach to nursing/midwifery by which nursing/midwifery care provision is organized to achieve patient centered care. (5,14). The Nursing/midwifery Care Standard Practice can be used as a Clinical decision-making process, Communication and history taking, documentation, a nursing/midwifery process by conceptualization of Professional Responsibility and Accountability, Knowledge-Based Practice, Client focused provision of care & Ethical practice by care givers. The nursing/midwifery care standard practice comprises the implementation of the nursing/midwifery process known as: Assessment, Diagnosis, Planning, Implementation and Evaluation of care (ADPIE). This process is effective if it is done together with the collaboration of patient, family and caregiver. (15, 16, and 17)

The first Nursing/midwifery process component is assessment, which means the collection, organization, validation, and documentation of both subjective & objective data. It involves taking vital signs, performing a head to toe assessment, listening to the patient's comments and questions about his/her health status, observing his/her reactions and interactions with others and is a systematic guide for data assessment that permits the identification of nursing problem. (18, 5, 19)

The second Nursing/midwifery process component is Nursing/midwifery Diagnosis. It includes analyzing the data, identifying health problems, health risks, and the strengths the patient has, and formulating the nursing diagnoses. The Nursing/midwifery Diagnosis identifies the needs that require care and determines the degree of dependence on nursing/midwifery care. (19, 20, 21)

The third Nursing/midwifery process component is the Nursing care Plan, it involves determining the overall nursing/midwifery care that should be established based on the diagnosis. It also includes prioritizing the patient's problems and diagnoses, formulating goals and desired outcomes. This will be used to select nursing interventions to enable the patient to meet those goals. (19, 20, 21)

The fourth Nursing/midwifery process component is Nursing Implementation. It includes the beginning and completion of actions required to achieve results, which involves the implementation and documentation of the interventions performed. It also includes reassessing the client, determining the nurse/midwife's need for assistance, implementing the nursing/midwifery orders and documentation of nursing/midwifery actions. (19, 20, 21)

The fifth Nursing/midwifery process component is Nursing Evaluation. At this stage, it is possible to assess the human response to the nursing care provided. Evaluation includes collecting data related to the desired outcomes, comparing the data to see if the patient's goals or outcomes desired were met, relating the nursing actions to the goals and outcomes, evaluating the status of the problem, and continuing, modifying or terminating the patient care plan the human response. Thus, it includes not only analyzing the success of the goals and interventions, but also examining the need for adjustments and changes as well. (20, 21, 22)

A study conducted in Brazilian private hospital showed that the nursing/midwifery care standard practice was not integrated. There was a lack of coherence in the prescribed actions related to patient health conditions. They additionally stated that a lack of preparedness and a lack of a holistic view that hindered the perception and record of the essential care provided. (15, 23)

A study in Manitoba College explained that the College of professional Nurse/midwife has the legislated authority through the professional Nurses/Midwives Act to establish standards of nursing/midwifery care practice in order to protect the public. Standards of nursing/midwifery care practice described that how a professional nurse/midwife is to practice, at a minimum. This minimum is evidenced by their observable behaviors and actions. It is the responsibility of all professional nurses/midwives in Manitoba to understand these standards and be accountable to apply them to their own nursing/midwifery care standard practice, regardless of roles or practice settings.

The policies of employers do not relieve individual professional nurse/midwife of accountability for their own actions or the primary obligation to meet the Standards of Practice for professional Nurses/midwives. An employer's policies should not require a registered nurse/midwife to practice in a manner that violates the Standards of Practice for professional Nurses/midwives. The College provides consultation to assist nurses/midwives with the application of standards for nursing/midwifery practice. (20, 24)

Nursing/midwifery care Standard Practice implementation status can be affected by different factors. Some of them are: lack of adequate knowledge and skill of nursing/midwifery care standard practice, lack of skilled supportive supervision, lack of recognition & commitment, lack of nursing/midwifery audit program and lack of adequate supplies for the implementation of standards. The important factor in the implementation of the Nursing/midwifery care standard practice is the knowledge, skill & attitude of the nurses/midwives. The implementation status of a health facility relies on the knowledge, skills, and attitudes of the professionals. (5, 19)

The study in Addis Ababa showed that highly knowledgeable nurse/midwife respondents were 38(25.2%) 10 times more likely to implement nursing/midwifery care standard practice than poor knowledge group nurses/midwife([AOR=9.1 at 95%CI (2.69, 30.9),adjusted for working environment & facility. Gaps in this study also showed that in the implementation of nurse/midwife process: nursing diagnosis, objective data collection and measuring evaluation were observable gaps. Among the reasons of this: lack of knowledge; absence of recognition for highly devoted nurses/midwives; their experience with declining value of nursing/midwifery despite their efforts. After theoretical-practical knowledge- based training & practice in the implementation of the nursing/midwifery care standard, nurses/midwifery reported a positive change in their feelings after their initial discomfort and unfavorable perception of the nursing/midwifery diagnosis. (3, 19, 25)

On the other hand, the other performance gaps in the nursing/midwifery care standard practice are poor supervision system. A nursing/midwifery supportive supervision enables individual practitioners to develop knowledge, competence & responsibility for their own practice and enhance consumer protection and safety of care in complicated health facility. (12, 26) If executed correctly, a supportive supervision could be a system for improving professional development and enhancing worker job satisfaction and motivation. To summarize, a nursing/midwifery supportive supervision is also a vital tool to support quality improvement, risk management, implementing management and building systems of accountability and responsibility. (27)

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 for 190 (94%)and completed for 89(43.8%) post intervention 73(97.3%) and completed for 72(96%),physician order sheet was attached during

pre-intervention for 198(98%) and completed 111(54.9%) post intervention 69 (92%) and completed for 67 (89.3%), nursing care plan was attached during pre-intervention for 160(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%), discharge 18 summary was attached during pre-intervention for 156(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% to 78.6%. (28)

Pre- and post-intervention study was conducted on total of 80 Medical Cards at inpatient departments of Dilchora Hospital. Accordingly, the total result showed among the collected cards 12.8(32%) of them had a complete Nursing Care Plan Documentation attached & done in their Medical Cards during pre-intervention time. This had been increased to 25.6(64%) during the post intervention period. The proportion of patient who documented Nursing Admission Assessment increased from 16(40%) to 32(80%). Similarly, the proportion of patient who had documented Nursing Diagnosis has been increased from 16(40%) to 28(70%), Nursing Care Plan from 12(30%) to 28(70%), and Nursing Implementation increased from 12(30%) to 24(60%) pre & post-intervention periods respectively. (29)

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 health care provider improves the inpatient medical record completeness from the base line 73% to 84% during post intervention. This project indicates that applying strategic problem solving to medical record completeness can be effective in improving quality of healthcare (30).

## **CHAPTER FIVE: METHODS AND MATERIALS**

### **5.1. Project area and period**

The project was conducted at DambiDollo General Hospital found in Oromia Regional state Kellem Wollega Zone, Dambi Dollo town from March 2019 to June 2019GC. DembiDollo general Hospital is located 636 km from Addis Ababa (capital city of Ethiopia) and it is established in 1919. At that time it was serving as the beginning it was serving as beginning it was serving as missionary clinic then it had served for many years and gradually became health center. It was renovated by the previous Soviet Union government in 1971 EFY. Since then it gave services as a district level hospital until 2000. In 2002 the Regional Health constructed additional buildings and expanded to a general level hospital. Now the hospital is giving health service for more than 1.2 million people live in one town and 10 districts and its catchment area is around 4,600km<sup>2</sup>. DembiDollo General Hospital has 217 Staff, 114 beds with 82.3% bed occupancy rate and 5 day average length of stay, OPD visit 98,685 per year.

### **5.2 Project design**

A pre- post intervention design was used in this project to examine the completion percentage of nursing process. The pre-intervention assessment was conducted in the inpatient department of Dambi Dollo General hospital base line data were collected from January March 2019GC, The baseline assessment of the completeness of nursing process was less than that the Ethiopian Hospital Service Transformation Guidelines (EHSTG) .therefore, an intervention was conducted to improve the completeness according to the EHSTG and a follow up data was collected in May 2019GC. The same indicators/checklists were used for the assessment of performance.

### **5.3 Population**

#### **5.3.1 Source population**

All medical records of patients treated and discharged from Dambi Dollo General Hospital

#### **5.3.2 Project population**

An individual folder of inpatients treated and discharged from January to March 2019 for pre intervention and April to June 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 50 as minimum or 5% of the discharged patients folder to be reviewed based on the protocol to assess the completeness of nursing care plan (31).

For the hospitals like Dambi Dollo general hospitals with high patient flow better to use 5%.

$$\text{BOR} = \frac{\text{Total admission} \times \text{ALS}}{\text{Total no. of bed} \times \text{no. of days}} \times 100$$

#### Given

BOR (Bed Occupancy Rate) = 82.3%

ALS (Average Length of Stay) = 5 days

Total number of bed = 114

Total day during project period = 90 days

#### Required

Total number of admission during project period = ?

Sample size of the project (n) = ?

$$\text{Total admission} = \frac{\text{BOR} \times \text{Total no. of bed} \times \text{no. of days}}{\text{ALS} \times 100} = \frac{82.3 \times 114 \times 90}{5 \times 100} = 1689$$

$$n = 5\% \text{ of total admission} = 1689 \times 0.05 = 84$$

Based on the protocol 84 discharged patients folder (nursing process format) were reviewed each for pre and post interventional study using standardized prepared check list to assess the completeness among from those admitted and discharged patients nursing process using prepared standardized checklist by using simple random sampling method. The sample size determination and calculation mechanism was taken from hospital performance monitoring and improvement manual.

### 5.4.2 Sampling technique

Simple random sampling technique was applied. After identifying the sample size randomly select patients folder from the discharged list of all patients who were discharged from an inpatient ward this information were obtained from Admission/Discharge. The folder of these patients was obtained from the Medical Records Unit.

## **5.5 Project variable**

### **5.5.1 Dependent variables**

Nursing process standard practice

### **5.5.2 Independent variables**

Job training, supportive supervision,

## **5.6 Operational definition**

**Nursing care plan standard-** It is the professional nursing activities that are demonstrated by the nurse through the nursing process.

**Nursing process-** It is an organized, systematic and holistic approach to through which nursing care standard provision is organized to achieve patient centered care.

**Incomplete-**refers the patient is classified as not received a complete Nursing Process if the patient has not a documented Nursing ADPIE.

## **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 were reviewed and collected all completed nursing process format was reviewed and put together for Processing and analyzed by descriptive method of analyzing nursing process standard at facility level data was analyzed using manual technique and the result displayed in percent by table and graph.

## **5.8 Data quality management**

The data collection team was oriented on the checklist that use for data collection and the way to collect data then supervisor was interview data collector to understand, if they were understanding about nursing process standard or not and pre-test was done before data was collected and the data quality (completeness and consistency) was checked during the data collection process by supervisor.

### **5.9. Ethical Considerations**

Ethical approval for the capstone project was obtained from institutional reviewed board and research committee of Addis Ababa University before conducting the project given to Dambi Dollo General Hospital administrative office. Permission to conduct the project 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 DambiDollo General Hospital, A.A University and any other concerned bodies

## CHAPTER SIX: INTERVENTIONS

### 6.1. Alternative interventions

After discussion with different nurse professionals as total of 8 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 of nurses for nursing care plan standard
- Experience sharing with other neighbor hospital
- Delegation of supportive supervisors among trained nurses
- Recognition and motivation of model nurses

Table 1: Alternative intervention at DambiDollo Hospital.

<b>Root cause</b>	<b>Interventions</b>
Lack of awareness of nursing care plan standard	Training of nurses for nursing care plan
	Experience sharing with other neighbor hospital
	Delegation of supportive supervisors among trained nurses
	Recognition and motivation of model nurses

### 6.2. Selection of the best interventions

Lack of awareness of nursing process standard was an identified root cause of the problem for the implementation of nursing care plan standards. The hospital, matrons, quality officer, the head nurses, the nursing audit committee & staff nurses with a total of 8 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: Create decision matrix qualitative

No.	Strategies	Impact	Time	feasibility	Cost	Total
1	Recognition of model nurses	V. Good	6 months	V. good	Low	
2	Training nurses	High	2days	good	Medium	
3	Delegation of nurses for supportive supervisors	Good	3Month	Good	Medium	
4	Experience sharing	V. Good	2Days	V. Good	High	

Table 3: Selection of the best intervention at DambiDollo Hospital.

(5- highest & 1 – least point)

Interventions	Criteria				Total Score
	Impact	Feasibility	Cost	Time	
Recognition of model nurses	4	4	5	3	16
Training nurses	5	4	4	5	18
Delegation of nurses for supportive supervisors	4	3	4	4	15
Experience sharing	4	5	3	5	17

The results showed that, if each evaluative criterion was weighted equally, giving training was the best intervention with a total score of 18, followed by experience sharing (with a total score of 17); recognition of model nurses (with total score of 16) and delegation of nurses for supportive supervision (with a total score of 15). Therefore from a given alternative interventions giving onsite training was the best alternative intervention to improve nursing care plan standard completeness.

## **ONSITE TRAINING**

**Impact;** majority or out of 20 nurses interviewed 14(70%) of them didn't have awareness about nursing process 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 performance and efficiency and also according to EHIRG all employees need onsite training in every year he/she will do all activities required to meet the standard.

**FEASIBILITY ;** this is feasible because the training was provided for all 20 staff of inpatient department at their own place which did not require much time and money in addition ,the training was given by local staff those taken training of trainer 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 one day training for each group and was implemented within the implementation period..

## **CHAPTER SEVEN**

### **IMPLEMENTATION**

**Onsite training:** - Two days onsite training was given based on the Ethiopian Health Service Transformation Guidelines (EHSTG) for 20 inpatient nurses. The training was given by senior nurses who took training of trainer on nursing care plan standard. The issues discussed during the training consists of the following topics:

- the importance of Nursing care standards
- the five Nursing Process Components
- the Nursing Process Documentation tool adopted by the hospital and
- the challenges that the Nurses/midwives faced during the implementing period

#### **Indicators**

##### ***Process indicator***

- Number of nurses trained

##### ***Outcome indicator***

- Share of nursing process completed

## CHAPTER EIGHT: RESULTS

To evaluate compliances of nursing process standards 168 admitted and discharged patient's folder were reviewed during this capstone project both in the pre and post intervention of study periods.

The completeness of process was assessed in terms of recording nursing process components including assessment, nursing diagnosis, nursing planning, nursing implementation and evaluation. In order to improve poor compliance of nursing process standards in Dambi Dollo hospital, two-day onsite training was provided as intervention. Consequently, due to the intervention, the overall completeness of nursing process increased by 29 percentage points (from 47% baseline to 76% post intervention). The following figures show specific achievements for different components of nursing practices

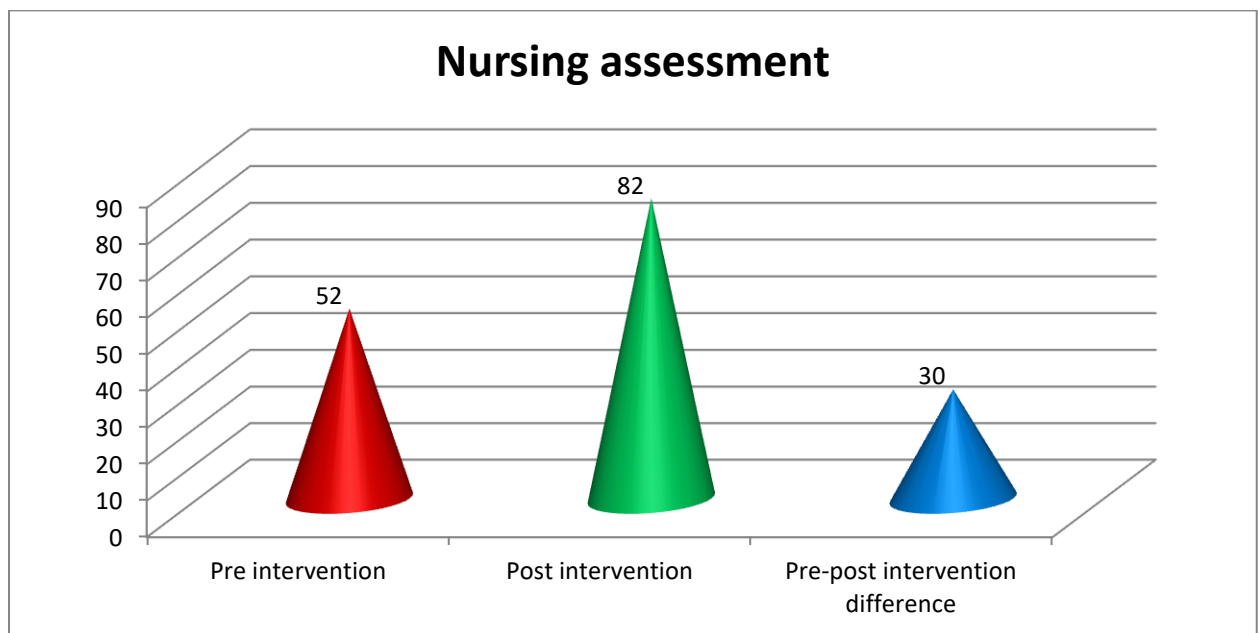


Figure 2: Nursing assessment completeness during pre-post intervention Dambi Dollo hospital 2019.

The result of nursing assessment shows improvement by 30 percentage points from 52% to 82%

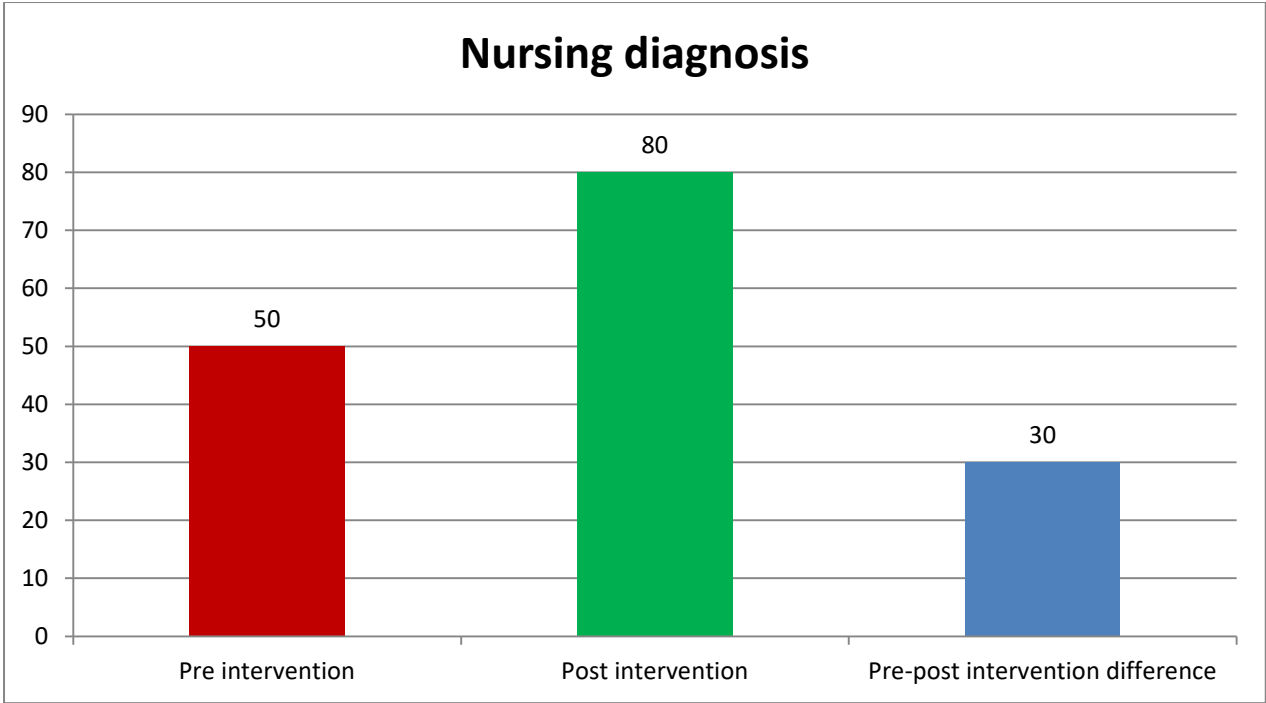


Figure 3: Nursing diagnosis completeness during pre-post intervention Dambi Dollo hospital 2019.

The result of nursing diagnosis shows improvement by 30 percentage points from 50% to 80%

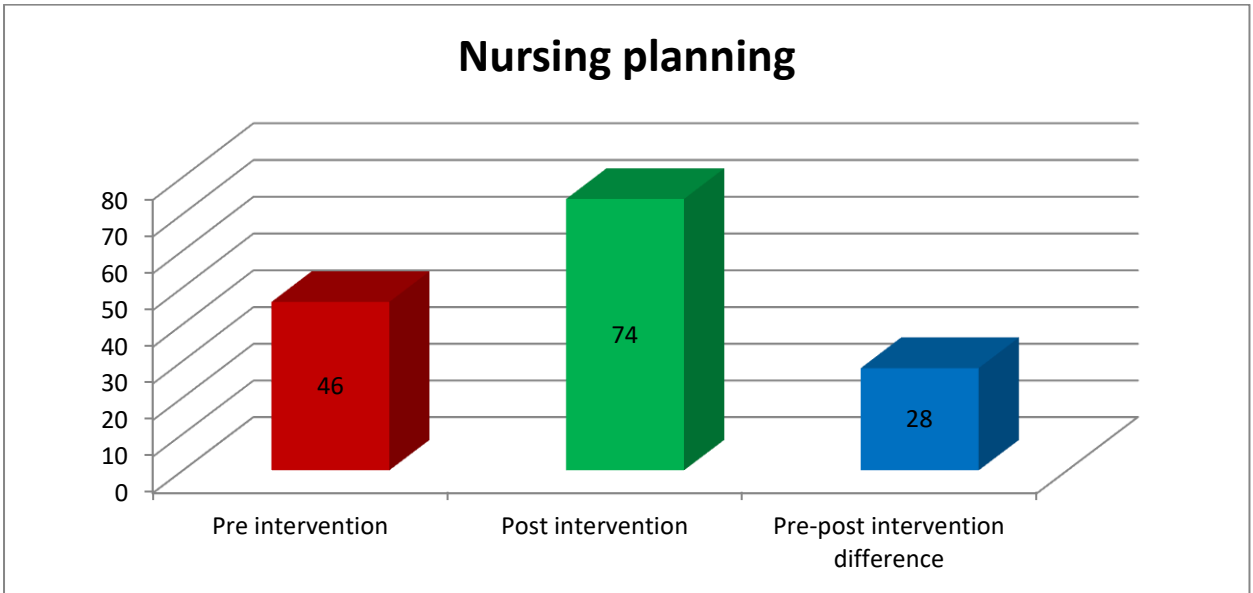


Figure 4: Nursing planning completeness during pre-post intervention DambiDollo hospital 2019.

The result of nursing planning shows improvement by 28 percentage points from 46% to 74%.

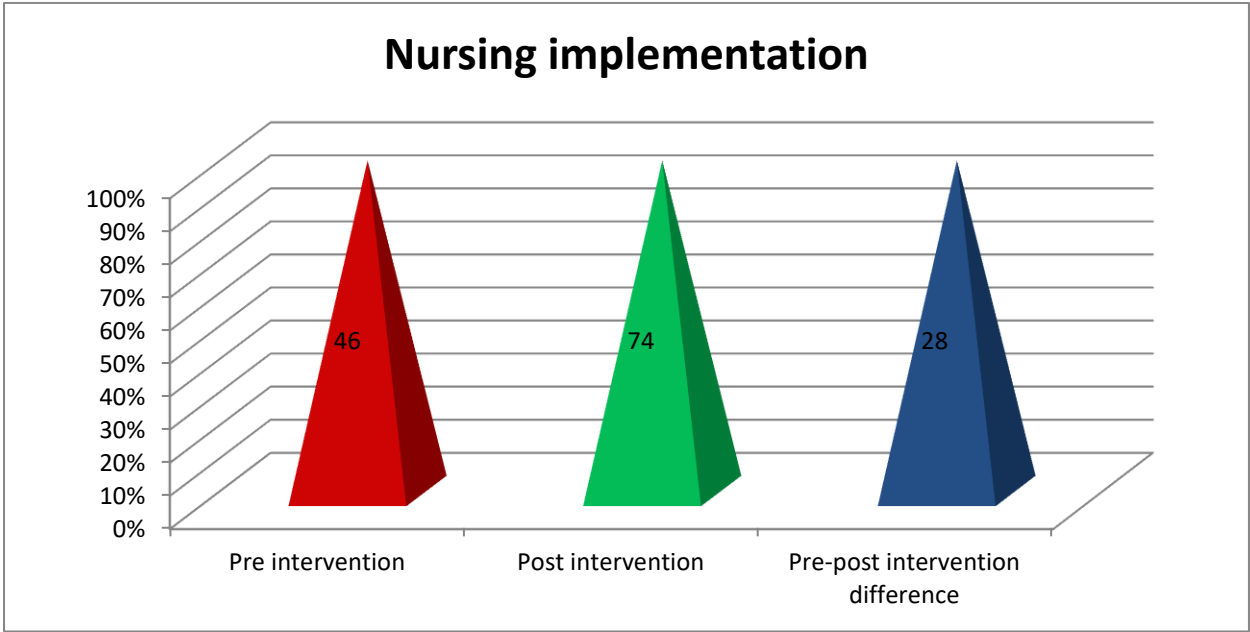


Figure 5: Nursing implementation completeness during pre-post intervention Dambi Dollo hospital 2019.

The result of nursing implementation shows change by 28 percentage points from 46% to 74%

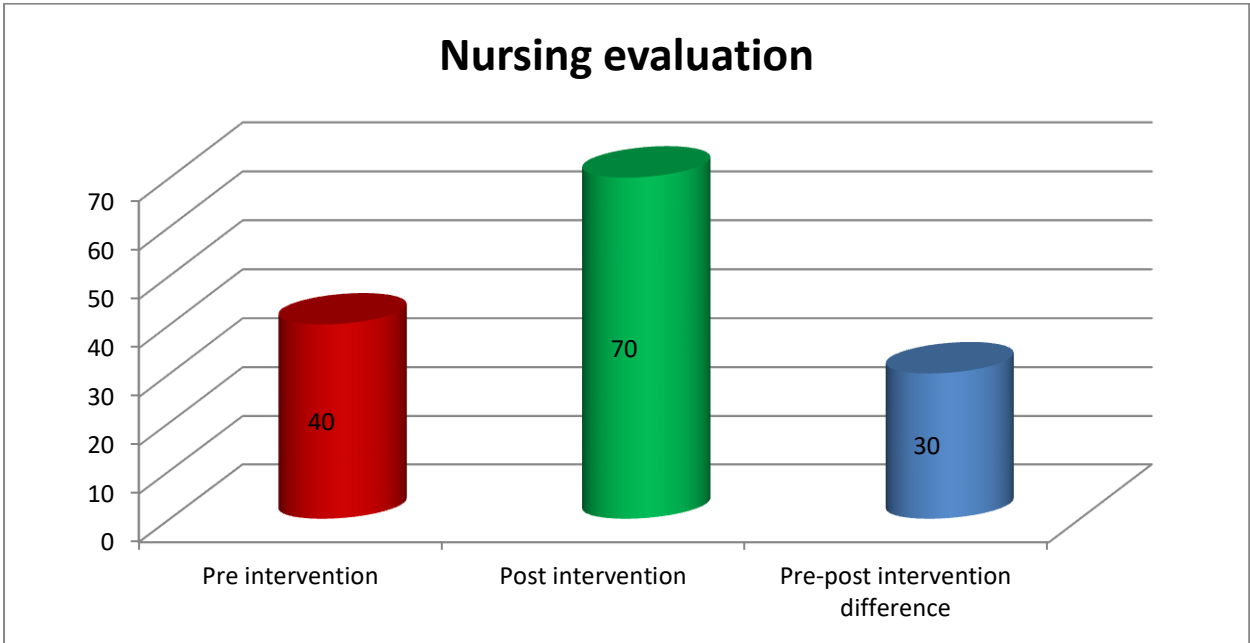


Figure 6: Nursing evaluation completeness during pre-post intervention Dambi Dollo hospital 2019.

The result of nursing evaluation shows improvement by 30 percentage points from 40% to 70%

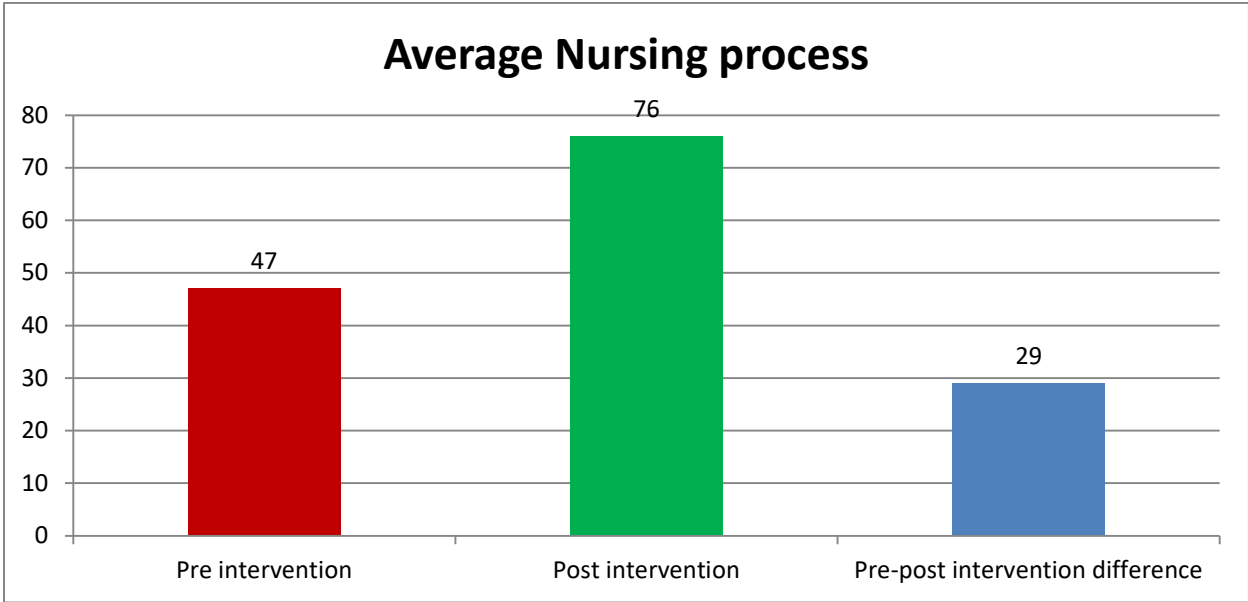


Figure 7: average of (five steps of nursing process) nursing process completeness during pre-post intervention Dambi Dollo hospital 2019

The result of overall nursing process shows improvement by 29 percentage points from 47% to 76%

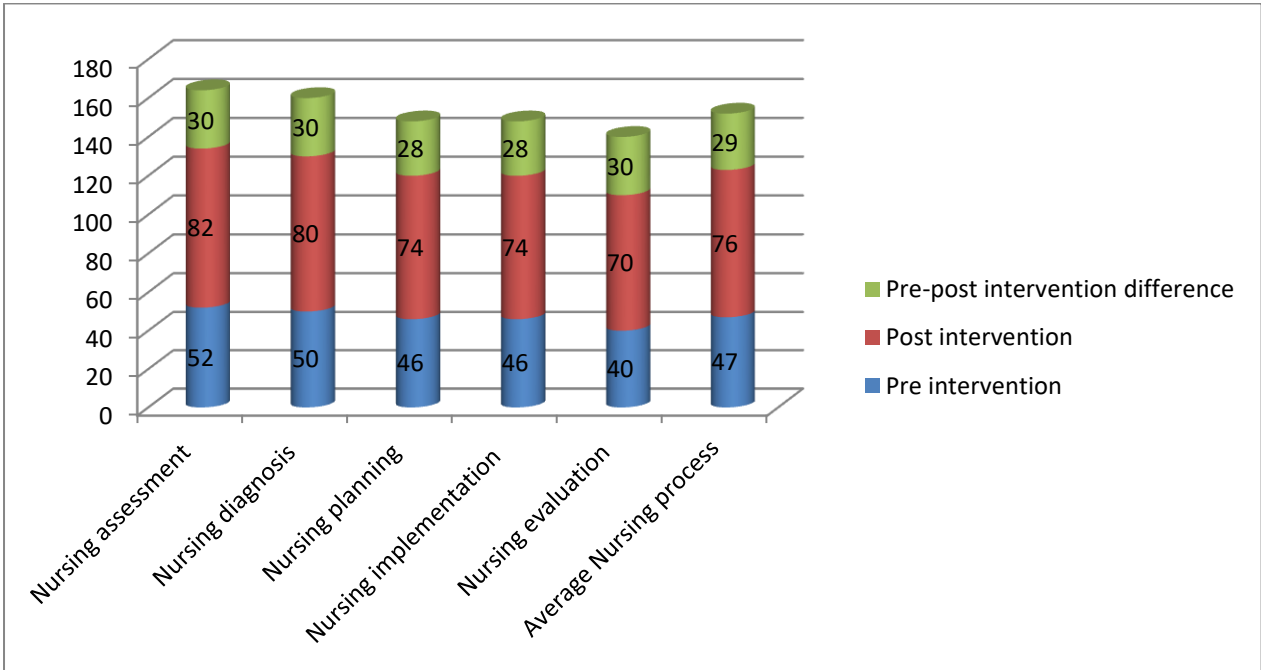


Figure 8: general pre post intervention and difference of nursing process implementation Dambi Dollo hospital 2019.

Table 4: Nursing process Completeness, Dambi Dollo Hospital, 2019

S/ No	Indicators	Category (Yes/No)	Result				Pre-Post Intervention Difference
			Pre Intervention		Post Intervention		
			Frequency	Percent	Frequency	Percent	
1	nursing assessment	Yes	44	52	69	82	30
		No	40	48	15	18	
2	nursing diagnosis	Yes	42	50	67	80	30
		No	42	50	17	20	
3	nursing planning	Yes	39	46	62	74	28
		No	45	54	22	26	
4	nursing implementation	Yes	39	46	62	74	28
		No	45	54	22	22	
5	nursing evaluation	Yes	34	40	59	70	30
		No	50	60	25	30	
	Average Completeness during Pre and posttest Intervention	Yes	198	47	319	76	29
		No	222	53	101	24	

The baseline 47% to 76% during post intervention evaluation the completeness of nursing process was assessed in terms of nursing assessment, nursing diagnosis, nursing planning, nursing implementation, and nursing evaluation.

## **CHAPTER NINE: DISCUSSION**

The capstone project done in Dambi Dollo General Hospital was found out that the number of nursing process standards completeness. The main finding of this project is in compliance with Ethiopian hospital Service Transformation guideline standards for nursing process standard completeness increased from 47% to 76 %. This showed Successful nursing process completeness intervention programs. Successful nursing process standard completeness programs require a knowledgeable hospital nurses that recognizes the importance it holds in providing quality patient care. Training for hospital nurses should both educated nurses about nursing process standard and encouraging them to practice the guidelines. That means: Immediate and initial actions needed to be taken before training occurs, Clarify nursing process standard, improve the quality of patient care, educated nurses through interactive training, Demonstrated proper nursing process standard practices in training, and encouraging nurses.

Many studies on the implementation of Nursing Process and associated factors among nurses have been done here in Ethiopia and as well in abroad. But almost all of the study subjects were nurses themselves and as we know these will lead a social anticipated bias that may overestimate the finding. But the current project may overcome this drawback since we are collecting the data after reviewing patient documents.

Overall nursing process completeness both pre- and post-intervention study was conducted on 168 Medical Cards at inpatient departments of Dambi Dollo Hospital.

This project shows that the intervention conducted helped for considerable improvement in all over nursing process completeness in Dambi Dollo hospital Oromia, western Ethiopia from 47% to 76% whereas, compared with the study conducted Menelik II Hospital showed nursing care plan was completed 70.3% (29). Another study was conducted inpatient departments of St.Paul's Hospital Millennium Medical College nursing care plan was completed 57.3%, (27). and the study conducted at Dilchora hospital shows nursing process completed 76% so, the study conducted in Dambi Dollo shows higher rate of nursing process completed than those Menelik II hospital and St.Paul's Hospital Millennium Medical College because of the time duration of this project was less than those, large sample size and low cost. But this project was comparable with study conducted at Dilchora hospital.

The total result of this project showed among the collected cards 39 (47%) of them had a complete Nursing Care Plan during pre-intervention time. This had been increased to 64(76%) during the post intervention period. The proportion of patient who completed Nursing Assessment increased from 44 (52%), to 69 (82%). Similarly, the proportion of

patient who had documented Nursing Diagnosis has been increased from 42(50%) to 67 (80%), Nursing Care Plan from 39 (46%) to 62 (74%), Nursing Implementation increased from 39 (46%) to 62 (74%), and nursing evaluation increased from 34 (40%) to 59 (70%) pre & post-intervention periods respectively.

## **CHAPTER TEN: CONCLUSION AND RECOMMENDATION**

### **10.1 Conclusion**

The intervention showed a significant improvement in the completion of nursing process in Dambi Dollo hospital. Providing onsite training was the key contributor to the success of this project. Before our intervention, nurses were not aware about nursing process completeness. During the baseline assessment, we found that documentation elements of nursing process under the responsibility of nurse had the lowest completion rates. As a result, nurses were showed strong commitment for completing all nursing process; this directly led to the improvement in the completion rate of nursing process the success of the intervention was because of many factors. The intervention was simple, effective and utilized resources that were available without generating additional costs to the hospital. By following the strategic problem-solving approach, we were able to focus our efforts and resources on a problem that could be solved with minimum cost. By 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. That embraced teamwork and team spirit, which was not only good for the project but also good for the hospital. In general an enhancement of completeness nursing process improved significantly.

This project has concluded that all nurses were worked has low or no awareness on outpatient medical record completeness, training and supervision. Therefore, providing training and strengthening supervision plays important role.

### **10.2 Recommendation**

1. The hospital has to strengthen the further follow-up and sustainability of the project.
2. Hospital nursing services managers (matrons) need to also arrange and facilitate case presentations on documentation and nursing process for sustainability of the project.
3. Furthermore, it is also useful to conduct similar assessments in other health facilities so that to come up with more effective interventions to enhance practice of nursing process and to provide quality services for the population.

### **Strength**

- This study used pre post medical card review that helps to compare the reliability of the nurse's responses to the result of the card review towards the implementation of nursing care standard.
- Data collectors are recruited from nurse and 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.
- Study questionnaire was prone to social desirability bias; because of every one do not want to expose once inability or unwanted attitude.

## REFERENCES

1. Robert J Pratt, Johan van Wijgerden, in Tuberculosis, 2009
1. International Council of Nurses. Definition of Nursing. ICN website accessed January 10, 2007. [<http://www.icn.ch/definition.htm>] Copyright © 2009 International Council of Nurses
2. Federal Democratic Republic of Ethiopia Ministry of Health Ethiopian Hospital Transformation Guidelines Volume 1, July 2016
3. Haftom G., (2013) «Improving the implementation of nursing care process»: Mekelle Hospital, Ethiopia.
4. B.Melesse B.,(2015) «Patient waiting time and its determinants in the general outpatient department»: Debremarkos and Felegehiyot Referral Hospitals; Amhara regional state, North west, Ethiopia.
5. Bethelehem G., (2014) «Assessment on the implementation of Hospital Reform Guideline with reference to Pharmacy service»: Addis Ababa, Ethiopia.
6. Patricia A. Duclos-Miller, Improving Nursing Documentation and Reducing Risk 2016
7. Davies B, Edwards N, Ploeg J, Virani T. Insights about the process and impact of implementing nursing guidelines on delivery of care in hospitals and community settings. BMC Health Serv Res. 2008; 15:8–29.
8. Deborah A., (2012) « Promotion of Comfort through Early Palliative Care Consultation for Children and Adolescents Undergoing Hematopoietic Stem Cell Transplantation (HSCT)»: Feasibility of Implementation and Evaluation of a Proposed Practice Change; Maryland university, Baltimore, USA.
9. Professional Standards Authority, Annual review of performance (2015/6) «The Nursing and Midwifery Council (the NMC) regulates the practice of nursing and midwifery»: [www.professionalstandards.org.uk](http://www.professionalstandards.org.uk). United Kingdom.
10. Joint Commission on the Accreditation of Healthcare Organizations. 2005 hospital accreditation standards. Oakbrook Terrace, IL: Joint Commission Resources; 2005
11. FMOH. (2016) « Nursing and Midwifery Care Services»: Ethiopian hospital services transformation guidelines; volume 1, Addis Ababa, Ethiopia.

12. NHS Education for Scotland, (2007) «National Approach to Mentor Preparation for Nurses and Midwives»: Core Curriculum Framework. Edinburgh; NHS Education for Scotland.
13. Bekele C., (2005) «Adult patient satisfaction with nursing care»: Department of Community Health Faculty of Medicine; Addis Ababba, Ethiopia.
14. Australia Nursing Association, (2016). «Nursing and Midwifery Board of Australia Standards for practice»: Enrolled nurses; Australia.
15. Nursing & midwifery Board of Ireland, (2015) « The Practice Standards for Midwives»: Nursing & midwifery Board of Ireland.
16. Medical Board of Australia, (2012) «Health Care Records Documentation and Management»: <http://www.medicalboard.gov.au/CodesGuidelinesPolicies.aspx>.
17. Australian Nursing and Midwifery Federation,(2014)«National practice standards for nurses in general practice. Melbourne»: Australian Nursing and Midwifery Federation - Federal Office.
18. American Nurse Association, (2010) «Scope and Standards of Practice»: 2nd Edition © 2010 American Nurses Association. Retrieved February 12,2014 from [http://www.texasnurses.org/associations/8080/files/ANA\\_Scope\\_Standards.pdf](http://www.texasnurses.org/associations/8080/files/ANA_Scope_Standards.pdf).
19. American Nurse Association, (2015) «Nursing Scope and Standards of Practice»: (3rd edition), Silver Spring.
20. Kusiak.P., (2016) « Improvement of Patient Satisfaction Through Enhancement of RN Communication Skills»: A Quality Improvement Project; Rhode Island College.
21. Richard R., (2005) « Quality service and quality nursing care for persons with intellectual disabilities living in residential centers in the republic of Ireland»: Ireland.
22. Baena R., et'al (2010) «Evaluation of the Nursing Process Used at a Brazilian»: (Vol.21). Brazilian Teaching Hospital, Brazil.
23. Manitoba T., (2013). «Standards of Practice for Registered Nurses»: Nursing Practice Expectations; Manitoba.
24. G. Hadgu, S. Almaz, S. Tsehay, (2015) «Assessment of Nurses' Perceptions and Barriers on Evidence Based Practice in TikurAnbessa Specialized Hospital»: Addis Ababa Ethiopia.

25. American Journal of Nursing Science. Vol. 4, No. 3, pp. 73-83. doi: 10.11648/j.ajns.20150403.15
26. Alexander S., (2016) «A Project to Improve Nurses' Knowledge of, and Attitudes Towards, Pain Management at End of Life»: Doctor of Nursing Practice Projects; 61. Sonja Alexander University of Massachusetts Amherst.
27. CRNNS. (2017) «Standards of Practice for Registered Nurses»: college of Registered Nurses; Nova Scotia.
28. FitsumG. Completeness Of Inpatient Medical Record In St.Paul's Hospital Millennium Medical College Adiss Ababa, Ethiopia .Oct, 2018
29. Mulatu Takele “Improving the implementation status of nursing and midwifery care standard practice” at medical, surgical and gynecology wards in dilchora hospital, June 2018 Dire Dawa, Ethiopia.
30. Tola K, Abebe H, Gebremariam Y, Jikamo B. Improving Completeness of Inpatient Medical Records in Menelik II Referral Hospital, Addis Ababa, Ethiopia. Adv Public Health. 2017;2017:1–5
31. Federal Hospital Performance Monitoring and Improvement Manual – July 2011

## **ANNEXES**

### **Annex I: Participant Information Sheet**

My name is ----- Currently I am a graduate student at Addis Ababa University, College of Health Sciences, School of Public Health, Department of Health Care and Hospital Administration. And now I am conducting a capstone project to assess nursing process implementation status.

Title of the project: Improving the implementation status of nursing process practice in Dambi Dollo Hospital of Dambi Dollo, Ethiopia, 2019.

Objective: To maximize the implementation status of the nursing process standard practice in Dambi Dollo Hospital of Dambi Dollo, Ethiopia, 2019.

Participants: randomly selected nurses designed title-related questionnaires for them working on Dambi Dollo Hospital who meets the eligibility criteria.

Potential Risks: There is no foreseen risk by being in this project.

Benefits: No financial benefits are related with this project. But by participating in this project, you will give an input for the implementation of nursing/midwifery care standards.

I would like to ask you few questions. Your honest response to the questions can make the study to achieve its objective. All the information that you give will be kept confidential and private.

Only the principal investigator and interviewer will have access to the information.

You are kindly requested to respond voluntarily. You can also choose not to participate in this study totally or if you become uncomfortable during the study, you will be allowed to leave the study at any time.

If you have any question, you can contact me at any time by using the following addresses;

Name:-YonasBalcha

Mobile:-+251910799197/+251905068919 and Email:-yonikoo10@gmail.com

Annex II: Informed Consent

I am here with declaring that:

The objectives of this project are explained to me and are clear.

The contents of the consent are verified to me to participate in the study.

I understand that participation in this study is completely voluntary and that I may withdraw at any time without supplying reasons. I agree to participate in this study to be interviewed, provided my privacy is guaranteed. When signing this consent form to participate in the study, I Promise to answer honestly to all reasonable questions and not provide any false information or in any other way purposely mislead the researcher.

Respondent's signature \_\_\_\_\_

If no, skip to the next participant

Date of interview: \_\_\_\_\_ Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

Interviewer Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Supervisor's name \_\_\_\_\_ signature \_\_\_\_\_ Date.

Thank you

Observational questionnaires on challenges for nurses/midwives about implementation of nursing/midwifery care standards.

Instruction-five: please put «√ on either« Yes or No» side of the space provided.

S.N	Questionnaires	Yes	No	Remarks
401	Is there any shortage of staffs at your ward?			
402	Is there any shortage of nursing/midwifery process<< formats>>?			
403	Are there any untrained professionals about nursing/midwifery care standard?			
404	Is there any hand washing facility in each ward?			
405	Is there any lack of awareness about nursing/midwifery care standard practice among nursing/midwifery professionals?			
406	Is there any shortage of supplies for nursing/midwifery care standard practice?			
407	Can audit committee identify gaps during its reporting period?			
408	Can supportive supervisors supervise, mentor or coach the junior professionals at any time?			
409	Is there any miss-understanding to record or to document correctly the «NANDA» format?			
410	Does the nursing/midwifery audit committee have clear and achievable operational plan?			
411	Is there any patient discharged without taken a care of nursing/midwifery process?			
412	Is there Is there any lack of devotion about the implementation of nursing /midwifery care standard from the concerned bodies (CEO, CCO & matron others)?			

Annex IV: Review of nursing/midwifery process format record completeness in the implementation status, of nursing/midwifery process Instruction-five: please put «√ on either« complete or incomplete» side of the space provided.

s.no	Nursing process component	Pre intervention(n=40 MRs)		Post intervention(n=40 MRs)	
		Complete	incomplete	Complete	incomplete
601	Assessment				
602	Diagnosis				
603	Nursing Plan				
604	Implement				
605	Evaluation				
	Overall Nursing process				