



**ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES SCHOOL OF PUBLIC HEALTH**

A Pre-Post Interventional Study on Improving the Implementation Status of Nursing/Midwifery Care Standard Practice At Haramya Hospital, Oromia Regional State, Ethiopia

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A Capstone Project Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree Masters of Hospital and Health Care Administration

**ADDIS ABABA, ETHIOPIA
August 2020**

Declaration

1. This capstone project is my original work, and all those sources of material are used for the thesis has been duly acknowledged.

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Table of CONTENTS

	Page
List of Tables	iv
List of Figures	v
Acknowledgements	vi
Abbreviations	vii
Abstract	viii
1. Organizational Description	1
2. Background of the Problem	2
2.1 INTRODUCTION	2
2.2. Statement of the Problem	3
2.3. Significance of the Study	4
3. Root Cause Analysis	5
3.1 Methods Used to Identify the Possible Root Causes	5
3.2. Possible Root Causes	5
3.3. Verification for Major Gaps:	6
3.4. Identified real root causes for the problem.....	8
4: Literature Review	10
4.1. Nursing/Midwifery Care Standard Practice	10
4.2. Standard of Practice	10
4.3. Implementation Status of Nursing/midwifery Care standards	12
4.4. Professional Competence in Nursing/midwifery care Standard Practice.....	13
4.5. Professional Evaluating Competence of Nursing/midwifery care Standard Practice	13
4.6. Related Risk factors with implementation of Nursing/midwifery Care standards.....	13
2.7. Conceptual Frame Work	15
5: Objectives	16
5.1. General objective.....	16
5.2. Specific objectives.....	16
6: Project Methods and Materials	17
6.1. Study Setting/area and period	17
6.2. Study Population	17

6.3. Study design	17
6.4. Sample size Determination and Sampling	17
6.5. Data Collection.....	18
6.6. Data collection tools.....	20
6.7. Inclusion and exclusion criteria.....	20
6.8. Study Variables	20
6.9. Operational Definition.....	20
6.10. Data analysis Procedure	21
6.11. Ethical Consideration	21
6.12. Plan for Dissemination of Results	21
7. Intervention	22
7.1. Develop Alternative Intervention.....	22
7.2. Selection of the best interventions	22
8. Implementation accomplishment	25
8.1. Training Intervention.....	25
8.2. Reestablishing nursing/midwifery audit committee by experienced individuals	25
8.3 Indicators.....	25
8.3.1 Process Indicators	25
8.3.2 Outcome indicators	25
9. Results.....	26
9.1. Socio-Demographic Characteristics of the Study Participants	26
9.2. The implementation status of Nursing/midwifery care standards results	27
9.3. Challenges interviewed from hospital management members.....	28
9.4. Challenges from nurses/midwives towards implementation of Nursing /Midwifery Care Standards	29
9.5. The Implementation Status of Nursing /Midwifery Process Record Completeness (Standard 4) Results	30
9.6. Implementation status of medication administration in medical record completeness (Standard 7)	31
10. Discussion.....	33
10.1. Nursing/midwifery care standard implementation status.....	33

10.2. Organizational factors for the implementation of nursing/midwifery care standard practices . . .	34
11. Evaluation	36
12.1. Strength	36
12.2. Limitation of the study	36
13. CONCLUSION AND RECOMMENDATION.....	37
13.1 Conclusion:	37
13.2 Recommendations	37
14. Reference	38
Annex 1: Participant Information Sheet	41
Annex 2: Informed Consent.....	42
Annex 3: Questionnaires.....	43

List of Tables

	Page
Table 1: Decision Matrix for Comparison of Alternative Interventions.....	22
Table-2: Socio-Demographic Characteristics of Study Participants in Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.	27
Table 3: The challenges that had been reported by hospital SMT on nursing /midwifery care standard practices (Organizational related factors) in Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.....	29
Table-4: The Challenges from nurses/midwives towards implementation of Nursing /Midwifery Care Standards in Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.	30
Table-5: The implementation status of Nursing/midwifery care standards in Nursing and midwifery process complete recording (standard 4) in wards Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.	31
Table-6: The implementation status of Nursing/midwifery care standards from medication administration records in medical record completeness (standard 7) in wards of Haramaya general hospital, Oromia, Ethiopia, from March to August, 2020.	32
Table-7: A final performance rate of nursing/midwifery care standard practice.....	36

List of Figures

	Page
Fig1: Fishone diagram	6
Figure 2: The magnitude of root causes of the problem by pare to diagram.....	9
Figure 3: The implementation status of Nursing/midwifery care standards from all (10 standards).....	28

Acknowledgements

Above all, great thanks to ALLAH, for helping me all the way through my whole activities and this Capstone work.

I would like to express my thanks to Addis Ababa University School of Public Health to give me this opportunity to engage in this program.

I am very much indebted to my advisors Ms. Gashaye Asrat and Ms. Birhan for their encouragement, guidance and generously sharing their scarce time for the completion of this capstone project.

I also extend my deepest gratitude to Dr. Ibsa Musa Hiewot Fana hospital's CEO for his participation and provided support for this project.

My heartfelt thanks for Haramaya hospital SMT members and data collectors, In addition, great thanks for my classmate colleagues especially hiwot and Nugusse for their support, Finally, my special thanks to my Wife, sons and whole family for helping me in all aspects.

Abbreviations

ART--	Antiretroviral Therapies
DB-	Data Base
EHRIG-	Ethiopian Hospitals Reform Implementation Guideline
FMOH-	Federal Ministry of Health
HIV-	Human Immune Deficiency viruses
HPMI-	Hospital Performance Monitoring & Improvement
MPH-	Master of Public Health
O-PAHC-	Outpatient –patient Assessment of Health care
OPD-	Out Patient Departments
QI-	Quality Improvement
WHO-	World Health Organization
SMT-	Senior Management team

Abstract

Background: The nursing/midwifery care standards help to ensure that patients are receiving high quality care. The standards support implementation of the basics of nurses'/midwives' profession. Despite the importance of nursing care standards, implementation of the standards is lacking in most of the developing countries, including Ethiopia. Similarly, the baseline assessment of nursing standards in this study at Haramaya hospital was poor. Thus, it was critically important to improve the implementation of the Nursing/midwifery care standard practice in Haramaya general hospital.

Objectives: To improve the implementation status of Nursing /midwifery Care Standards from 52.5% to 81% in wards of Haramaya Hospital, by the end of August 2020.

Method: A facility based pre & post interventional study was conducted from March to August 2020 in Haramaya Hospital. A nationally tested and accepted instrument, the Ethiopian Hospitals Reform Implementation Guideline tool, was used to measure the performance on nursing/midwifery standards of care. The sampled nurses/midwives were allocated proportionally from all wards in the hospital. Data related to factors that hinder implementation of the nursing /midwifery standards was collected consecutively by data collectors using checklist and nursing standards through observational methods. Data quality was controlled through supervision and training of data collectors.

Result: Among the total 88 the same respondents (44 before & 44 after), mean age was 27.23 years (SD=4.2) and the implementation status of nursing/midwifery care standards was 52.5% in pre-intervention & 78.4% after-intervention. This change was statistically significant at ($df=44$, $P<0.001$). Of the total of 80 patient cards documentation review (before 40 & 40 after intervention) the average implementation status of the standards in nursing/midwifery process & Medication administration record was 10.3 (50%) in pre-intervention & 28.5 (72.3%) after-intervention.

Conclusion and recommendation: The implementation status of the nursing /midwifery care standard practice is still below the expected criteria and it needs further intervention to increase its utilization. Knowledge, recognition & motivation are possible contributing factors for the improving of nursing/midwifery care standard practices those who are working at medical, surgical, & gynecology wards.

1. Organizational Description

Haromaya General Hospital is located in Eastern Ethiopia, East Harare Oromia Regional State, in haromaya woreda which is approximately 517 km from Addis Ababa. It was established in 2005 E.C by Ethiopian Government. Haromaya General Hospital has various professionals that included 12 GP physicians, 102 nurses & Midwifery, 9 pharmacist, 8 lab staffs, 4 IESO, one general surgeon and one gynecologist, 37 other health professionals and 160 support personnel making a total of 334 staffs. The hospital is an 86 bed capacity hospital and annual average admissions about 4674 with an average length of stay of 5.5 days.

Haromaya hospital provides health care through its different clinical departments. They are
Outpatient service: (adult and pediatric OPD, Family planning, EPI, ANC), MDR-TB service, Emergency service, Inpatient services: Psychiatry, Dentistry, Obstetrics, Gynecology, Neonatal (NICU), Pediatrics, General surgery, Internal medicine.

Laboratory service: CD4, Parasitological, Microbiology, Serology, Hematology, Clinical chemistry. Pharmacy service: (Dispensing, DIS, Clinical Pharmacy) Radiology, Conventional X-ray and Ultrasound. HGH provides services for more than 1.5 million people coming from five woredas of surrounding area.

The annual average outpatient department attendance was about 82457, The OPD comprises of 7 medical officers, twenty nurses, 6 pharmacy staffs, 9 lab staffs and 20 support staffs, provides its services five working days per a week.

2. Background of the Problem

2.1 INTRODUCTION

The term standards as professionally developed expressions of the range of acceptable variations from norm or criterion [1, 2]. The Nursing/midwifery Care Standard Practice is the levels of safe and competent practice that all nurses/midwives must meet when providing nursing/midwifery services. In nursing/midwifery care, all standards of practice provide a guide to the knowledge, skills, judgment and attitudes that are needed to practice safely. They reflect desired and achievable level of performance against which actual performance can be compared [3].

The establishment of nursing/midwifery practice standards is essential for a self-regulating profession. The health professional act around the globe requires that standards of practice and code of ethics be adopted by a profession. American Nurses Association standard for practice [4, 5], Canadian nursing practice standards [6] and Ethiopia Hospitals Reform Implementation Guidelines nursing and midwifery standard [7] are some of the common examples of standard nursing practices adopted in response to the health professionals' act of respective countries.

The Ministry of Health of Ethiopia has introduced the Hospitals Reform Implementation Guide line [7] as a strategy to improve quality of service provision. The strategy has been implemented as part of hospitals' reform in all public hospitals. This study was designed to assess adherence to the Ethiopian hospitals Reform Implementation Guideline nursing/midwifery standards in Haramaya general hospital.

The baseline assessment of the implementation nursing/midwifery standards revealed that 47.5% of Ethiopian Hospitals Reform Implementation Guideline nursing/midwifery standards were unmet; a system for coordinating and managing nursing staff was partially completed. This means out of the 10 nursing/midwifery care standards; only two has been partially completed, resulting in an overall compliance rate of 52.5%.

2.2. Statement of the Problem

Poor & inconsistent implementation of nursing/midwifery care 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/midwifery care standard practice, disorganization of the health service, conflicting roles among nurses/midwives, medication error, poor diseases prognosis, dissatisfaction of customers with the care provided, and increased morbidity & mortality rates(8,10,11).

Even though the importance of the Nursing/midwifery care standard practice is very common, in various literatures showed that there exist different challenges in its implementation. The principles of the nursing/midwifery care standards such as the professional accountability & responsibility, client focused provision of service, knowledge based practice & ethical practice were not integrated and that there was a lack of coherence in the prescribed actions related to patient health conditions (8, 9, 12). The other challenges to test to implement the nursing/midwifery care standard practice were that the establishment of a validated model of nursing/midwifery records aimed to promote individual care.

The implementation of Nursing/midwifery Care standard Practice in Haramaya hospital is still below the expected criteria (as indicated in the haramaya hospital self-assessment survey 2019 i.e.56.3%). Incomplete record of nursing/midwifery process components, incomplete medical record & lack of awareness for nursing/midwifery care standards were basic challenges of nursing/midwifery care standards implementation in haramaya hospital.

This project aimed to improve the implementation of the Nursing/midwifery care standards in Haramaya Hospital by addressing those major bottlenecks of the problem. Thus, it is expected that the findings of the project will play its role in improving the overall nursing/midwifery care standards and in decreasing the poor outcomes of the services. Therefore, the main interest was to answer the following two important questions: (a) what are the main factors that hinder the nurses/midwives from implementing the nursing /midwifery care standards? And (b) what is the implementation status of nursing/midwifery care standards after intervention.

2.3. Significance of the Study

Nursing/midwifery care standard practice is one of the major health care services. It contributes a lot to the patient healing process. Even though there are competent physicians present in a given health institution, it would not be adequate without appropriate nursing/midwifery care standard practice. Nurses/midwives have 24 hour contact with patients as well as being near to them. This study will 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 study in nursing /midwifery care standard practice is to give a better care with dignity and humanitarian reason, understanding the individual's needs, show compassion and sensitivity, and, provide care in a way that respects all people equally.

3. Root Cause Analysis

A root cause analysis will help to identify the factors that cause the nursing/midwifery care standard implementation problem. Different techniques applied to identify the root causes of the nursing/midwifery care standard implementation problem.

3.1 Methods Used to Identify the Possible Root Causes

Open focus group discussion was held with selected staffs from hospital wards, head Nurses and matrons, nursing and midwifery clinical supervisor, Inpatient-director, Quality management officer and Senior management teams (SMT) to find out what they think are the reason for the nursing/midwifery care standard implementation problem.

3.2. Possible Root Causes

A fishbone diagram was developed based on the verbal information obtained from involved bodies to identify multiple possible root causes of a single problem.

- ✓ Low awareness about nursing/midwifery care standards
- ✓ Lack of nursing/midwifery clinical supervisors
- ✓ Nonfunctional nursing/midwifery audit committee
- ✓ Inadequate nursing/midwifery care standard service material supplies
- ✓ Lack of recognition and motivation
- ✓ Shortage of nurse/midwife staffs

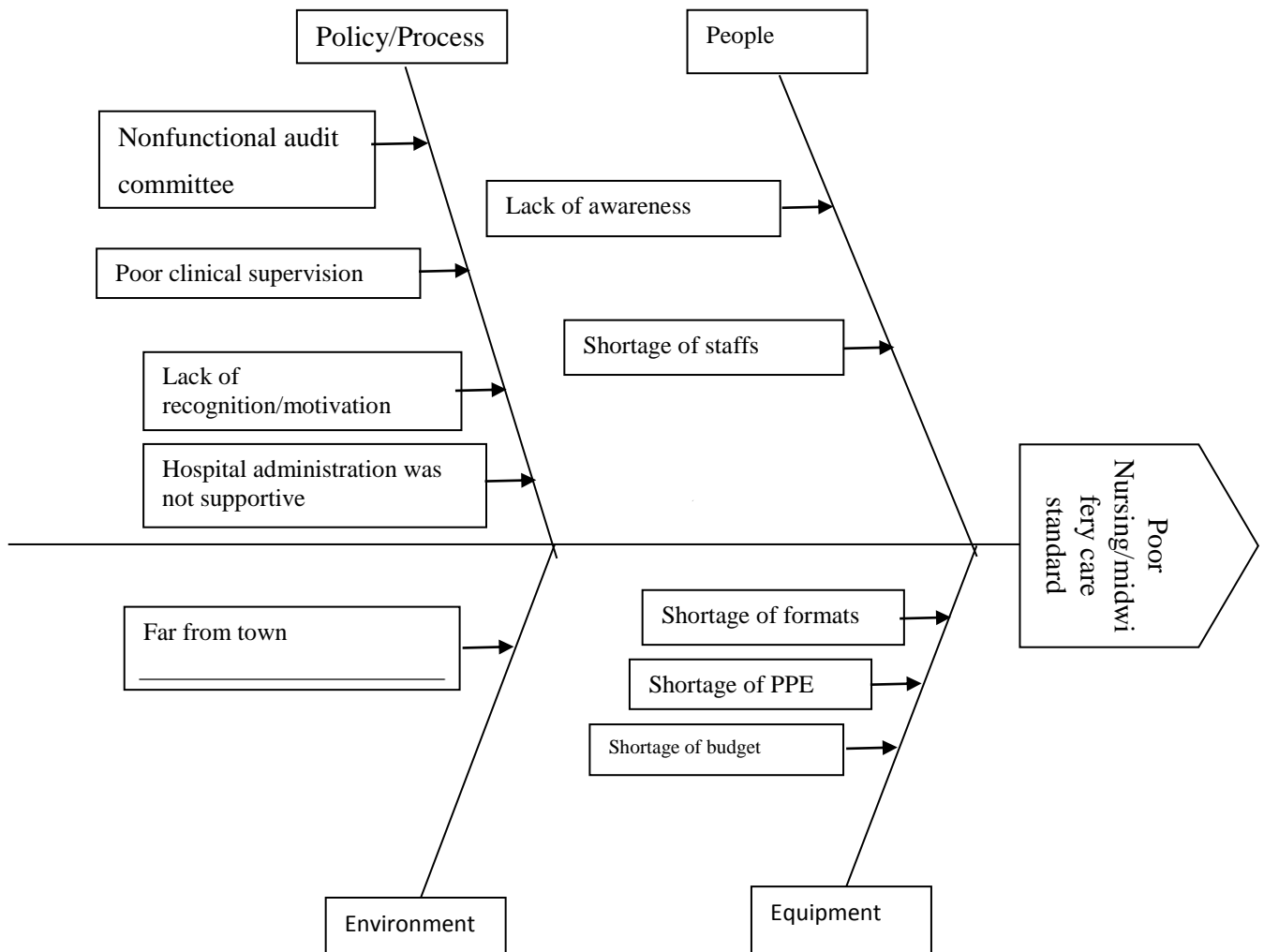


Fig1: Fishbone diagram

3.3. Verification for Major Gaps:

To verify collected opinion of root causes, data were collected from SMT, nurses/ midwife, document review and Ethiopian Hospital Service Transformation Guidelines (EHSTG) standard questionnaires was used.

Lack of nursing/midwifery supportive supervision: As Ethiopian Hospital Service Transformation Guidelines (EHSTG); the nursing/midwifery care standards should be implemented by continuous supervision of nursing/midwifery supportive supervision. The nurses/midwives document review had showed that supportive supervision had established in the hospital but not real root cause.

Lack of recognition/motivation for model nurses/midwives: The respondents replied 65 percent that there was recognition/motivation for model nurses/midwives but not enough (table 4 on page 31).

Shortage of nurses/midwives professionals: The nurse/midwife per patient ratio in the medical, surgical, gynecology & obstetrics units was 1:5, 1:4 & 1:7 respectively. The average nurse per patient ration in these three wards at this project time was 1:5. As stated in standard guideline for haramaya general hospital the nurse/midwife per patient ratio in the year 2018 was 1:4 for cold or ambulatory cases, 1:2 for post-anesthesia cases & 1:1 for under anesthesia cases. Therefore, during this study, the nurse/midwife per patient ratios in haramaya general hospital was working as above standards during day time. The nurse/midwife per patient ratios became below the standard during night time. This might affect the implementation status of the nursing/midwifery care standards but not real root cause.

Nonfunctional nursing/midwifery audit committee: The hospital had established nursing/midwifery Audit committee. The nursing/midwifery Audit committee had no operational plan which was evaluated and approved by the SMT. When we reviewed nursing/midwifery committee meeting minutes we observed that meeting was irregular and the committee has been conducting auditing assessment but the gaps were not identified and not feedback. The nursing/midwifery Audit committee members responded the reason is around 80% was lack of training on nursing/midwifery care standards.

3. Hospital administration was not supportive: - To investigate with the compliance if the hospital administration was given enough support to the nursing and midwifery activities SMT including CEO the interview was conducted. The finding showed that nursing director is a member of SMT and budget for the nursing was allocated. In year 2012 E.C it was checked from hospital financial documents that there is budget approval for nursing and midwifery activities. The hospital administration also conducted quarterly assessment; their feedbacks were given to nursing/midwifery standards committee for the gaps obtained. The SMT also approved the bi-annual refresher training budget for untrained staffs. So, this was not the root cause of the problem.

4. Low awareness about nursing/midwifery care standards: By conducting group discussion with SMT they responded that the hospital had training plan to support nursing and midwifery services but training was not provided. The nurses/midwives were interviewed with pre-intervention questionnaires on lack of training about nursing/midwifery care standards; 26(59%) were not trained on standards. The nursing/midwifery Audit committee members responded that only two of their members have training on nursing/midwifery care standards. The SMT also approved the bi-annual refresher training budget for untrained staffs but training was not given for budget year.

The result indicates that training was mandatory to feel the gap of their knowledge and skill to perform effective nursing care process and patient safety activities. Therefore, “**Lack of knowledge and skill of nurses/ midwives on nursing care standards**” selected as a main root cause of low implementation of nursing/midwifery care standards.

3.4. Identified real root causes for the problem

- 1) Low awareness about nursing/midwifery care standards
- 2) Lack of nursing/midwifery supportive supervisor
- 3) Lack of nursing/midwifery Audit committee

To prioritize the above root causes discussion was conducted with sixteen hospital staffs to vote on the main root cause of the problem « Low awareness about nursing/midwifery care standards » was the prioritized root cause that had been focused during the intervention period.

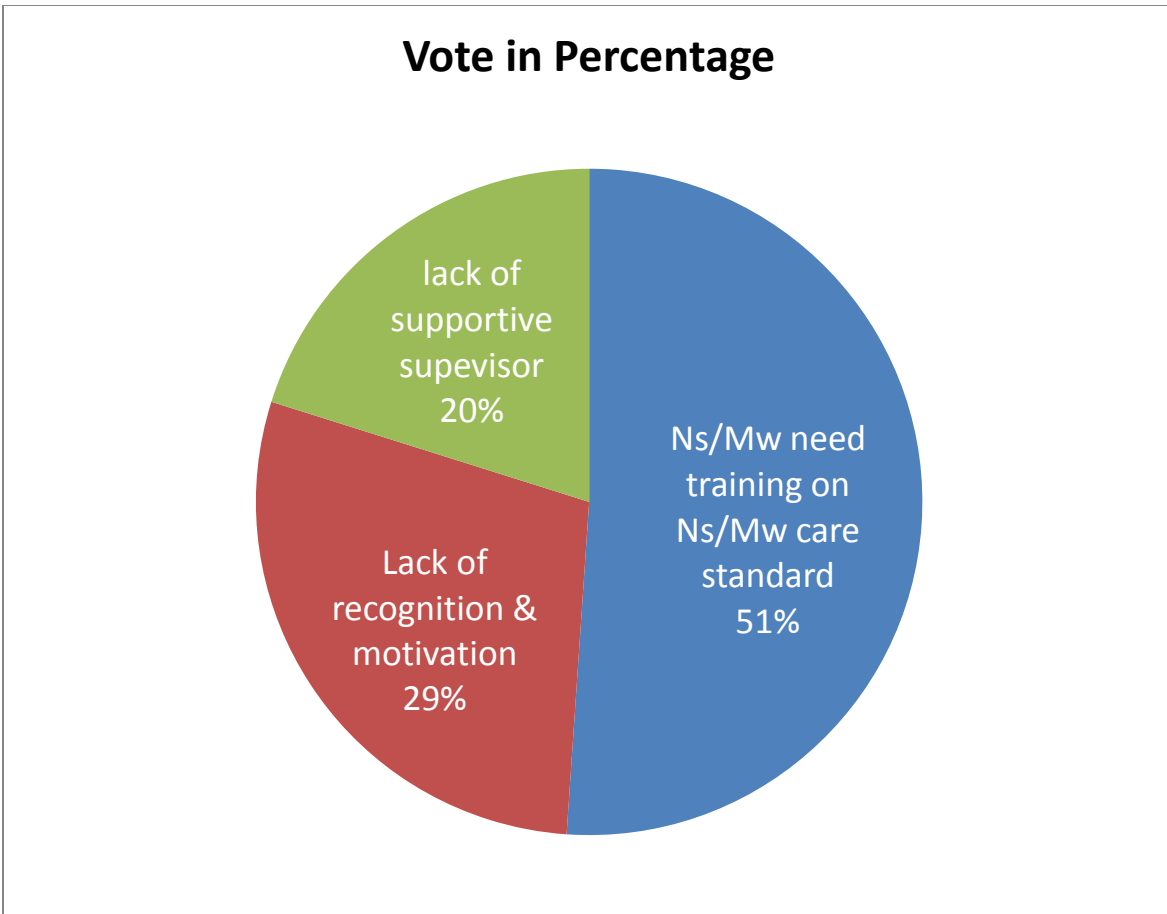


Figure 2: The magnitude of root causes of the problem by Pareto diagram.

4: Literature Review

4.1. Nursing/Midwifery Care Standard Practice

Nursing/midwifery is a difficult profession to understand and engages many types of users of nursing/midwifery care. Nursing/midwifery care is a step wise process bringing a progress in the patient's health condition and living style over time, giving rise to the need for new data, different diagnoses, and changes in the plan of care. Therefore, evaluation is a continuous process to examine the effect of nursing/midwifery interventions and the treatment regimen on the patient's health condition and expected health outcomes (15, 16).

4.2. Standard of Practice

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 (4, 17). 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 (8, 18).

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, Implement-ation and Evaluation of care (ADPIE). This process is effective if it is done together with the collaboration of patient, family and caregiver (19, 20, and 21).

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 (1, 8, 22-24).

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 (22-24).

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 (22-24).

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 (22-24).

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 (24, 16). 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 (22-25).

The professional nursing/midwifery care standard practice generally comprises four important basic standardized concepts: (a) **Professional Responsibility and Accountability** which maintains standards of nursing/midwifery practice and professional conduct determined by FMOH. (b) **Knowledge-Based Practice** which consistently applies knowledge, skills and judgment in nursing /midwifery practice. (c) **Client-Focused Provision of Service** which Provides nursing/midwifery services and works with others to provide health care services in the

best interest of clients. **(d) Ethical Practice** understands, upholds and promotes the ethical standards of the nursing/midwifery profession in clinical practice, education, administration & researches (9, 23, and 3).

4.3. Implementation Status of Nursing/midwifery Care standards

Even if the nursing/midwifery care standard practice is very important, various literatures showed the different challenges in its implementation. 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 (19, 26).

The Nursing/midwifery care Standards of Professional Implementation describe a competent level of behavior in the professional role, including activities related to ethics, education, evidence-based practice and research, quality of practice, communication, leadership, collaboration, professional practice evaluation, resource utilization, and environmental health. All professional nurses/midwives are expected to engage in professional role activities, including leadership, appropriate to their education and position. Nurses/midwives are accountable for their professional actions to themselves, their healthcare consumers, their peers, and ultimately to society (22, 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 (23, 27).

4.4. Professional Competence in Nursing/midwifery care Standard Practice

The customers have a right to expect nurses/midwives to display professional competence throughout their executions. The nurse/midwife as a professional is responsible and accountable for improving professional competence. It is the nursing/midwifery profession's duty to shape and guide the nursing/midwifery care standard practice for the care service competence. Regulatory agencies defined minimal standards of competence to protect the customer. The facility is responsible and accountable to offer a practice environment suitable to competent practice. Assure the competency is the shared duty of the professional individual of nurses /midwives, professional institutions, credentialing and certifying entities, regulatory agencies, employers, and other key stakeholders (22, 28, and 29).

4.5. Professional Evaluating Competence of Nursing/midwifery care Standard Practice

Competence in nursing/midwifery practice must be evaluated by the individual nurse/midwife (self-assessment), nurse/midwife **peers**, and nurses/midwives in the roles of supervisor, coach, mentor, or preceptor. In addition, other aspects of nursing/midwifery performance may be evaluated by professional colleagues and patients. Competence can be evaluated by using tools that capture objective and subjective data about the individual's knowledge base and actual performance and are appropriate for the specific situation and the desired outcome of the competence evaluation. However, no single evaluation tool or method can guarantee competence (15, 30).

4.6. Related Risk factors with implementation of Nursing/midwifery Care standards

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 (8, 22, and 31).

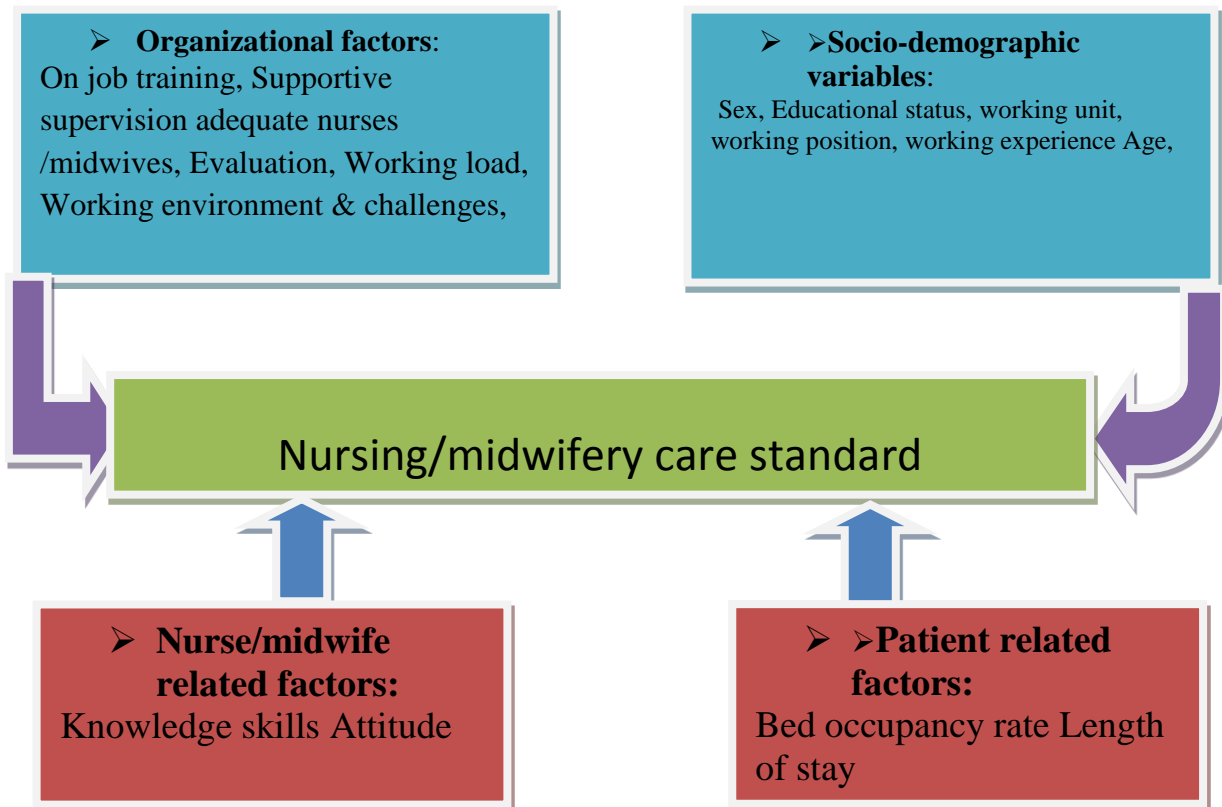
The study in Addis Ababa showed that highly knowledgeable nurse/midwife respondents were 38(25.2%) 10 times more likely to implement nursing/midwifery care standard practice than poor knowledge group nurses/midwife([AOR=9.1 at 95%CI (2.69, 30.9), adjusted for working environment & facility (32). Gaps 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 (32). After a 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 (33, 22, and 34).

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 (4,35). 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 (36). As the result, it has been suggested that in all work settings nurses/midwives should receive adequate support and supervision to ensure that they have the opportunity to enhance the professional knowledge and skills (35, 36).

It is a good judgment to summarize that the nursing/midwifery care standard practice is very essential for the practice of nursing/midwifery care; but, its use is not an easy execution. So, ongoing evaluation is required for how the nursing /midwifery care standard practice is executed within the health facility (8).

2.7. Conceptual Frame Work

In developing countries nursing/midwifery care Standard Practice implementation status can be affected by different factors. Some of them are: lack of adequate knowledge and skills, 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. Mostly the implementation status of the standard relies on the knowledge, skills, and attitudes of the professionals (8, 22, and 31).



5: Objectives

5.1. General objective

To improve the implementation status of the nursing/midwifery care standard practice from 52.5% to 81% in wards of Haramaya Hospital by the end of August, 2020.

5.2. Specific objectives

1. To provide the awareness of the standards for Nurse/midwife professionals working at the wards in the hospital in 3 months by the end of August, 2020.
2. To Increasing completeness of inpatient medical records more than 95% the end of August, 2020.

6: Project Methods and Materials

6.1. Study Setting/area and period

The study was conducted in Haramaya general Hospital, East Harargea, Oromia Regional state, Ethiopia. Haramaya Hospital is found in Eastern Oromia Regional state; 507Km away from Addis Ababa. The study was conducted from March to August 2020GC.

6.2. Study Population

The study population was nurses/midwives working in all the wards such as casualty, medical wards, surgical ward, gynecological ward and pediatric ward. The hospital had a total of 125 nurses/midwives (12 at Medical, 7 at surgical, 28 at Gynecology & OBs & 7 at pediatrics wards) as the study population working at the end of March 2019.

6.3. Study design

A pre and post facility based intervention study was conducted among 88 (44 at Pre and 44 at Post- intervention) nurses/midwives and 15 management team members in Haramaya general hospital. A pre-intervention baseline data was collected in March 2020. Based on the baseline assessment results, an intervention was conducted to improve the EHSTG, nursing/midwifery care standards and a post intervention assessment was conducted at the end of August 2020. The same indicators/checklists were used for the assessment of performance.

6.4. Sample size Determination and Sampling

Two types of samples were determined for the purpose of this study. A total sample size was determined using a sample size calculation formula for comparative interventional study that allows detecting a 25% change in the primary outcome as compared to the possible interventional packages. The parameters used in the sample size calculation will be a 25% change (from p_1 to p_2) in the proportion of nurses/midwives who will meet a complete Nursing/midwifery care standard practice with a confidence level of 95% and study power of 80%. A 10% contingency was considered to account missing information as a result of loss of respondents. Based on the above assumptions total sample sizes of 44 nurses/midwives were calculated. Based on this calculation the total sample size was allocated proportionally to the all four wards. A subset of the entire population (72 nurses/midwives) was used for the study. Stratified sampling was used

in that the specific ward represent the strata for example the obstetrics & gynecology 28, medical 19, pediatrics 12 and surgical ward 13 was the strata from which random sampling was done. In order to get the proportionate allocation of each ward the following formula was used.

The sample size calculation

$$n = \frac{(Z\alpha + Z\beta)^2 * [P1(1-p1) + P2(1-P2)]}{(P2-P1)^2}$$

Where, n = the required sample size

P1 = the proportion of standard checklists which met a Nursing Care standard practice pre-intervention (before intervention) = 0.56

P2 = the target value of the proportion of standard checklists which met a Nursing Care standard practice post - intervention (after intervention) =0.81

P2-P1= the magnitude of a change that was a desired to be able to detect = 0.25

1- α = the level of confidence; (α =0.05, $Z\alpha$ =1.645)

1 - β = the power of the study; (β =0.8; $Z\beta$ =0.84)

$$n = \frac{(1.645+0.84)^2 * [0.56(1-0.56) + 0.81(1-0.81)]}{[0.81-0.56]^2} = 39.55 \sim 40$$

10% Contingency of 40 is 4. Then the total Required Sample Size of nurses & midwives =2*(40+4) = 88 (44 nurses/midwives Pre-intervention and 44 nurses/midwives Post-intervention)

Total population in the strata / total population multiplied by sample size

For obstetrics & gynecology ward =28/72×44=18 nurses

For surgical ward =13/72×44=7 nurses

For medical ward =19/72×44=12 nurses

For pediatric ward =12/72×44= 7nurses

6.5. Data Collection

Data were collected using structured questionnaires. The questionnaire was prepared in English. Four voluntary staff members who were not involved in patient care were trained and involved in data collection. Organizational and nurse/midwife related factors was assessed using EHRIG

observational checklists which include the following items : (1) structured questionnaires of EHRIG for nursing/midwifery care standards and its implementation level (2) the challenges of organizational related factors on nursing/midwifery care standard practices (3) the challenges that had been interviewed by nurses/midwives on nursing /midwifery care standards.

Interviewees were conducted by data collectors based on random sampling of participants from the wards for a period of three days in March 2020 and the same interview was repeated at the end of August, 2020 to evaluate post-intervention results.

Furthermore during data collection in pre and post interventions phases, an observational checklist was used to identify met and unmet nursing standards. The original list of criteria for Ethiopian Hospital Reform Implementation Guideline nursing standards developed prior to the evaluation was used to create indicators for the evaluation study. Accordingly, each ward that under evaluation was assessed for the presence of (a)Visible organizational structure indicating line of communication within nursing and organization at large (b) Job descriptions for nurses and verify that they include responsibilities and reporting relationships (c) copy of nursing staffing plan and confirm this establishes nurse to patient ratios for the given ward (d) written policies that describe the nursing process and verifying: nursing admission assessment and nursing care planning , implementation and evaluation, and (e) inpatient records with complete nursing care plan and written guidelines for nurses' verbal and written communication about patient care and written procedures for process of medication of administration and verifying the procedure addresses safety, proper administration, and administration authority.

The observation was made by a team composed of the researcher and nursing director. During the visit which lasted a total of two days, all head nurses from each ward were interviewed and Records were also assessed, for example, in the baseline survey and during post intervention, ten in patient records from each ward were selected randomly to evaluate whether or not the nursing process was complete.

6.6. Data collection tools: a questionnaire was developed from the Ethiopian Hospital Reform Implementation Guideline key performance indicators which were used as baseline measures of adherence to nursing standards and the same instrument was repeated to see changes after the interventions.

6.7. Inclusion and exclusion criteria

❖ Inclusion criteria:-

- All inpatient ward nurses/midwives
- Patient cards at medical, surgical & gynecology wards

❖ Exclusion criteria: -

- Nurses/midwives at emergency department & outpatient department.
- Free service nurses/midwives & absentees during data collection

6.8. Study Variables

1. Dependent variable

- Nursing/midwifery care standard practice

2. Independent variables

- **Socio-demographic variables:** Age, sex, educational status, working unit, working position, working experience.
- **Organizational factors:** on job training, supportive supervision, adequate nurses /midwives, evaluation, working load, working environment & challenges,
- **Patient related factors:** Bed occupancy rate and length of stay

6.9. Operational Definition

- ❖ **Nursing/midwifery care standard-** It is the professional nursing/midwifery activities that are demonstrated by the nurse/midwife through the nursing/midwifery process.
- ❖ **Nursing/midwifery process-** It is an organized, systematic and holistic approach to nursing /midwifery through which nursing/midwifery care standard provision is organized to achieve patient centered care.
- ❖ **Challenge-**the situation of being faced with something that needs great mental or physical effort in order to be done successfully and therefore tests a person's ability.

- ❖ **Medical Record Completeness**-They are papers that document the nursing/midwifery process & other necessary patient medical records
 - **Complete**- refers a patient is classified as received a complete Nursing Process if he /she has a documented Nursing ADPIE.
 - **Incomplete**-refers the patient is classified as not received a complete Nursing Process if the patient has not a documented Nursing ADPIE.

6.10. Data analysis Procedure

The proportion of nursing /midwifery care standard performance was evaluated by using the ten nursing/midwifery standard checklists with met & unmet columns. The data were calculated for both pre-intervention and post-intervention groups. The medical record document review was evaluated by using each of five components of the nursing/midwifery process & using seven medical record components with complete & incomplete columns. A paired sample t-test was used to test the difference in the outcome of interest before and after intervention and a P-Value < 0.05 was considered statistically significant by using Statistical Package for Social Sciences (SPSS) version 23.0.

6.11. Ethical Consideration

Ethical approval was obtain from institutional review board and research committee of Addis Ababa University before conducting the study given to Haramaya general hospital management; the objective of the study should be explained to the study subjects and informed verbal consent should be obtained from each study subjects prior to data collection. The confidentiality of the obtained data should be kept in very careful manner.

6.12. Plan for Dissemination of Results

The final study result will be presented at public defense forum and will be submitted to AAU for possible documentation in the libraries. Copies will also be sent to Haramaya hospital, Oromia Regional Health Bureau, Federal MOH, and different others that can involve in improving hospital performance

7. Intervention

After problem identification activities completed, the identified root causes of the problems was grouped into four different perspectives, which include people, policy, environment, and supplies. To determine the real root causes, all possible root causes were investigated in detail by collecting relevant data from documents and concerned staff members of the hospital. The main root cause for low Nursing/midwifery care standard practices is lack of awareness about nursing/midwifery care standards.

7.1. Develop Alternative Intervention

1. Experience sharing with other facilities
2. Reestablishing nursing/midwifery audit committee by experienced staffs
3. Incentivize Head Nurse
4. Onsite training

7.2. Selection of the best interventions

Lack of awareness about nursing/midwifery care standards was an identified root cause of the problem for the implementation of nursing/midwifery care standards. The hospital SMT members had conducted Comparative analysis of the alternative interventions as indicated below (see table-1 below). The best intervention had been selected based on the following four Evaluative Criteria, namely: impact on the problem, resources (cost), time required and Political feasibility.

Table 1: Decision Matrix for Comparison of Alternative Interventions

S.No	Interventions					Total Score
		Impact	feasibility	cost	Time	
1	Experience sharing with other facilities	3	1	2	3	9
2	Reestablishing nursing/midwifery audit committee by experienced staffs	5	5	4	4	18
3	Incentivize Head Nurse	5	3	1	5	14
4	Provide Onsite training	5	5	5	4	19

1. Reestablishing nursing/midwifery audit committee by experienced staffs

Impact: numerous research studies have shown the importance of creating multidisciplinary teams to plan quality improvement interventions. One of the benefits of a multidisciplinary team is that members will bring different perspectives and knowledge about problems, their underlying causes, and potential solutions. Members may also be able to offer different resources and encourage buy-in for the solutions among their peers. For all these reasons, identifying the right individuals to participate in implementing the nursing/midwifery care standards improvement strategies was central to the success of our effort. Once formed, the committee has been meeting on a regular basis (i.e. weekly) throughout the planning and implementation stages (2).

Feasibility: this intervention proved to be feasible technically as there were capable and motivated staffs who were willing to be members of the committee.

Cost: The intervention was also feasible in terms of cost as Reestablishing nursing/midwifery audit committee does not incur much cost.

Time: Though committee work is an additional burden for the Hospital staff, the staff member were willing to commit their time for this activity due to the benefit it bring about. In addition committee work is also part of their job.

1. Provide Onsite training:

Impact: according to the Ethiopian hospital implementation guideline (EHRIG) Nursing/midwifery standards check list, a person who worked in hospital wards needs training so that he/she will do all the activities required to meet the standards.

Feasibility: Onsite training is found to be feasible as the training was provided for the staff at their own premises which did not require much time and money. In addition, the training was given by an inside staff member which minimized time and financial costs of brining outsiders for the training.

Cost: The cost of this intervention could be afforded by the hospital.

Time: this intervention needed six days and was implemented with the planned implementation period.

Discussion with Concerned Bodies

Based on the result of decision matrix and discussing with medical director, inpatient director, ward case team coordinator, nurse/midwifery director and ward head nurses to select from alternative interventions then the following best intervention was selected.

1. Provide Onsite training
2. Reestablishing nursing/midwifery audit committee by experienced staffs

8. Implementation accomplishment

8.1. Training Intervention

After preparing training proposal and the training sessions was scheduled, three days onsite training was given for 38 nurses/midwives by two rounds on Nursing/midwifery Care Standards, based on the Ethiopian Health Service Transformation Guidelines (EHSTG), Chapter 7, on the following topics

1. The Nursing/midwifery care operational standards
2. Documentation of Nursing/midwifery process component formats and recording of medication administrations & other necessary format sheets
3. Discussion on the importance of Nursing/midwifery care standards
4. Discussion on the challenges of the implementation standards.

The training was given by BSC Nurses working in the hospital that has better knowledge and training experience on Nursing Care Standards. The training cost was covered by Haramaya general hospital and materials support from zonal health bureau.

8.2. Reestablishing nursing/midwifery audit committee by experienced individuals

Nursing/midwifery audit committee had been established in Haramaya hospital before this capstone project. But most of the audit committee members had not been skilled with practical experience.

1. Nursing/midwifery audit committee was reestablished with experienced staffs.
2. A Three Focus Group Discussion had been held with the audit committee to identify gaps then Term of Reference (TOR) & evaluating checklists were developed during the intervention period.

8.3 Indicators

8.3.1 Process Indicators

- Number of nurses & midwives professionals trained on the standards.
- Frequency of audit committee conducting auditing

8.3.2 Outcome indicators

- Increased the score of nursing/midwifery care standards ‘Met’
- Improved audit committee performance

9. Results

9.1. Socio-Demographic Characteristics of the Study Participants

Total of 88 nurses/midwives (44 before & 44 after interventions) were requested to participate in the project study during the pre- and post- intervention survey. Out of 88 all participants were voluntarily completed the questionnaires.

Among those participants 29(66%) females and 15(34%) were males at pre-intervention and 26(59%) were females and 18(41%) were males at post intervention and majority of participants were aged between 26-35yrs which is 21(47.7%) with the mean age of 27.25, and SD 4.2 at pre-intervention and majority of participants were aged between 18-25yrs which is 12(24%) the mean age of 27.31 and SD 4.19 at post intervention. On the other hand, among SMT (N=15) who participated in this capstone project, 13 of them were males in both pre-post intervention assessment.

In addition to these the majority of respondents 30(68.2%) were First degree nurse/midwife professionals, the remaining 14(31.8%) were diploma nurses/midwives. Most of the respondents 18 (40.9%) were working at gynecology & obstetrics, 12(27.3%) medical and 7(15.9%) surgical ward. The rests 7(15.5%) were working at pediatric and general ICU wards. Work experience of nurse/midwife varies from one to twenty-six years while the majority lies within the category of 5 to 10 years which were 20(45.5%). Nurses/midwives whose clinical service was less than and equal to four years were 10 (22.7%) and the rests 9(20.5%) & 3(6.8%) of nurses/midwives had lied within the categories of 11 to 15 & 16 to 20 years respectively. (See Table 2 below).

Table-2: Socio-Demographic Characteristics of Study Participants in Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.

Characteristics N=44		Pre-intervention		Post-intervention	
		N	%	N	%
Gender	Female	29	65.9	26	59
	Male	15	34.1	18	40.9
Age	18-25	18	40.9	20	40.4
	26-35	21	47.7	17	45.5
	36-45	3	6.8	5	9
	46-55	1	0.2	1	2.3
	56-65	0	0	0	0
	>65	0	0	0	0
Mean age & (SD)		27.25 and 4.20		27.31 and 4.19	
Educational status	Diploma	14	31.8	14	31.8
	First degree	30	68.2	30	68.2
	Second degree	0	0	0	0
service year	<5 years	10	22.7	11	25
	5-10	20	45.5	18	40.9
	11-15	9	20.5	10	22.7
	16-20	3	6.8	3	6.8
	>20	2	4.5	2	4.5
Working unit	Medical ward	12	27.3	12	27.3
	Surgical ward	7	15.9	7	15.9
	Gyne-Obs	18	40.9	18	40.9
	Others	7	15.5	7	15.9

9.2. The implementation status of Nursing/midwifery care standards results

A total of 10 standards about nursing/midwifery care standard checklists were used in this capstone project both in pre and post-intervention periods to evaluate the implementation status and determine the improvements of nursing/midwifery care standards. The level of nursing/midwifery care standards increased from 52.5% at pre-intervention to 78.4% at post-intervention assessment (**Figure 3**). In this capstone project nursing/midwifery care standards-standard 1, 2 & 10 were met after the intervention and standard 3&5 have been met before intervention activities. In general the average implementation status of nursing/midwifery care standards were increased from 52.5% in pre-intervention to 78.4% in the post-intervention.

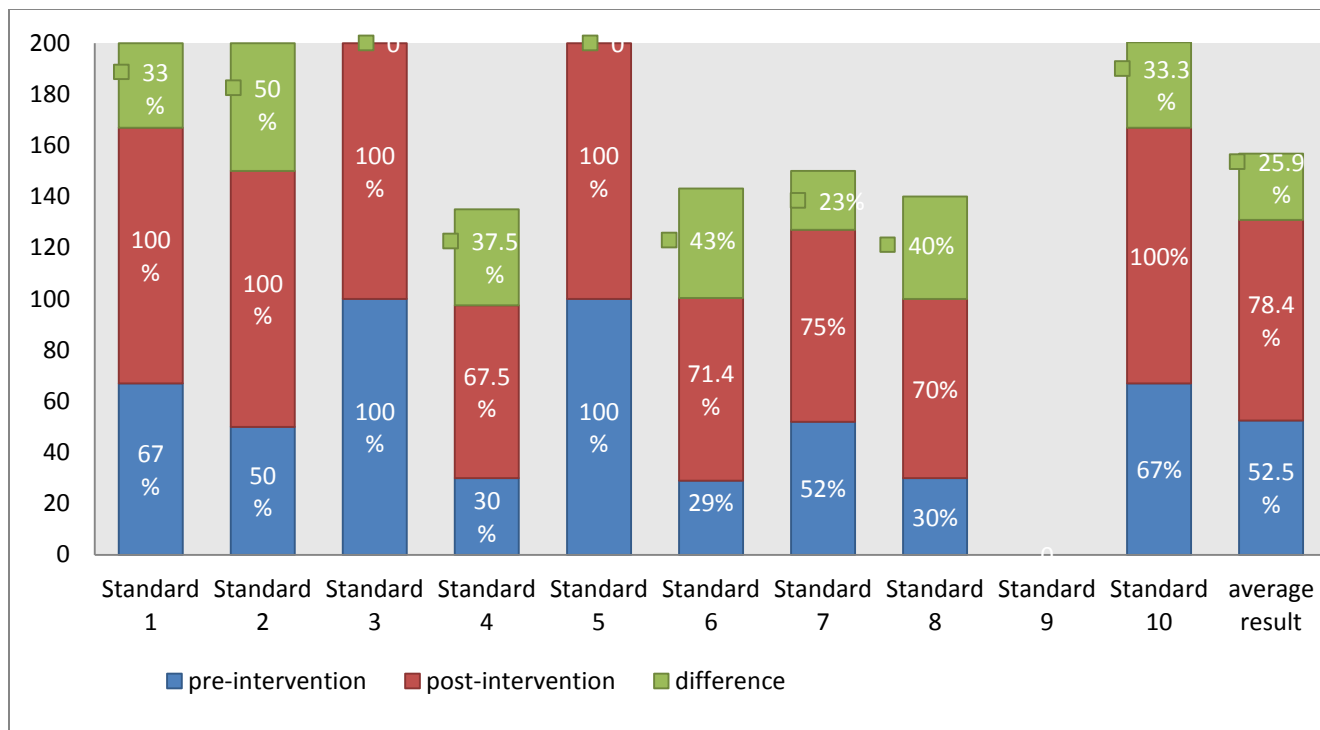


Figure 3: The implementation status of Nursing/midwifery care standards from all (10 standards).

9.3. Challenges interviewed from hospital management members

An in-depth interview was done with the administrative body of hospital including CEO, CCOs, M/E officer, Quality officer, Nursing/midwifery directors, and nurse heads. A total of 30 respondents were involved in both intervention periods (15 respondents before and 15 respondents after intervention).

Of the total participants 9(60%) pre-intervention & none of them 0(0%) post intervention said that there were lack of budget allocation for the nursing/midwifery standards implementation in the hospital. Of 6(40%) of the respondents and 5(33.3%) of them said that the nurses/midwives were without recognition & motivation both in pre & post-intervention periods. Nearly all respondents 14(93.3%) were agree on lack of training of nursing and midwifery care standards at pre-intervention periods. Other challenges that hindered the implementation status of the nursing/midwifery care standards presented in the following table (See table 3 below).

Table 3: The challenges that had been reported by hospital SMT on nursing /midwifery care standard practices (Organizational related factors) in Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.

S.No	Challenges (N= 15)	Pre-intervention n=yes		Post-intervention n=yes		P-value
		n	%	n	%	
1	Lack of Knowledge about the standards	9	(60%)	0	(0%)	
2	Inadequate number of professionals	9	60%	3	20%	
3	Lack of training regarding the standards	14	93.3%	6	40%	
4	Lack of recognition and motivation	6	40%	5	33.3%	
5	Lack of budget allocation about the standards	8	53.3%	6	0%	
6	Nursing /midwifery inexperienced audit committee didn't support by M&E and quality officers	9	60%	4	26.7%	

9.4. Challenges from nurses/midwives towards implementation of Nursing /Midwifery Care Standards

Most of respondents' 38(86.6%) nurses/midwives before intervention period mentioned that the major challenge in implementing status of standards in the hospital was lack of training about nursing/midwifery care standards. Even more than half of nurse/midwife professionals had no read or referred the nursing/midwifery care standards in the EHSTG during their entire working time in wards. On the other hand, the majority of the respondents stated that there was shortage of supplies for nursing/midwifery 31(70.4%) & 13(29.5%) pre & post-intervention periods respectively. Please see additional challenges in the following table 4 blow.

Table-4: The Challenges from nurses/midwives towards implementation of Nursing /Midwifery Care Standards in Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.

S.No	Challenges (n= 44)	Pre-intervention n=yes		Post-intervention n=yes		P-Value
		N	%	n	%	
1	Shortage of nurses/midwives	19	43.2%	11	25%	
2	Nurses/midwives need training about nursing/midwifery care standards	38	86.4%	10	22.7%	
3	Lack of awareness about nursing /midwifery care standard	26	59.1%	14	31.8%	
4	Shortage of supplies for nursing /midwifery care standard practice	31	70.4%	13	29.5%	
5	Lack of awareness to record correctly the nursing/midwifery forms	28	63.6%	9	29.5%	
6	Lack of recognition & motivation	31	70.4%	31	71.4%	

9.5. The Implementation Status of Nursing /Midwifery Process Record Completeness (Standard 4) Results

Standard 4 has stated that the review of documents record completeness on nursing/midwifery process. A total of 80 Medical Cards of discharged patients were reviewed 40 cards during pre and 40 cards post-intervention periods. The majority (55%) of nursing and midwifery assessments were not completed. Among the collected patient cards 12(30%) of them had a complete Nursing Care Plan documentation attached & properly done during pre-intervention and this had been increased to 27(67.5%) during the post intervention period. The proportion of patients' cards who had documented Nursing Admission Assessment increased from 18(45%) to 33(82.5%), the proportion of patient cards that had documented Nursing Diagnosis has been increased from 17(38.6%) to 29(72.5%), Nursing Care Plan from 12(30%) to 27(67.5%), and Nursing Implementation increased from 10(22.7%) to 28(63.6%) during pre & post-intervention periods respectively. The Nursing/midwifery Evaluation part in the

Nursing/midwifery Process documentation was found to be the component most frequently missed one, both in the Pre and Post-intervention periods. Nursing/midwifery evaluation had been documented 9(22%) and 22(52.3%) of the patients during the Pre and post-intervention periods respectively (see table 5 below).

Table-5: The implementation status of Nursing/midwifery care standards in Nursing and midwifery process complete recording (standard 4) in wards Haramaya hospital, Oromia, Ethiopia, from March to August, 2020.

Nursing/midwifery process components	Pre intervention (n=40 MRs)		Post intervention (n=40MRs)	
	Complete record		Complete record	
	N	(%)	N	(%)
Assessment	18	45%	33	82.5%
Diagnosis	17	38.6%	29	72.5%
Nursing Care Plan	12	30%	27	67.5%
Implementation	10	22.7%	28	63.6%
Evaluation	9	22.5%	23	52.3%
Average result of Nursing /midwifery process	13.6	34%	24.6	61.5%

9.6. Implementation status of medication administration in medical record completeness (Standard 7)

Standard 7 have stated that the evaluation of medication administration by overview of medical record document completeness on patient's course of treatment. In medication administration records: Physician Order, transcribing the Order, Administration of Medications, and Administration & documentation were reviewed. The implementation status of medication administration in this capstone project was summarized by medical record completeness & by overview of attachment of necessary patient forms.

An inpatient medical record completeness improved significantly from the baseline 25.7(64.24%) to 32(83.3%) during post intervention evaluation. In the analysis of each study indicator showed that Presence of patient form & physician Signed improved from pre-intervention 36(90%) to 40(100%) post-intervention, Physician order sheet was attached and completed increased from 33(82.5%) to 38(95%) pre and post-intervention respectively. Nursing

care plan done & signed and completed increased from 12(30% to 27(67%) of admitted patients, Nurses complete and attached medication administration sheet for 18(45%) and 27(67%) of admitted patients and lastly discharge summary form were attached and completed for 28(70%) and 34(85%) of discharged patient cards pre and post intervention period respectively. The proportions of patient medical record documentation pre & post-interventions had been displayed in table 6 below.

Table-6: The implementation status of Nursing/midwifery care standards from medication administration records in medical record completeness (standard 7) in wards of Haramaya general hospital, Oromia, Ethiopia, from March to August, 2020.

Medication administration records in overview of MR completeness	Pre-intervention (n=40 MRs)		Post intervention(n= 40MRs)	
	Complete		Complete	
	N	%	N	%
Presence of patient form & physician signed	36	90%	40	100%
Physician order sheet note& signed	33	82.5%	38	95%
Nursing care plan done & signed	12	30%	27	67.5%
Record all medication administration & signed	21	52.5%	30	75%
Discharge summary present & signed	28	70%	34	85%
Discharge outcome (death Improve, disappear, self- discharge...)	32	80%	36	90%
Name of nurse & nursing care plan did	18	45%	28	70%
Average %	25.7	64.2%	33.3	83.2%

10. Discussion

10.1. Nursing/midwifery care standard implementation status

. The pre-intervention result of the implementation status of nursing/midwifery care standard practice in this project was 52.5% and it was increased to 78.4% post-intervention evaluation.

Several attempts were made to bring this significant change in nursing/midwifery service in line of Ethiopian Hospitals Reform Implementation Guideline nursing standard. The interventions activities mentioned in this document were relatively with fewer costs. They require only better organizing and appropriately using the existing resources. During the preparation phase more time was given for discussion at deferent levels with different professionals in the hospital like members of senior management team and key leaders from nurse/midwife staffs.

The objective of the project was discussed to them and their willingness to support the project was obtained. The information was disseminated to the rest of staff members through these people. Nurses were not used the allocated hospital pooled budget. Due to the absence of separately settled budget for nursing department, the nursing share was not known by the nurses and they were underutilizing the hospital resources. This project enabled them to claim for appropriate resources needed to execute nursing activities. Therefore, the major activities included in this intervention program were performed by using internal resources. The activities such as: conducting training, creating job descriptions, improving supply and enhancing supervision were successfully accomplished.

The pre-intervention level of the implementation status of nursing/midwifery care standard in this project is comparable with the study conducted in Deder hospital which was 56(55.2%) and with the study conducted in Tikur Anbessa hospital (32) which was 86(57.6%). This study is advanced in its implementation status of pre-intervention with the study conducted in Asella Referral Teaching Hospital (37) and in some selected hospitals of Central and Northwest zones of Tigray region which was 57(14.7%)(38) & 70(35%) respectively(14, 18). However, this study is very low when it has been compared with the study conducted in Sweden that was 137 (98%) (39), this might be due to study area, measurement criteria & developmental status of the country. On the other hand, this study is lower than a study conducted in Asella Referral Teaching Hospital with its interventional difference which was 46.8% & from this study which is 22.2% after interventions. The higher post intervention score indicate that the hospital

has a potential to improve the nursing/midwifery standards with proper intervention and the intervention area selected all has an impact on the difference.

In medical record documentation review; the total 80 cards were reviewed in both pre-intervention & post-intervention. The complete documentation was averagely increased from 12.8(32%) to 27.2(64%) during pre & post interventions respectively. This means, those cards which were documented all steps of nursing process in completed way increased from the baseline with the range of 32%. It is higher when it compared with the study conducted in Mekelle hospital, which was complete documentation increased from 36(75.0%) to 47(95.9%) in pre & post-intervention periods respectively with the range of 20.9 % (8). The documentation of the study from Mekelle hospital is higher than this study both in pre & post-interventions; but this study is higher than the study from Mekelle hospital it-self by its interventional difference 20.9% and from this study it is 32%. This difference might be due to: low availability of the charts, lack of supportive supervisors, sample size of the cards, lack of awareness and commitment. On the other hand; it is very low when it compares to the study conducted in Brazil, which was documented 100% (26). This variation might be due to: study area, study time, poor knowledge & attitude about standards as well as the difference in socio-economic status between the countries, could be the main reason of the variation.

10.2. Organizational factors for the implementation of nursing/midwifery care standard practices

The nurse/midwife per patient ratio during the intervention period in the medical, surgical, gynecology & obstetric wards were 1:5, 1:5 & 1:3 respectively. The average nurse per patient ration in these three wards at this project time was 1:4. As stated in different literatures for example Pamela Tevington (41,42) had stated that nurse/midwife per patient ratio in the year 2011 was 1:4 for cold or ambulatory cases, 1:2 for post-anesthesia cases & 1:1 for under anesthesia cases. Therefore, during this study, the nurse/midwife per patient ratios in Haramaya general hospital was working as above standards during working hour. But this working condition (1:4 ratios) was not consistent throughout 24 hours, meaning the nurse/midwife per patient ratios became below the standard in the afternoon & during night time. This might affect the implementation status of the nursing/midwifery care standards especially complete documentations. Therefore, there was not a consistency to continue the nursing/midwifery care standard practice throughout 24 hours in the same fashion. In this case, «shortage of

professionals» was a challenge for a continuous execution of nursing/midwifery care standards in Haramaya general hospital.

Even though, there are difficulties and challenges, the findings of this study support that a well-planned and organized nursing/midwifery care system can improve the implementation status of nursing/midwifery care standards. However, the findings of the study should be interpreted in light of its limitations. First, the same observation methods were used in the pre and post-intervention periods with the potential bias and may affect the conclusions. Second, the study was conducted in a single hospital and results may differ in other settings.

11. Evaluation

The overall results: The evaluation needs to answer the questions ‘Had the intervention changed the determinants? Or met the goals? By how much? Why? & Why not? The implementation status of nursing/midwifery care standards was increased from 52.5% to 78.4%, in pre & Post-intervention periods respectively. In this interventional period an increment was made by 25.9% from pre-intervention period (see table 7 below). And the performance rate was met to the desired objective due to some basic implementation of the interventions like; Training of the nurses & midwives about the standards and strengthening of audit committee.

Table-7: A final performance rate of nursing/midwifery care standard practice

Objective	Indicator	Pre-intervention	Post-intervention	Frequency
To improve the implementation status of the nursing/midwifery care standard from 52.5% to 81%	Training of the nurses & midwives about the standards	No	Yes	Half yearly
	Performance rate of Nursing/Midwifery care standard practice	52.5%	78.4%	Half yearly

12. Strength and Limitation

12.1. Strength

The strength of this project is reestablishing of nursing/midwifery committee from skilled and experienced profession. There was enough time for intervention and fully the budget part for the training and follow up of this project covered by Haramaya hospital. Because of this the achievement of this project is comparable with the intended objectives.

12.2. Limitation of the study

The study design was cross sectional which is used to investigate findings on a single point of time. So that the factors affecting the implementation of nursing /midwifery care standards out of the study period & it was impossible to measure the indicators (bed sore, attrition rate ...) because of its measuring period.

13. CONCLUSION AND RECOMMENDATION

13.1 Conclusion:

The findings of this capstone project suggest a number of implications.

- ❖ Provision of refresher trainings on Nursing/midwifery care standards can result in a significant improvement in implementation and compliance with the Ethiopian hospitals reform implementation guideline
- ❖ Establishing nursing/midwifery committee from knowledgeable and experienced professions has a great impact in the achievement of the intended objective.
- ❖ Most of the problems in implementation of nursing/midwifery care standards in haramaya hospital are easily manageable if nurses/midwives are supported with nursing/midwifery supervisors, continuous recognition & auditing the services regularly.

13.2 Recommendations

- ❖ Full implementation of the Ethiopian hospitals reform implementation guideline strategies should be made especially focusing on standards having a zero performance rate from the expected criteria like standard 9 which stated the implementation of eight hour shift.
- ❖ Budget should be allocated for nursing/midwifery care standards in cash on yearly basis.
- ❖ Provide opportunities like on job training for new staffs or periodical training to update the knowledge of nursing/midwifery care standard practice.

For staff nurses/midwives

- ❖ Conducting a peer review in some time intervals should narrow the nursing/midwifery care standard gaps
- ❖ The nurses/midwives should not be only relied on training but reading & referring the nursing/midwives care standard manual every time in your working life.

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Annex 1: 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/midwifery care standard implementation status.

Title of the project: Improving the implementation status of nursing/midwifery care standard practice in Haramaya Hospital in Oromia, Ethiopia, 2020.

Objective: To improve the implementation status of the nursing/midwifery care standard practice in Haramaya Hospital in Oromia, Ethiopia, 2020.

Participants: randomly selected nurses/midwives designed title-related questionnaires for them working in Haramaya 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: - Abdulbasit Aliyi

Mobile:-0910077515/0900671258

Email:-abdulaliyi56@gmail.com

Annex 2: 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

Annex 3: Questionnaires

Part-I: Socio-demographic characteristics for nurses/midwives

Instruction—one: put a «circle» for your answer among a given choices on the «response» side.				
No	Questionnaires	Response	Remark	skip
1	What is your sex?	1. male 2. female		
2	What is your age in year?	_____		
3	What is your educational status?	1. Diploma 2. Degree(BSc) 3. Master of science(MSc)		
4	What is your working unit?	1. Medical ward 2. Surgical ward 3. Gynecology ward 4. others		
5	What is your working position?	1. nurses director 2. case-team coordinator 3. staff nurses		
6	What is your working service in year?	_____		
7	What is your working service in current position?	_____months, or _____year/s		

Part-IV: Interview questionnaires for hospital managers about the implementation of standards (CEO,CCO, Matrons, HRM,M/E, quality officer, head nurses...)

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

S.N	Questionnaires	Yes	No	Remarks
8	Does the hospital have enough amounts of nurses/midwives?			
9	Did all nurses/midwives train about nursing/midwifery process?			
10	Did all nurses/midwives train about nursing/midwifery care standards?			
11	Is there any time interval to measure the implementation status of the nursing/midwifery care standards?			
12	Are there any motivating mechanisms to recognize model nurses/midwives about a good performance of nursing/midwifery process?			
13	Does the SMT allocate a budget for nursing/midwifery care standard Practice on yearly bases in cash?			
14	Does the hospital have any measuring mechanisms to know a lack of Knowledge & capacity about the nursing/midwifery care standards?			
15	Have the nursing/midwifery audit committee being supported by M&E & quality officer			

Part-V: 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=_____ MRs)		Post intervention(n=_____ MRs)	
		Complete	incomplete	Complete	incomplete
16	Assessment				
17	Diagnosis				
18	Nursing Care Plan				
19	Implement				
20	Evaluation				
21	Total				

Part-VI: Overview of medical record completeness about the attached & complete documentation of necessary formats.

Instruction-five: please put «√ on either« complete or incomplete» side of the space provided.

S.No	MR completeness	Pre intervention(n=_____ MRs)		Post intervention(n=_____ MRs)	
		Complete	incomplete	Complete	incomplete
22	Presence of patient form & physician signed				
23	Physician order sheet Note & signed				
24	Nursing care plan done & Signed				
25	Record all medication: 1. ordered and administered to a patient 2. at bed-side clip board during the patient's stay & MR 3. Name of drug,route,dosage, time,frequency & signed by transcriber administration & signed 4. medication is administered & signed by the nurse				
26	Discharge summary present & signed				
27	Discharge outcome (death Improve, disappear, self-discharge...)				
28	Name of nurse & nursing care plan did				

Part-III: 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
29	Is there any shortage of staffs at your ward?			
30	Is there any shortage of nursing/midwifery process«< formats»?»?			
31	Are there any untrained professionals about nursing/midwifery care standard?			
32	Is there any hand washing facility in each ward?			
33	Is there any lack of awareness about nursing/midwifery care standard practice among nursing/midwifery professionals?			
34	Is there any shortage of supplies for nursing/midwifery care standard practice?			
35	Can audit committee identify gaps during its reporting period?			
36	Can supportive supervisors supervise, mentor or coach the junior professionals at any time?			
37	Is there any miss-understanding to record or to document correctly the «NANDA» format?			
38	Does the nursing/midwifery audit committee have clear and achievable operational plan?			
39	Is there any patient discharged without taken a care of nursing/midwifery process?			
40	Is there any lack of devotion about the implementation of nursing /midwifery care standard from the concerned bodies (CEO, CCO & matron others)?			

Part-VII: Observational standard checklists from nursing/midwifery care standards

Instruction-two: please put «√ on either« met or unmet» side of the space provided

NURSING AND MIDWIFERY CARE SERVICES MANAGEMENT				
#	Standard	Method of Evaluation	Met	Unmet
1	The hospital has established nursing/midwifery service management structures and job descriptions that detail the roles and responsibilities of each nursing and midwifery professional, including	Check for nursing representation in the SMT;		
		Does a system exist to supervise nursing activities?		
		Has the hospital established management structures that detail the roles and responsibilities of nursing/midwifery professionals, including reporting and communication relationships?		
		Does the hospital have a nursing/midwifery		

	reporting relationships.	workforce plan that addresses nurse/midwifery staffing requirements according to the standard set for hospitals?		
		Do the hospitals provide written policies describing the responsibilities of nurses/midwives on prevention, promotion, rehabilitative and curative care as well as nursing and midwifery care process?		
		Is there a prepared budget and operational yearly plan regarding nursing and midwifery practice and has it been submitted to the SMT?		
2	The hospital has a nursing and midwifery workforce plan that addresses nurse /midwife staffing requirements and sets minimum nurse /midwife to patient ratios in each service area.	Obtain copy of nursing staffing plan and confirm this establishes nurse to patient ratios for each service area (e.g. inpatient wards, ER, surgical suite, labour and delivery).		
		Confirm the plan identifies mechanisms to reassign nursing staff or call in extra staff to ensure that minimum nurse to patient ratios are maintained at all times		
3	The hospital has written policies describing the responsibilities of nurses and midwives for the nursing/midwifery process including the admission assessment, planning, implementation and evaluation of nursing/midwifery care.	Identify written policies that describe the nursing process.		
		Verify that the following are addressed:		
		• Nursing admission assessment		
		• Nursing Diagnosis		
		• Nursing care planning		
		• implementation and		
		• evaluation		
4	All admitted and emergency patients/clients have a nursing/midwifery care plan that describes	Select a random sample of 10 inpatient records from different wards.		
		Confirm that each contains a nursing care plan.		

	holistic nursing/midwifery interventions to address their needs. The plan is regularly reviewed and updated as required.	The plan is regularly reviewed and updated as required.		
5	All hospital nurses/midwives comply with the professional code of conduct and ethics which governs their professional practice.	5.1. Does the hospital provide a written professional code of conduct and ethics to all nurses and midwives?		
		Does the hospital provide complete uniforms for nurses/midwives and do nurses/midwives comply with the institutions dress code and all nurses are wearing the specific uniform?		
		Are nurses /midwives in complete uniform at all times?		
		Does the hospital have a system to report illegal, incompetent or impaired practice?		
6	The hospital has established guidelines for verbal and written communication about patient/client care that involves nurses/midwives and their patients/clients, families, other case team professionals of the disciplines, including verbal orders and timely documentation of accomplished activities.	Does the hospital provide written guidelines regarding verbal and written communication and documentation?		
		Do nurses and midwives attend nursing rounds on a regular basis?		
		Do nurses and midwives provide safe, effective, efficient, and patient-centered care to patient/clients?		
		Do nurses/midwives engage in self-evaluation on a regular basis?		
		Do nurses and midwives seek constructive feedback regarding their own practice?		
		Does the hospital have a systematic peer review? Regularly, supervise, mentor and coach that senior nurse to support the junior nurses?		

		Do the nurses/midwives have performed one hour rounds?		
7	The hospital has standardized procedures for the safe and proper administration of medications by nurses or designated clinical staff.	Identify written procedures for process of medication of administration.		
		Verify that procedure addresses safety, proper administration, and administration authority.		
		Review 10 Medication Administration Records from different wards and confirm that each is completed correctly with the signature of		
		<ul style="list-style-type: none"> • Transcriber 		
		<ul style="list-style-type: none"> • The individual who administered each medicine dose. 		
8	The hospital has established nursing/midwifery care practice audit programme, including the documentation of completed audits and resulting practice improvements.	Does the Hospital have a Nursing/midwifery Audit Committee?		
		Does the Nursing/midwifery Audit Committee meet regularly and conduct a nursing/midwifery service audit?		
		Do Nurses/midwives collect data to monitor the quality of nursing/midwifery practice?		
		Do Nurses/midwives participate in critical review and/or evaluation of policies, procedures, and guidelines to improve the quality of healthcare?		
		Do Nurses/midwives collaborate with the inter-professional team to implement quality improvement plans and interventions?		
		Do Nurses/midwives analyze trends in healthcare quality data?		
		Do Nurses/midwives incorporate evidence base best practices to improve health outcomes?		

		Look for a nursing/midwifery audit report		
		Look for action plans that address gaps identified by audits		
		Observe implementation of the action plans		
9	The hospital implements regular nursing/midwifery eight hours' shift, hourly rounds, and central medication cabinet or room.	9.1. Is the hospital implementing 8 hours shift of nurses/midwives? 9.2. Do the nursing/ midwife staffs conduct hourly patient rounds? 9.3. Does the hospital implements central medication management system to ensure medications are not placed at patient side?	NA	
10	The hospital has a centralized nursing & midwifery station set-up in each ward with adequate space, equipment and consumables.	9.4. Does each unit have the necessary equipment and supplies to accomplish nursing and midwifery care practice? Does the unit have equipment for specific minor procedures? 9.6. Does the nurse/midwife assess equipment necessary to accomplish the nursing and midwifery practice related to safety, effectiveness and availability?		
		TOTAL		