**ADDIS ABABA UNIVERSITY**

**COLLEGE OF HEALTH SCIENCES**

**SCHOOL OF NURSING AND MIDWIFERY**

**DEPARTMENT OF MIDWIFERY**

# PRECONCEPTION CARE PRACTICE AND ASSOCIATED FACTORS AMONG HEALTH CARE PROVIDERS IN SELECTED PUBLIC HOSPITALS IN ADDIS ABABA, ETHIOPIA, 2020

**BY: - YIHALEM ABEJE (BSC)**

**A RESEARCH THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY, DEPARTMENT OF MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCES IN MATERNITY AND REPRODUCTIVE HEALTH NURSING.**

**JUNE, 2020**

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**ADVISORS: ENDALEW GEMECHU (PhD, ASS. PROF)**
**ADDISHIWET FANTAHUN (BSC, MSC)**

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**JUNE, 2020**

**ADDIS ABABA, ETHIOPIA**

## APPROVAL BY THE BOARD OF EXAMINATION

THIS THESIS BY YIHALEM ABEJE ZEWDIE (BSC) IS ACCEPTED IN ITS PRESENT FORM BY BOARD OF EXAMINERS AS SATISFYING THESIS REQUIREMENT FOR THE DEGREE OF MASTERS IN MATERNITY AND REPRODUCTIVE HEALTH NURSING.

### EXAMINER:

ROZA TESHOME (MSc, ASS. PROF, PhD FELLOW)-- ---------- ----------

FULL NAME SIGNATURE DATE

### ADVISORS:

ENDALEW GEMECHU (PhD, ASS. PROF**)** ---------- -- ---------

NAME OF MAJOR ADVISOR SIGNATURE DATE

ADDISHIWET FANTAHUN (BSC, MSC) ---------- ----------

NAME OF CO -ADVISOR SIGNATURE DATE

### DEPARTMENT HEAD:

**HAWENI ADUGNA(BSC, MSC)** ---------- ----------

FULL NAME SIGNATURE DATE

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**Student**

Name: Yihalem Abeje (BSc) _____ _____

Signature Date

**Research advisors:**

Endalew Gemechu ((PhD, ASS. PROF**)** _____ _____

Name Rank Signature Date

Addishiewt Fantahun (BSc, MSc) _____ _____

Name Rank Signature Date

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# ABBREVIATIONS / ACRONYMS

| | |
|---|---|
| ANC | Antenatal care |
| CDC | Centers for disease control and prevention |
| EDHS | Ethiopian demographic and health survey |
| ETB | Ethiopian birr |
| HCPs | Health care providers |
| HIV | Human immunodeficiency virus |
| LBW | Low birth weight |
| MNCH | maternal newborn and child health |
| NGO | Nongovernmental organization |
| NTDs | Neural tube defects |
| PCC | Preconception care |
| SRS | Simple random sampling |
| SPSH | St Peters specialized hospital |
| SPSS | Statistical package for social sciences |
| STIs | Sexually transmitted infections |
| WHO | World health organization |
| Y12HMC | Yekatit 12 hospital medical college |
| ZMH | Zewditu memorial hospital |

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# ABSTRACT

**Background: -** Preconception care is the arrangement of biomedical, behavioral, and social wellbeing mediations to ladies and couples before conception happens. In any case, it is one of the lost components inside the continuum of maternal and child healthcare. Healthcare providers (HCPs) are at the cutting edge of screening and recognizing preconception risk factors driving to adverse pregnancy results.

**Objective: -** To assess preconception care practice and associated factors among health care providers in selected public hospitals in Addis Ababa, Ethiopia, 2020.

**Methods: -** Institutional based Cross-sectional study design was conducted. Pretested structured self-administered questionnaires were administered to a sample of 852 study subjects who were selected by a simple random sampling technique. Data were cleaned, coded, and entered into Epi-data version 4.6 software, and then exported to Statistical package for social sciences (SPSS), version 25 for statistical analysis. Variables with a p-value<0.25 in the bivariate analysis were the candidate for multivariable logistic regression and those with a p-value<0.05 in the multivariable analysis were considered as having a statistically significant association.

**Results:** Among total of 781 study participants, 55.7% of health care providers had a good level of knowledge of PCC. The level of health care provides PCC practice (N=775), lower practice 19.7%, medium practice 43%, and high-level practice 37.3% found in this study. Those HCPs with poor PCC knowledge had more than 5 times higher odds of not practicing PCC (AOR= 5.49 95% C.I. **3.84-7.84**). Whereas, those HCPs who do not screen their clients' reproductive life plan (RPL) had more than 3 times higher odds of not practicing PCC (AOR=**3.84** 95% C.I. **2.20-6.71**).

**Conclusion and recommendation:** The findings of this study demonstrated PCC practice was not well incorporated and consistent which indicates that PCC is not well coordinates into the study space. Creating of PCC approach and rules additionally preparing of HCPs are recommended to fortify the integration of the health care system.



**Keywords: -** preconception care, knowledge, practice, healthcare providers

# 1. INTRODUCTION

## 1.1 Background

Preconception care (PCC) is the arrangement of biomedical, behavioral, and social wellbeing mediations to ladies and couples before conception happens, pointed at progressing their wellbeing status, and decreasing behaviors and environmental variables that could contribute to destitute maternal and child health outcomes. Its extreme point is to move forward maternal and child wellbeing results, in both the brief and long term(1). PCC is pointed to recognize and adjust biomedical, behavioral, and social dangers to a woman's wellbeing or pregnancy results through prevention and management(2).

The reason of preconception care is to provide hazard screening, wellbeing advancement, and successful mediations as a portion of routine wellbeing care(2). Ranges tended to by the preconception care are behavioral conditions, chronic illnesses, Vaccine-preventable infections, Genetic Conditions, and medications(3). Family arranging, Infertility/ subfertility, Female genital mutilation, undesirable and fast pregnancies, Sexually transmitted infections(STIs), Mental wellbeing issues are also addressed by PCC (4).

Preconception care contains a positive impact on the range of wellbeing results. It can diminish maternal and child mortality, avoid unintended pregnancies, anticipate complications and adverse results during pregnancy and delivery, and increment a chance of conception(5). It can also avoid underweight and stunting, and prevent vertical transmission of Human immune deficiency virus (HIV)/STIs. There is a developing involvement in executing preconception care activities both in high-income and in low- and middle-income nations, such as Italy, the Netherlands, the Philippines, and Sri Lanka (4).

Interventions of Preconception care could be creatively incorporated in current health care delivery mechanisms that are being used to get specific groups. For example, folic acid supplementation could be incorporated in family planning service and provider-initiated HIV testing and counseling service; and discussions on sexual violence, female genital mutilation,

and tobacco cessation could be included in the school education system with young men and women students. Preconception care could be provided in health institutions, education places, and community settings. It could also be delivered by using innovative electronic and mobile technology (4,6).

Still, there's no international general agreement exists on whom PCC ought to be offered. PCC could be offered for the general population, all reproductive-age individuals, individuals planning to pregnancy, and individuals with predefined high-risk groups(7). A reasonable way for initiating PCC is individuals and couples who are planning a pregnancy or not currently panning a pregnancy, individuals those who are and those who are not planning a pregnancy. Targeting individuals, couples, families, and communities for PCC should make a greater effort to marginalized socially and financially and so more vulnerable to wellbeing and social problems. There are also special needs for targeting couples and individuals for reaching preconception intervention that is previous adverse reproductive outcomes, pre-existing genetic risks, genetic conditions, chronic illness such as diabetes(4,6).

Preconception care (PCC) could be a modern evidence-based practice that is not yet well presented and coordinated into the Ethiopian health care frameworks. But world health organization (WHO) vigorously suggested the execution of preconception care (PCC) six years ago(1).

## 1.2 Statement of the problem

Roughly 810 women died with in the world every day from preventable causes related to pregnancy and childbirth (8) and also 5.9 million children under five deaths, 2.7 million neonatal deaths (9), largely from preventable causes. Nearly all of the adverse pregnancy results are reported from low-income countries. For instance, the vast majority (86%) of all the maternal death, more than 60% of preterm birth, 91% of low birth weight (LBW), 98% of stillbirth, and 99% of neonatal death are occurring in low-income countries (10–12).

Studies showed that women reported more risk factors before conception than compared with pregnant women(frequent drinking, current smoking, and the absence of an HIV test) (13). The report showed 33% of pregnant women take folic acid one month before pregnancy. This report also found 17% of pregnant women utilize tobacco daily and 11% of pregnant women utilize alcohol weekly before pregnancy(14). The preparation of women for pregnancy is highly considered as significant for a healthy pregnancy and the next generations. There are modifiable factors, which impact the intrauterine environment and fetal improvements such as diet and nutritional status, and lifestyles, which are modifiable before conception(15). PCC could be influenced by many factors such as unfavorable attitudes, lack of knowledge, lack of policy, tools, guidelines, and reimbursements. Improving PCC requires transformed into the knowledge, attitudes, and behaviors of the responsible body(16,17).

According to the 2016 national demographic health survey report, maternal mortality ratio of 412/100,000 live birth, the under-five mortality rate of 67/1000 live birth, the infant mortality rate of 45/1000 live birth, and Neonatal mortality rate of 29/1000 live birth were documented (18). Pre-conception care(PCC) is health care given for women in reproductive age that enhances women's health through prevention and management (1). PCC is the execution of a set of mediations to recognize and adjust biomedical, behavioral, and social risks to women's wellbeing and pregnancy result through control and avoidance, with emphasis on the importance of initiation of these mediations before conception to maximize the finest impact on pregnancy outcome (2).

The government of the Federal Democratic Republic of Ethiopia (FDRE) plans to decrease maternal mortality to 199 per 100,000 live births in 2020 and 70 or less by 2030 in line with the target set by the World Health Organization (WHO). The target set by WHO is reachable because most of the maternal deaths are preventable if accessing antepartum care, intrapartum care, and postpartum care (19).

Giving preconception care (PCC) for women before conception by healthcare providers (HCPs) is crucial management for a pregnancy outcome. HCPs are primarily responsible for adjusting and recognizing preconception risk factors that cause adverse pregnancy outcomes. Reported showed that the absence of PCC and delay entry into ANC are contributing factors to infant mortality. Preconception care is an evidence-based practice but has not been globally endorsed in the health care setting (20).

Only one cross-sectional survey conducted among 634 healthcare providers working in public health institutions in Hawassa, Ethiopia, reported that only 31% of HCPs had good knowledge of PCC and while 84.7% (537/634) of them were found not practicing PCC in the study area (21). Another cross-sectional survey conducted in one of the African countries, Egypt, reported there is poor PCC knowledge and practice among the HCP's. This study reported only 22% of HCPs had good knowledge (22).

Health care provider's knowledge of PCC will impact on improving PCC practice. Knowledge is required for correctly performing a duty. However, acting without knowledge distances the providers from their goal, rendering the outcome impossible. A review of prior studies reveals that there are few studies on pre-conception care mainly on knowledge, and practice of health care providers in Ethiopia. Bearing in mind the innovation of the pre-conception care program, we intended to conduct a study on the practice of PCC and associated factors among health care providers working in selected public hospitals in Addis Ababa, Ethiopia.

## 1.3 Significant of the study

Preconception care (PCC) is an evidence-based practice that is not well coordinates into the Ethiopian health care frameworks. This study will be conducted in Addis Ababa to assess the health care provider's level of their preconception care practice for the first time.

The finding of this study will supply to the integration of preconception care in the health care system of the country. The identified gap and recommendation also will support the policymakers as inputs to include the concept of preconception care into the health care provider's training curriculum of the country. The finding of this study will also help to influence the higher educational institution to revise the curriculum to give effective preconception care. Lastly, the finding of this study will use as a reference and guide for researches who want to study preconception care practice and its associated factors.

# 2. LITERATURE REVIEW

The aim of this literature review is to summarize what has already been existing knowledge about preconception care in developing and developed countries, to discuss the impact of previous research findings, and to identify gaps of preconception care clinical practice in Ethiopia. As a baseline, literatures have been reviewed and collected on socio-demographic, knowledeg and other related factors of preconception care which have an impact on preconception care practice.

## 2.1 The health care providers knowledge of preconception care

An institutional-based qualitative study in the United Kingdom found that the knowledge and demand of General practitioners about preconception care were poor(23). Another quantitative study claimed that more than 88% of health care providers know when a woman should start taking folic acid for the prevention of neural tube defects ( NTDs), and also more than 85% of health care provides know folic acid supplementation over what is accessible in the diet is importantly(24).

Studies in Iran found that 36.4 % of physicians had good level preconception knowledge. This study also found that 31% of family physician project midwives, 58.8 % of family health technicians, 14.3% of health care social workers, 66.7% bachelors of science in family health had a good level of knowledge about preconception care(25). Another institutional study in Iran showed that the Mean (SD) score of midwife's level of knowledge was 73.21 (± 11.83)(26).

According to a cross-sectional study in Nepal demonstrated that 9.4% of bachelor level nursing students had a good level of knowledge, 85.9% of bachelor level of nursing students had a moderate level of knowledge on preconception care and 4.7% of bachelor level of nursing student had an inadequate level of knowledge on preconception care (27).

A cross-sectional study conducted in South Africa found that 55% of primary health care nursing students were a knowledgeable group and 45.0% of primary health care nursing students were in the not knowledgeable group(28). Another cross-sectional study conducted in Nigeria among health workers found that only 23% of health workers know more than 75% of the components of PCC. This study also reported 29.7% of health workers know 51–75% of the components of preconception care, 65% of health workers know 26–50% of components of PCC, and 20.1%health care workers know less than 25% of the components PCC(29).

An institutional cross-sectional study conducted in Ethiopia found that 69.2% of residents had a good knowledge of preconception care(30). The institutional cross-sectional study conducted in Bahirdar Ethiopia found that 47.7% of health professionals had a good level of knowledge on preconception folic acid use. In this study, 95.7% of general practitioners had a good level of knowledge of preconception folic acid usage. Other health professionals like 64.5% of health officers and 62.7% midwives (62.7%) had a good level of knowledge on preconception folic acid usage. But (33.3%) of nurses were less knowledgeable about preconception folic acid usage(31).

## 2.2 The level of health care providers practice on preconception care

Studies in Iran reported that around 70% of physicians and 75% of Bachelors of Science in family health had a poor practice about preconception care. In this study, the report showed that 64.7% of midwives and 52.4% of healthcare social workers had a moderate practice about preconception care(25). Another institutional study in Iran found that the mean (SD) score of midwives level of preconception care practice was 80.31 (±12.25)(26).

A cross-sectional study conducted in Nigeria among health workers found that 47.7% of health workers had provided some component of PCC. Among components of preconception care, 33% of health workers administered preconception folic acid supplementation, and 23% of the study participants counseling on the importance of preconception (29). An institutional cross-sectional study conducted in Ethiopia Hawassa found that 15% of HCPs had provided poor PCC(21). Another crossectional study in Tikur anbesa hospital found that 19.2% of

residents had a good level of preconception care practice(30). Another institutional cross-sectional study conducted in Bahirdar Ethiopia found that only 9.7% of health care providers had prescribed folic acid supplement before conception for women. Of these, 8.9% of study participants were general practitioners. This study also reported that 31.6% of health care providers had provided the correct dose of folic acid to prevent the repetition of NTD(31).

## 2.3 Factors of preconception care practice

A study conducted in Nepal reported that there is a significant association b/n health care providers' level of knowledge on preconception care and training (p=0.026) (27). Another study conducted in Iran found that there was no significant relationship between the level of knowledge on preconception and practice preconception care (P = 0.133, r= 0.238). These studies identified predictors of midwife level of knowledge on preconception care. These predictors were included age, educational level, employment status, and work experience. The predictors of midwives' level of practice on preconception were age, employment status, and job responsibilities (26).

A cross-sectional study conducted in South Africa found that the knowledge of PCC was a significant association with a residence. Rural Students (AOR =5.3, 95% CI 1.9–14.5 and semi-rural students (AOR =2.6 95% CI 0.9–6.7) were significantly associated with the level of knowledge on preconception care (28). Another cross-sectional study conducted in Nigeria among health workers found that there was a difference in knowledge of PCC between doctors and nurses. This study also showed there was a statistically significant association between knowledge of PCC and experience ($\chi 2 = 0.014$) (29).

An institutional cross-sectional study conducted in Ethiopia Hawassa found that HCPs working in hospitals (AOR = 1.8, 95% C.I. 1.3±2.6), usage of a smartphone to access clinical resources (AOR = 1.4, 95% C.I. 1.1±2.0), HCPs ever have read PCC guideline (AOR = 1.9, 95% C.I. 1.4±2.7), HCPs who claimed to practice PCC (AOR = 3.4, 95% C.I. 2.0±5.9), and monthly earn a salary of _ 146.0 $(AOR = 1.5, 95% C.I. 1.1±2.1) had significant association on the level of health care providers knowledge on preconception care(20).

Another study in Hawassa found that HCPs who did screening their clients' reproductive life plan (RPL) (AOR=7.2 95% C.I. 3.6- 14.5), HCPs with good PCC knowledge (AOR= 4.4, 95% C.I. 2.5-7.6) had significant association on health care providers practice of preconception care. Compared to medical doctors, nurses, and midwives together had the probability of not completely practicing an element of PCC by more than two times (AOR=2.4, 95% C.I. 1.3 - 4.6). HCPs perceived expectation who should provide PCC by all HCPs had the likelihood of practicing PCC by twofold more than PCC should be given by selected HCPs (AOR=2.0, 95% C.I. 1.3-3.3)(21).

An institutional cross-sectional study conducted in Bahirdar Ethiopia found that professionals who had work experience in ANC clinic AOR = 1.9, 95% CI: (1.09, 3.53) had a significant association with knowledge of the health care providers on preconception folic acid usage. They were also significant association in age less than 30years old (AOR = 1.7, 95% CI: (1.00, 2.89), being a general practitioners AOR = 34.0, 95% CI:(7.57, 160.67) and midwives (AOR = 2.0, 95% CI: (1.05, 4.01) with knowledge of the health care providers on preconception folic acid use(31).

**Conceptual framework**

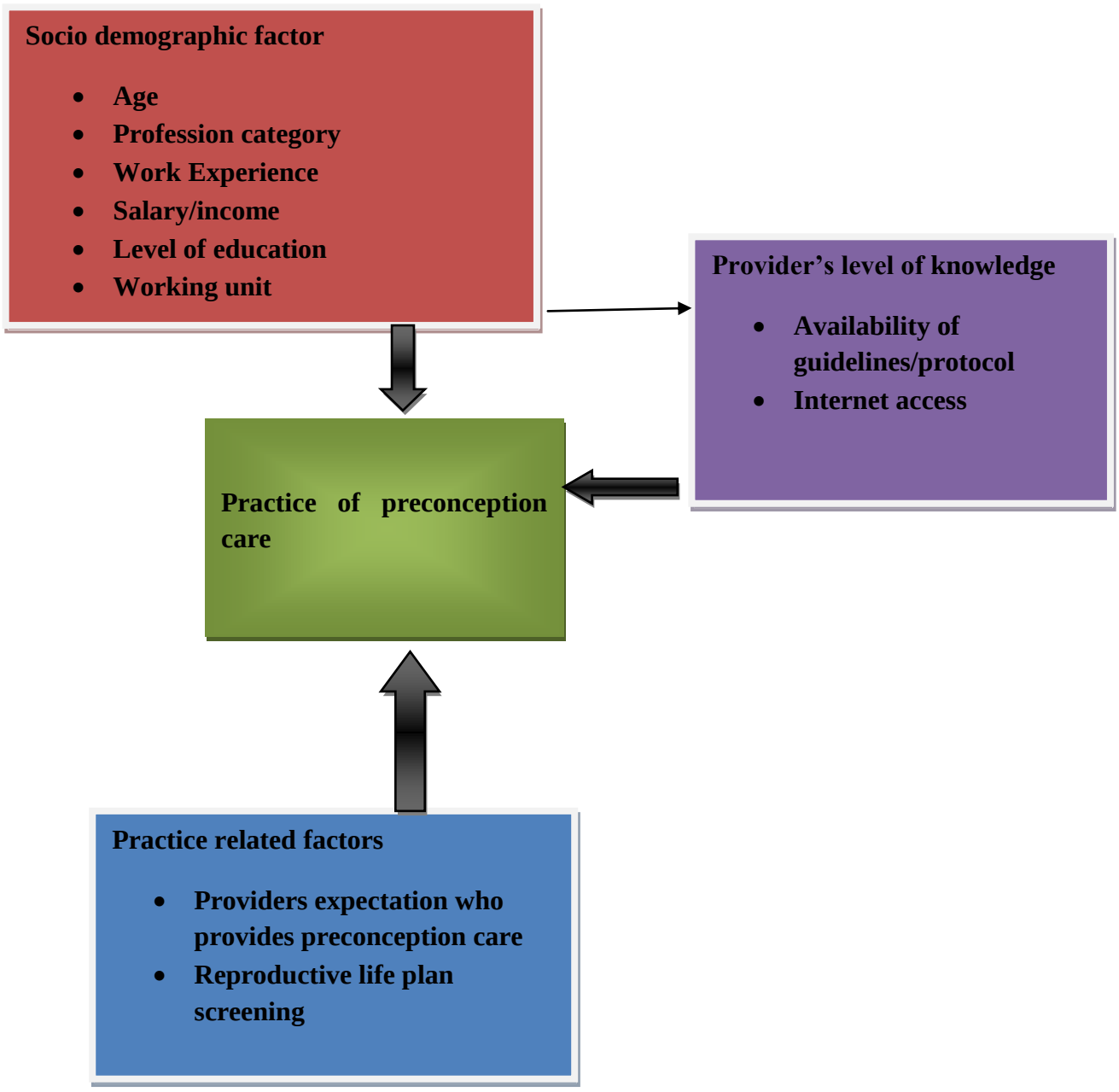



**Figure 1: Conceptual framework of preconception care practice and associated factors Ethiopia, 2020** (adopted from 20,21)**.**

# 3. OBJECTIVES

## 3.1 General objective

- To assess preconception care practice and associated factors among health care providers in selected public hospitals in Addis Ababa, Ethiopia, 2020.

## 3.2 Specific objective

- To assess the level of preconception care practice among health care providers in selected public hospitals in Addis Ababa, Ethiopia, 2020.
- To identify factors associated with preconception care practice among health care providers in selected public hospitals in Addis Ababa, Ethiopia, 2020.

# 4. METHODS AND MATERIALS

## 4.1Study design and period

An institution-based cross-sectional study design was conducted from March 15 to April 25/2020.

## 4.2 Study area

This study was conducted in selected Public Hospitals in Addis Ababa. Addis Ababa is located in the Central part of Ethiopia and belongs to the Western highlands. All sides of the capital city are bordered by Oromia Regional State, and covers an area of 530 sq. km (53,000 ha). Addis Ababa City Administration has 2.7 million people accounting for nearly 4% of the total population, from which 1,434,164 are females and 1,305,387 are males. Thus, females comprise 52% and males 48% of the total population. The Addis Ababa City Government has 10 sub-cities. Each sub-city has an average of 10-12 woredas/districts. The Health facilities of Addis Ababa include 11 public hospitals (specialized, referral and general), 86 public health centers, and about 720 private and NGO health facilities of different levels (Hospitals, specialized centers/clinics, medium clinics, and primary clinics (32). Four (4) hospitals are selected by lottery for the present study. These are Yekatit 12 hospital Medical College (Y12HMC), St Peters specialized hospital (SPSH), Gandhi memorial hospital (GMH), and Zewditu memorial hospital (ZMH).

## 4.3 Populations

### 4.3.1 Source population

All health care providers in Addis Ababa public hospitals.

### 4.3.2 Study population

All health care providers who were selected from the source population and who were meet the inclusion criteria.

## 4.4 Inclusion and exclusion criteria

### 4.4.1 Inclusion criteria

Health care providers who worked at least for 6 months.

### 4.4.2 Exclusion criteria

Health care providers who are on study leave or vacation.
Health care providers who had observable psychiatric or substance abuse problems.

## 4.5 Sample size and sampling procedure

### 4.5.1Sample size determination

The sample size was calculated using a formula by using four major determinant variables for PCC Practice based on the study conducted in Hawassa, Ethiopia by Andargachew eta l **(Ref) (See Table 4.1).** By using Epi-Info version 7.1 at a 95% level of confidence, with a power of 80% and adding a 10% non-response rate, the total sample size calculated is **852.**

**Table 1: Sample size calculation based on four major determinant variables for PCC Practice**

| Variables | Odds Ratio | 95% CI | Total sample size |
|---|---|---|---|
| 1. Provider's Knowledge of PCC | 4.4 | 2.5–7.6 | 268 |
| 2. Screening Women's Reproductive life Plan(RLP) | 7.2 | 3.6–14.5 | 202 |
| 3. Professional category | 2.4 | 1.3–4.6 | 539 |
| 4. Provider's Perceived expectation about who should Practice PCC | 1.44 | 1.3–3.3 | 775 |

Therefore, the final sample size was calculated by adding a 10% non-response rate, **775+ 77** = 852 of study participants were included in the study.

### 4.5.2 Sampling procedure

The study setting was selected randomly from the eleven public hospitals in Addis Ababa. The first respective sample was allocated to selected hospitals proportionally based on the health care provider's population in each hospital. Then, again samples for each profession (medical doctors, nurses, midwives, pharmacists, and health officers) were allocated proportionally. Finally using simple random sampling (SRS) technique health care providers from each profession were taken considering the list of health care providers as a sample frame.

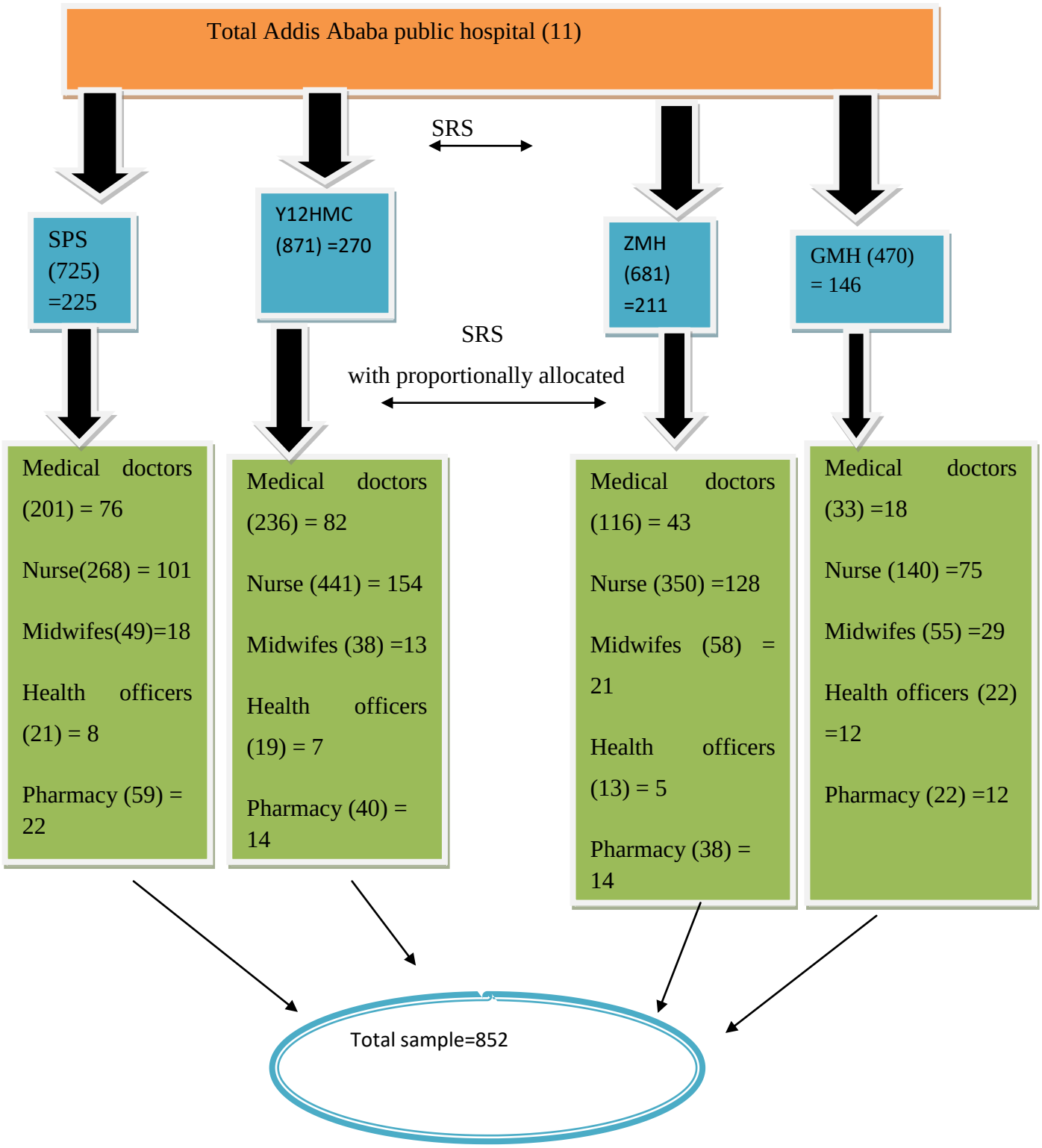



Figure 2: Scheme presentation of the sampling procedure

## 4.6 Data collection procedure

### 4.6.1Instrument

Data were collected by using pretested structured self-administered questionnaires English and Amharic versions based on the language of choice and level of understanding of the study adapted from a review of related literature (20,21). It consists of five sections (socio-demographic information, knowledge, practice, and associated factors of preconception care questions).

### 4.6.1 Data collection technique

Self-administered questionnaires were distributed to the health care providers by trained four midwives with experience on data collection, and the data was collected in the clinical area and head midwife and nurses facilitated the orientation and dissemination of the questionnaire. Finally, the filled questionnaire was checked for completeness and consistency of the data by the data collector's supervisors.

## 4.7 Variables

### 4.7.1 Dependent variables

Level of provider's preconception care practice

### 4.7.2 Independent variables

Socio-demographic variables

- Age
- sex
- Professional category
- Religion

- Educational level
- Marital status
- Work experience

Knowledge related variables

- Availability of preconception guideline
- Internet access
- Working unit

Practice related variables

- The practice of reproductive life span screening
- Access to resource to practice PCC
- HCPs expectation who provides preconception care

## 4.8 Operational definition and definition of terms

- **Healthcare providers (HCPs):** In this, study health care provider stands for medical doctors, nurses, midwives, health officer, and pharmacists.
- **Preconception care (PCC):** is the provision of biomedical, behavioral, and social health interventions to women and couples before conception occurs. It aims at improving women's health status and reducing behavioral, individual and environmental factors that contribute to poor maternal and child health outcomes(WHO 2013)
- **Knowledge of PCC:** Knowledge about PCC was measured by an 18-item knowledge questionnaire adapted from previous studies(20). The scale for assessing knowledge is from 0-18 scores. Correct answers were given a score of 1 and incorrect answers 0. Those who scored less than the mean value were considered to have poor knowledge while those who scored greater than or equal to the mean value were considered as having good knowledge.

**PCC Practice:** A further 36 items were measured several elements of PCC practice, including reproductive life planning, screening practices, access to resources to practice PCC. The items were adapted from a previous study(21). The response options involve 'Never = 1, rarely = 2, sometimes = 3, often = 4, and always = 5.' The total score were computed for each respondent

and it ranges from 36 - 180. Those who score less than the mean was considered to have Poor Practice while those who score greater than or equal to the mean value were considered as having Good Practice.To further describe the level of providers' PCC practice, we classified those who scored < 50% of items measuring PCC practice as practitioners demonstrating 'low level of PCC practice. The remaining ones who scored between 50%-75% and those scored > 75% were categorized as providers with a medium and higher level of PCC practice respectively.

### 4.9 Data analysis

The data was cleaned, coded, and entered into Epi-data version 4.6 software, and then exported to Statistical package for social sciences (SPSS) version 25 for statistical analysis. The first descriptive summaries including frequency, proportions, and measures of the mean were carried out for both independent and dependent variables. Next, the bivariate analysis was done to identify the association between the independent and the dependent variables. Those variables with a p-value<0.25 in the bivariate analysis were a candidate for multivariable logistic regression, and then those variables with a p-value<0.05 in the multivariable analysis were considered as having statistically significant association with PCC.

### 4.10 Data quality management

The quality of data was assured at the maximum attainable level by using a structured questionnaire adapted after reviewing related literature and following the necessary procedures to get the intended results. To ensure the quality of data, the pre-test of data collection tools was done at Dagmawi Minillik hospital before two weeks' main data collection by taking 5% of the total sample size. Data collectors and supervisors had orientation one day before data collection. The questionnaire was checked for completeness and correctness daily by immediate supervisors.

## 4.11 Ethical clearance

The study was conducted after full approval and ethical clearance is obtained from Addis Ababa University, College of Health Sciences, School of Nursing, and Midwifery. Written requests to conduct the study were made to the Addis Ababa Health Bureau and the permission to conduct the study was granted by Participating Hospitals in the study. The consent form was written in Amharic and English. The researcher was ensured that participants understood the information given by using the language of the choice and at the level of their understanding of the study. Participation in this study is voluntary; the participants can also withdraw at any time from the study if they feel uncomfortable. Refusal to participate was not affected their work at any of the health facilities in any way. To ensure that the participants' rights to anonymity and confidentiality are protected, the researcher took the following measures: The participants were assured that all of the information given by them would be treated in strict confidence and would only be used for the study; The researcher was made sure that the collected raw data was kept safe and confidential, locked up in a secure place and the files were password-protected, and names of the participants were not be written in study records and data was reported in a manner that doesn't identify or link the participants with the information.

## 4.12 Dissemination of results

The result of this study will be disseminated to Addis Ababa University College of Health Sciences, School of Nursing and Midwifery, and Addis Ababa Health Bureau. Attempts to publish parts of the research findings in reputable local and/or international journals will finally be made. The results will also be disseminated through workshops and seminars.

# 5. RESULTS

## 5.1. Socio-demographic characteristics of the study participants

Among 852 healths care providers, 781 (91.6%) HCPs participated in this study, 71 questionnaires were excluded (50 incomplete data and 21 of the chart is not available at the time of data collection). Of which, 412(52.8%) of the study participants were females and more than half 465(59.5) of the study participants were between the age group of 26-30 years, mean age being 30.48, SD $\pm$ 5.67. Based on the professional category, more than (55.7%) were nurses followed by medical doctors (23.9%). Nearly half (49.9%) of the study participants were married. Two third of the study participants had BSc degree and more than half (52.5%) had less than five years of service (See Table 2).

Table 2: Socio-demographic characteristics of health care providers working in selected public hospitals of Addis Ababa, 2020, Ethiopia.

| Socio demographic charcterstics | | total | |
|---|---|---|---|
| | | Frequency (n=781) | Percent (100%) |
| **Sex** | Male | 369 | 47.2 |
| | Female | 412 | 53.8 |
| **Age** | 20-25 | 87 | 11.1 |
| | 26-30 | 465 | 59.5 |
| | 31-35 | 115 | 14.7 |
| | >=36 | 114 | 14.6 |
| **Marital status** | Singel | 379 | 48.5 |
| | Married | 390 | 49.9 |
| | Divorced | 9 | 1.2 |
| | Widowed | 2 | 0.3 |
| | Living together | 1 | 0.1 |
| **Profession** | Medical doctor | 187 | 23.9 |
| | Nurse | 435 | 55.7 |
| | Midwife | 74 | 9.5 |
| | Public health officer | 28 | 3.6 |
| | Pharmacy | 57 | 7.3 |
| **Educational level** | Diploma | 43 | 5.5 |
| | Bsc | 527 | 67.5 |
| | Msc | 27 | 3.5 |
| | Gp.med | 170 | 21.8 |
| | Specialist | 14 | 1.8 |
| **Year of experience** | <5 | 410 | 52.5 |
| | >=5 | 371 | 47.5 |
| **Monthly salary in birr** | < 4000 | 18 | 2.3 |
| | 4000.0 – 4791 | 72 | 9.2 |
| | > 4791 birr | 691 | 88.5 |

## 5.2 The level of providers knowledge on preconception care

In this study, eighteen items were used to measure the level of the healthcare provider's knowledge of preconception care. Of the eighteen items, the level of the HCPs PCC knowledge score range from 0-17(Mean = 10.73, SD $\pm$3.19). Only 2 and 5 HCPs scored 0 and 17 respectively. There were no health care providers who scored 18 out of 18. More than half (55.7%) of the HCP had good knowledge about PCC and 44.3% of HCP had scored poor on knowledge of PCC.

To further classify the level of PCC knowledge 22% of HCPs had high-level PCC knowledge. The remaining 50% and 27% had a medium and lower level of PCC knowledge respectively. More than 75% of the study participants were aware of the importance of PCC for reproductive age individuals, delaying the next pregnancy at least 18months for the history of previous C/S mother and routine preconception laboratory test (HIV, VDRL, HBV&bood group) (see table 3).

Table 3:- Health care providers Preconception Care (PCC) Knowledge in selected public hospitals, Addis Ababa, 2020, Ethiopia

| Variables | Response category | N | % |
|---|---|---|---|
| Eligible client for preconception care include reproductive age individuals | True | 612 | 78.4% |
| | False | 87 | 11.1% |
| | don't know | 82 | 10.5% |
| Effective PCC should start 4 weeks before conception? | True | 446 | 57.1% |
| | False | 222 | 28.4% |
| | don't know | 113 | 14.5% |
| Periodontal disease is a risk for APO | True | 415 | 53.1% |
| | False | 190 | 24.3% |
| | don't know | 176 | 22.5% |
| Women with BMI <=18.4 planning pregnancy risk APO: | True | 460 | 58.9% |
| | False | 203 | 26.0% |
| | don't know | 118 | 15.1% |
| Women take 0.4 mg (400 mcg) of folic acid daily | True | 482 | 61.7% |
| | False | 236 | 30.2% |
| | don't know | 63 | 8.1% |
| Recommended routine pre-conceptual laboratory tests | True | 606 | 77.6% |
| | False | 148 | 19.0% |
| | don't know | 27 | 3.5% |
| Preconception genetic counseling and screening for sickle cell hemoglobinopathies | True | 453 | 58.0% |
| | False | 223 | 28.6% |
| | don't know | 105 | 13.4% |
| Genetic screening for DM and HTN | True | 472 | 60.4% |
| | False | 210 | 26.9% |
| | don't know | 99 | 12.7% |
| Isotretinions, Valproic acid, and Warfarin are medications poses teratogenic effect | True | 412 | 52.8% |
| | False | 184 | 23.6% |
| | don't know | 185 | 23.7% |
| Salbutamol avoid one month before and after conception | True | 343 | 43.9% |
| | False | 281 | 36.0% |
| | don't know | 157 | 20.1% |
| Early identification and treatment of diseases reduces the occurrence of APO | True | 525 | 67.2% |
| | False | 163 | 20.9% |
| | don't know | 93 | 11.9% |
| Recommended test for pregestational diabetes RBS test | True | 424 | 54.3% |
| | False | 289 | 37.0% |
| | don't know | 68 | 8.7% |
| Human Papillomavirus, Rubella, and Varicella are all vaccines contraindicated during pregnancy | True | 383 | 49.0% |
| | False | 256 | 32.8% |
| | don't know | 142 | 18.2% |
| Regular exercise women planning pregnancy 30 minutes of exercise 5 days a week | True | 541 | 69.3% |
| | False | 159 | 20.4% |

| | | | |
|---|---|---|---|
| | don't know | 81 | 10.4% |
| Women planning pregnancy delay pregnancy until reducing drug, alcohol, and tobacco | True | 586 | 75.0% |
| | False | 144 | 18.4% |
| | don't know | 51 | 6.5% |
| Avoidance of exposure to environmental hazards or toxin, not couples planning a pregnancy | True | 398 | 51.0% |
| | False | 310 | 39.7% |
| | don't know | 73 | 9.3% |
| Previous caesarian section client to delay the next pregnancy for at least 18 mo | True | 600 | 76.8% |
| | False | 127 | 16.3% |
| | don't know | 54 | 6.9% |
| Infertility screening and management is not the concern of PCC | True | 280 | 35.9% |
| | False | 445 | 57.0% |
| | don't know | 56 | 7.2% |
| Knowledge level | Good knowledge | 435 | 55.7% |
| | Poor knowledge | 346 | 43.3% |
| | Mean(SD) | M=10.73,SD ±3.19 | |

## 5.3 The level of providers practice on preconception care

In this study, the level of the healthcare provider's practice on preconception care was measured by 36 items. Of the 36 items measuring practice, the level of the health care provider's PCC practice score range from 36-180 (M=119.27, SD ± 33.54). Only nine study participants had practiced all PCC practice questions. Six study participants have never practiced all PCC practice questions. More than half (50.7%) of the HCP had poor practice about PCC and nearly half (49.3%) of HCP had scored good on the practice of PCC. To further classify the level of PCC practice (N=775), lower practice<50% (153, 19.7%), medium practice between 50%-75% (333, 43%) and high level practice >75% (289, 37.3%).

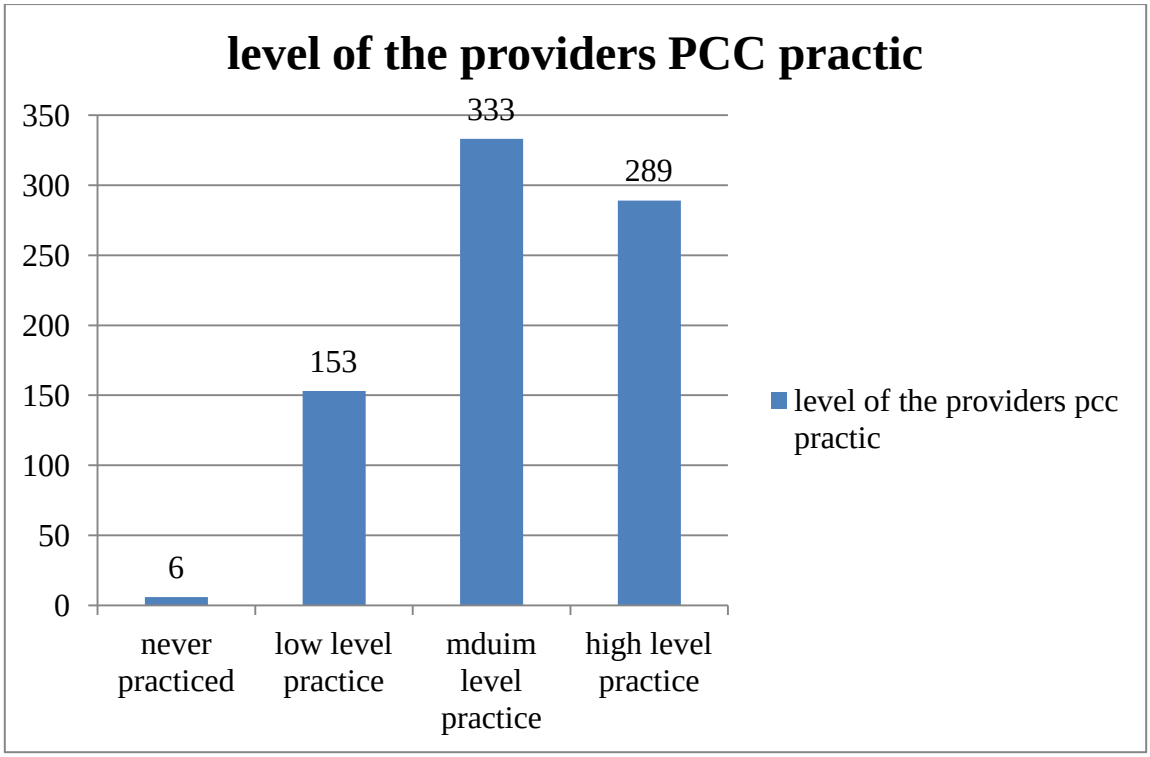



Figure 3: Health care provider's level of Practicing PCC in the selected public hospital of Addis Ababa (n=781) 2020, Ethiopia.

In this study preconception, counseling questionnaires were used to assess the level of the health care provider's PCC practice. More than half of the health care provider's counseled the importance of screening for STI/HIV and nutrition for a client. But physical exercise and environmental hazards &toxins were low practicings by health care providers (see table 4).

Table 4:-Health care providers practice preconception care counseling in selected public hospitals in Addis Ababa, 2020, Ethiopia.

| Variables | | n | % |
|---|---|---|---|
| Family planning methods | Never | 97 | 12.4% |
| | Rarely | 137 | 17.5% |
| | Sometimes | 243 | 31.1% |
| | Often | 112 | 14.3% |
| | Always | 192 | 24.6% |
| Pregnancy spacing | Never | 75 | 9.6% |
| | rarely | 201 | 25.7% |
| | sometimes | 213 | 27.3% |
| | often | 117 | 15.0% |
| | always | 175 | 22.4% |
| Physical exercise: | Never | 84 | 10.8% |
| | rarely | 171 | 21.9% |
| | sometimes | 269 | 34.4% |
| | often | 123 | 15.7% |
| | always | 134 | 17.2% |
| Bodyweight | Never | 64 | 8.2% |
| | rarely | 134 | 17.2% |
| | sometimes | 290 | 37.1% |
| | often | 152 | 19.5% |
| | always | 141 | 18.1% |
| Nutrition: | Never | 43 | 5.5% |
| | rarely | 97 | 12.4% |
| | sometimes | 247 | 31.6% |
| | often | 141 | 18.1% |
| | always | 253 | 32.4% |
| Alcohol tobacco, and psychoactive substance use : | Never | 138 | 17.7% |
| | rarely | 115 | 14.7% |
| | sometimes | 211 | 27.0% |
| | often | 128 | 16.4% |
| | always | 189 | 24.2% |
| Multivitamin containing Folic acid : | Never | 65 | 8.3% |
| | rarely | 149 | 19.1% |
| | sometimes | 225 | 28.8% |
| | often | 142 | 18.2% |
| | always | 200 | 25.6% |
| Maintaining good control of any preexisting medical conditions before conception | Never | 73 | 9.3% |
| | rarely | 132 | 16.9% |
| | sometimes | 246 | 31.5% |
| | often | 141 | 18.1% |
| | always | 189 | 24.2% |
| Importance of screening for STIs/HIV | Never | 63 | 8.1% |
| | rarely | 132 | 16.9% |
| | sometimes | 185 | 23.7% |

| | | | |
|---|---|---|---|
| | often | 113 | 14.5% |
| | always | 288 | 36.9% |
| Dangers of prescribed and non-prescribed medication use | Never | 63 | 8.1% |
| | rarely | 137 | 17.5% |
| | sometimes | 200 | 25.6% |
| | often | 130 | 16.6% |
| | always | 251 | 32.1% |
| Environmental hazard & toxins | Never | 139 | 17.8% |
| | rarely | 151 | 19.3% |
| | sometimes | 225 | 28.8% |
| | often | 98 | 12.5% |
| | always | 168 | 21.5% |
| Preventive of vaccines | Never | 115 | 14.7% |
| | rarely | 144 | 18.4% |
| | sometimes | 201 | 25.7% |
| | often | 128 | 16.4% |
| | always | 193 | 24.7% |
| Inviting partner for preconception counseling, risk screening, and management | Never | 116 | 14.9% |
| | rarely | 136 | 17.4% |
| | sometimes | 212 | 27.1% |
| | often | 133 | 17.0% |
| | always | 184 | 23.6% |

Preconception assessment and risk screening questionnaires were used to assess the level of providers PCC practice. More than half of health care providers were assessed past obstetric and gynecologic history, past medical and surgical history, and physical examination for clients. But less than 30% of health care providers have assessed the history of dental care, social history particular lifestyle behaviors, and exposure to environmental toxins and contaminants for clients (see table 5).

Table 5:- Health care providers preconception health assessment in selected public hospital Addis Ababa, 2020, Ethiopia

| Variables | | N | % |
|---|---|---|---|
| Demographic information | Never | 103 | 13.2% |
| | rarely | 122 | 15.6% |
| | sometimes | 174 | 22.3% |
| | often | 131 | 16.8% |
| | always | 251 | 32.1% |
| Past Obstetric & Gynecologic history | Never | 73 | 9.3% |
| | rarely | 157 | 20.1% |
| | sometimes | 136 | 17.4% |
| | often | 121 | 15.5% |
| | always | 294 | 37.6% |
| Past medical and surgical history | Never | 82 | 10.5% |
| | rarely | 100 | 12.8% |
| | sometimes | 176 | 22.5% |
| | often | 133 | 17.0% |
| | always | 290 | 37.1% |
| Genetic history or family pedigree | Never | 112 | 14.3% |
| | rarely | 131 | 16.8% |
| | sometimes | 218 | 27.9% |
| | often | 114 | 14.6% |
| | always | 206 | 26.4% |
| History of dental care/checkup | Never | 167 | 21.4% |
| | rarely | 142 | 18.2% |
| | sometimes | 244 | 31.2% |
| | often | 94 | 12.0% |
| | always | 134 | 17.2% |
| Social history particularly lifestyle behaviors | Never | 101 | 12.9% |
| | rarely | 142 | 18.2% |
| | sometimes | 246 | 31.5% |
| | often | 135 | 17.3% |
| | always | 157 | 20.1% |
| Exposure to environmental toxins and contaminants | Never | 138 | 17.7% |
| | rarely | 143 | 18.3% |
| | sometimes | 196 | 25.1% |
| | often | 129 | 16.5% |
| | always | 175 | 22.4% |
| Pharmacologic history | Never | 62 | 7.9% |
| | rarely | 163 | 20.9% |
| | sometimes | 235 | 30.1% |
| | often | 137 | 17.5% |
| | always | 184 | 23.6% |
| Nutritional assessment particularly BMI | Never | 63 | 8.1% |
| | rarely | 133 | 17.0% |
| | sometimes | 244 | 31.2% |

| | | | |
|---|---|---|---|
| | often | 148 | 19.0% |
| | always | 193 | 24.7% |
| Psycho-social assessment | Never | 88 | 11.3% |
| | rarely | 177 | 22.7% |
| | sometimes | 234 | 30.0% |
| | often | 133 | 17.0% |
| | always | 149 | 19.1% |
| Physical examination | Never | 49 | 6.3% |
| | rarely | 121 | 15.5% |
| | sometimes | 208 | 26.6% |
| | often | 141 | 18.1% |
| | always | 262 | 33.5% |
| Employment history | Never | 86 | 11.0% |
| | rarely | 168 | 21.5% |
| | sometimes | 227 | 29.1% |
| | often | 141 | 18.1% |
| | always | 159 | 20.4% |
| Vaccination status | Never | 96 | 12.3% |
| | rarely | 130 | 16.6% |
| | sometimes | 212 | 27.1% |
| | often | 113 | 14.5% |
| | always | 230 | 29.4% |

In this study prevention and management of identified risk factor questionnaires were used to assess the health care provider's level of the PCC practice. More than half of the study participants were provided provider-initiated HIV testing and counseling, linking clients to other relevant departments and pregnancy confirmation for clients (see table 6).

Table 6:-Health care providers practicing PCC intervention either yourself or by referring selected public hospitals, Addis Ababa, 2020, Ethiopia.

| Variables | | N | % |
|---|---|---|---|
| Folic acid supplementation/prescription | Never | 92 | 11.8% |
| | Rarely | 98 | 12.5% |
| | sometimes | 230 | 29.4% |
| | Often | 133 | 17.0% |
| | Always | 228 | 29.2% |
| Substance use cessation | Never | 124 | 15.9% |
| | Rarely | 156 | 20.0% |
| | sometimes | 193 | 24.7% |
| | Often | 115 | 14.7% |
| | Always | 193 | 24.7% |
| Select safe medication or substitute the existing with a safe one | Never | 90 | 11.5% |
| | Rarely | 111 | 14.2% |
| | sometimes | 226 | 28.9% |
| | Often | 154 | 19.7% |
| | Always | 200 | 25.6% |
| Ordering/checking routine preconception lab investigations | Never | 93 | 11.9% |
| | Rarely | 121 | 15.5% |
| | sometimes | 205 | 26.2% |
| | Often | 154 | 19.7% |
| | Always | 208 | 26.6% |
| Diagnosing & managing acute or chronic preconception risk Conditions | Never | 79 | 10.1% |
| | Rarely | 128 | 16.4% |
| | sometimes | 186 | 23.8% |
| | Often | 178 | 22.8% |
| | Always | 210 | 26.9% |
| Controlling existing pre-gestational chronic diseases | Never | 67 | 8.6% |
| | Rarely | 136 | 17.4% |
| | sometimes | 195 | 25.0% |
| | Often | 176 | 22.5% |
| | Always | 207 | 26.5% |
| Vaccination of client as per the national protocol | Never | 130 | 16.6% |
| | Rarely | 105 | 13.4% |
| | sometimes | 196 | 25.1% |
| | Often | 134 | 17.2% |
| | Always | 216 | 27.7% |
| Pregnancy confirmation | Never | 52 | 6.7% |
| | Rarely | 104 | 13.3% |
| | sometimes | 215 | 27.5% |
| | Often | 134 | 17.2% |
| | Always | 276 | 35.3% |
| Linking client to other relevant department or organizations | Never | 61 | 7.8% |
| | Rarely | 86 | 11.0% |

| | | | |
|---|---|---|---|
| Provider initiated HIV testing and counseling | sometimes | 193 | 24.7% |
| | Often | 202 | 25.9% |
| | Always | 239 | 30.6% |
| | Never | 52 | 6.7% |
| | Rarely | 75 | 9.6% |
| | sometimes | 155 | 19.8% |
| | Often | 165 | 21.1% |
| | Always | 334 | 42.8% |

When asked to propose who should provide PCC, less than half (40.3%), gave their opinion that all health care providers, i.e. medical doctors, nurses, midwives, public health officers, and health extension workers should provide PCC. The remaining participants indicated specific healthcare providers (Figure 3).

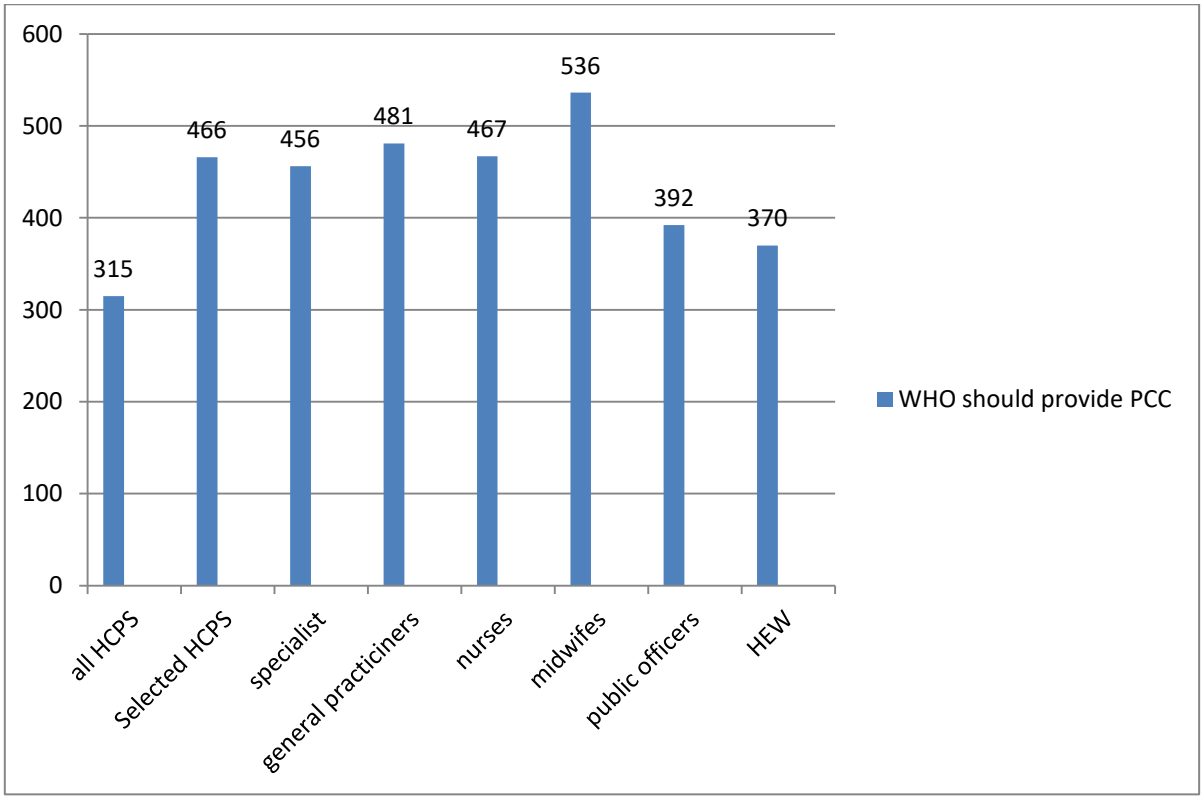



Figure 4: Health Care Providers' idea of who should give PCC in the selected public hospital, Addis Ababa, 2020, Ethiopia

When asked to propose do you ask for the reproductive life plan (RPL) of clients attending to your day to day practice, most of 86 % of HCPs had RPL screening practice. The remaining study participated in never RPL screening practice. When asked to propose which health institutions should give PCC practice, more than half (55.7%) of health care providers gave their opinion that all health institutions. The remaining respondents indicated selected health institutions. Most health institutions had not a policy and procedural document guiding PCC. Around 62% of this study participant said no clear policy and procedural document in the institutions. And also 65% of study participants not ever seen national guidelines or protocols prepared by the federal minister of health. Most 82% of study participants wanted training on PCC and 65 % of study participants were willing to incorporate elements of PCC in daily practice.

## 5.4 Factors associated with PCC practice

Based on bivariant analysis professional category, monthly salary, level of knowledge, reproductive lifespan screening, who should give PCC care and which institution should give PCC service were all associated with the level of preconception care practice and those variables with p-value <0.25 in the bivariable analysis were included in multivariable logistic regression analysis. In multivariable analysis professional category, level of knowledge, monthly salary, and reproductive life span screening were all significantly associated with preconception practice (p <0.05).

The likelihood of not practicing PCC was fivefold higher among those HCPs who had a poor level of knowledge on PCC than those who had a good level of knowledge (AOR=5.49, 95% C.I 3.84-7.84). Compared to medical doctors, nurses, midwives and health officers, pharmacy had the probability of less likely practicing PCC (AOR =0.15 95% CI 0.62-0.34, AOR=0.10 95% CI, 0.04-0.23, AOR= 0.03, 95% CI, 0.01-0.08) AOR =0.15, 95% CI, 0.05-0.47) respectively. The odds of practicing of PCC was more than three-fold higher among those HCPs who did not screen women's intention to pregnancy or their reproductive life plan (RPL) than those screening(AOR= 3.84, 95% CI, 2.20-6.71). The odds of having good PCC practice among those who earn a salary of >4791 birrs five times fold than those who earn a salary of <4000 birrs (AOR =5.15, 95% CI, 1.39-19.03).

Table 7: Results bivariate & multivariate logistic regression analysis of PCC practice among healthcare providers in selected public hospitals, Addis Ababa, 2020 Ethiopia.

| **Variable** | | **HCP practice status** | | | |
|---|---|---|---|---|---|
| | | Good practice | Poor practice | COR (95.0%, C.I.) | AOR (95.0%, C.I.) |
| **Knowledge level** | Good knowledge | 290 | 145 | 1 | **1** |
| | Poor knowledge | 95 | 251 | 5.29(3.88-7.20) | **5.49(3.84-7.84)** |
| **Profession** | Medical doctor | 103 | 84 | 7.51(3.37-16.73) | **0.15(0.62-0.34)** |
| | Nurse | 200 | 235 | 5.21(2.41-11.27) | **0.10(0.04-0.23)** |
| | Midives | 61 | 13 | 28.74(11.03-74.88) | **0.03(0.01-0.08)** |
| | Health officer | 13 | 15 | 5.31(1.85-15.23) | **0.15(0.05-0.47)** |
| | Pharmacy | 8 | 49 | 1 | 1 |
| **Salary per month** | <4000 | 4 | 14 | 3.55(1.16-10.90 | **5.15(1.39-19.03)** |
| | 4000-4791 | 33 | 39 | 2.96(0.89-9.87) | **1.45(0.83-2.55)** |
| | >4791 | 348 | 343 | 1 | |
| **Who should give PCC?** | Selected HCPS | 190 | 276 | 2.36(1.76-3.16) | 1.09(0.70-1.70) |
| | All HCPS | 195 | 120 | 1 | |
| **Which health institutions give PCC?** | Selected health institusions | 126 | 220 | 2.57(1.92-3.44) | 1.54(0.99-2.38) |
| | All health institutions | 259 | 176 | 1 | |
| **Reproductive life screening** | Not screening | 21 | 86 | 4.81(2.92-7.93) | **3.84(2.20-6.71)** |
| | Scrennning | 364 | 310 | 1 | |

1= Reference category, COR= cruds odd ratio, AOR=adjusted odd ratio, CI = confidence interval

# 6. DISCUSSION

Preconception assessment and risk screening, preconception counseling, and prevention and management of identified risk factors are essential elements of preconception care. These elements of care should address step by step to achieve good preconception care. Missing the essential component of PCC throughout the following results in substandard or poor PCC. PCC should be given regularly to all reproductive-age individuals before conception(1). In this study, only 37 percent of HCPs were provided an essential element of preconception care.

In this study, 37.3% of HCPs gave full packaged PCC care, 43% substandard, and 19.7% poor package of preconception care. These findings, compared to reports from other studies in Hawassa, are evidence showing the presence of the service in the study area. This is because this study was done in Addis Ababa which is the capital city of Ethiopia. A crossectional study in Iran reported the nearly 70% of physicians and 75% of Bachelors of Science in family health in all preconception care fields was poor practice, but the majority of family physician project midwives (64.7%) and healthcare social workers (52.4%) had a moderate practice (25). Interpretation and comparison of this result might not be possible due to different study populations. In one crossectional study in Hawassa, almost all HCPs were not implementing PCC (85%).The remaining HCPs claiming to practice (15%)(21). Another study in Tikuranbesa hospital conducted on residents reported that 19.2% of study particpants had good practice scores, whereas 42.3% had moderate and 38.5% had poor preconception care practice scores(30). The discrepancy might be different study participants. Still, the existence of the practice in its lower form might lead to prepare policy, guidelines, and continuous training for further improvement of the services. Efforts may be made by the concerned bodies to improve the practice of preconception care through the preparation of guidelines, providing continious training, and creating awareness in the health care systems.

This study asked to propose who should provide PCC, less than half (40.3%), gave their opinion that all health care providers, i.e. medical doctors, nurses, midwives, public health officers, and health extension workers should provide PCC. This might be the absence of a clear job description, absence of facility-based policy, and procedural guidelines.

This study pinpoints four major factors to practice preconception care. HCP's poor PCC knowledge is the first factor associated with the non-implementation of PCC. The odd of not practicing PCC were more than five times greater than among HCPs with poor PCC knowledge than HCPs with good PCC knowledge. A similar study conducted on this topic in Hawassa identified that HCP's knowledge of PCC is a key determinant factor to providers' PCC practice(21). Poor PCC practice might be related to lack of training on PCC including in-service and pre-service training. Health care provider's knowledge of PCC will lead to improved PCC practice. Knowledge is required for correctly performing a duty. However, acting without knowledge distances the providers from their goal, rendering the outcome impossible.

This study identified other factors associated with poor PCC. Compared to medical doctors, nurses, midwives, and public officers to the pharmacy had a higher likelihood of not-practicing PCC. Similar studies found, but couldn't make a comparison with this result(21). The discrepancy noted in this study may providers' educational preparation and setups in which these professionals are working. The WHO also revealed the benefit of building the capacity of health care providers and health care managers to enhance the planning, implementation, and monitoring of PCC(4). The CDC also vigorously advocated that all HCPs caring for a woman need to accomplish the suggested PCC components. This document concentrated on the need to improve the capacity building on the preconception care of pre-service training(2). Provision of pre-service education along with the provision of in-service education for all HCPs may help provide the service to all HCPs caring for the reproductive-aged individuals.

This study also recognized another factor associated with poor practice PCC. HCPs that are not screening the RPL of their clients had odds of not practicing PCC by three-fold higher than those who screening RPL. A cross-sectional study from Hawassa reported that HCPs who are not regularly screening the RPL of the client had a likelihood of not practicing or not implementing PCC by seven-fold higher than those who regularly screen RPL(21). The reason for the similarity for these studies might be due to nearly a similar sample size and similar

study design. Improvement of RPL with sufficient PCC training and institutional encouragement may help to address all the eligible to get PCC. The insertion of a single RPL question in clinical assessment formats may use as an alarm to all HCPs(21). The HCP's monthly salary was also among the factors affecting the HCP's PCC practice in this study. The analysis indicated that the odd of having poor PCC practice was higher among HCPs who earn a low salary. Similar studies could not be found to make a comparison with this result. This maybe who earns more salary may have more responsibility and a higher level of education.

This study also identified there is no significant association between the level of PCC practice and who should provide preconception care service given. Similar studies found those who perceived that all HCP should provide PCC were more likely to practice PCC as compared to HCPs with the perception that selected HCPs are responsible. This may be this study participant working similar working places that are hospital health care providers. But a similar study in Hawassa includes health centers and health extension workers.

# 7. STRENGTH AND LIMITATION OF THE STUDY

**Strengths**

This study is the first to assess preconception care practices among health care providers in selected public hospitals in Addis Ababa. However, the findings of this study can only be generalized to this cohort of the study population in the study setting.

**Limitations**

The level of the provider's preconception care practice was measured by the questionnaire. The absence of a means to validating their actual performance might not guarantee the precision of data. Despite the rigorous techniques used to minimize, like any other survey studies, possibilities of recall and social desirability bias are anticipated.

As in all cross-sectional studies, we can infer association but not causation. The timing of the study period is also a limitation of the study as results are limited by the cross-sectional time period.

# 8. CONCLUSION

Based on this study, the following conclusions are made:

- The study results demonstrated that more than half of the participants had good knowledge of preconception care
- The study revealed the absence of a standard and complete PCC practices by the HCPs
- The study identified that the majority of Providers' level of practice of preconception care was found to be low.
- The study showed that poor knowledge about PCC and Providers not screening Clients' RLP were predators of non- practicing PCC
- PCC is not well incorporated and plaint within the study space which indicates that also PCC is not well integrated into the area. Making ready of PCC policy and protocols and continuous pre-service and in-service education of HCPs are recommended to strengthen the integration of the health care system**.**

# 9. RECOMMENDATIONS

Based on the study findings, the following recommendations are made:

**The Federal Ministry of Health**

- There is no recognized policy document guiding the implementation of PCC in Ethiopia. Hence, the FMOH is recommended for making ready clear PCC policy and integrate it into the Health care system
- Health care training programs don't include PCC in the curriculum. The FMOH is thus recommended to include PCC elements into the nationally harmonized curriculums for the training of medical doctors, nurses, midwives, pharmacists, health officers, and health extension workers.
- There is no PCC guideline or Protocol to guide HCP's practice. The FMOH is recommended to avail resources such as guidelines, procedural documents and other published resources on PCC to increase the knowledge and practice of HCPs

**Addis Ababa Health Bureau**

- Provide continuous training (pre-service and in-service training.) to health care providers on Preconception care
- Organize mentorship to the Health Care Providers in the implementation of PCC at the facility level
- Create public awareness using media outlets about preconception care

**Researchers**

- Further study is recommended on how to tackle the barriers that hinder the provision of PCC and how to integrate PCC services into the health care system.

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# 11. APPENDIX

**Annex: 1 study Information sheet**

**Introduction**

Good morning /good afternoon.

My name is _____. I am working with Yihalem Abeje who is researching the partial fulfillment of a Master's Degree in maternity and reproductive health at Addis Ababa University. His research project is entitled **assessment of preconception care practice and associated factors among health care providers in selected public hospitals in Addis Ababa, Ethiopia 2020.**

**Dear participants:**

This study aims to assess preconception care practice and associated factors among health care providers. And you are selected to participate in this study by chance. The benefits of this study are to generate information about preconception care practice and associated factors among health care providers in selected public hospitals Addis Ababa, Ethiopia; which may help policymakers, responsible persons in the hospital, stakeholders and significant others to take actions based on the findings. There is no financial benefit for you in participating in the research. However, to effectively attain the objective of the research, I am kindly requesting your participation.

There are questions related to Knowledge, practice and associated factors of preconception care among health care providers for you to fill and there is no need to put your name on the questionnaire. Your responses will be completely confidential. It is your full right to refuse in responding to any question or all of the questions. If you don't want to participate you can leave the questionnaire empty even you can stop filling the questionnaire in between. However, your honest answers to these questions will help me in better understanding of Knowledge, practice and associated factors of preconception care. It will take a10 to 20 minutes to answer these questions.

Name of Principal Investigator: - Yihalem Abeje

Phone number: +251918-373185

Name of Advisors: -Dr. Endalew G. (Assist professor)

I confirm that I have read and understood the information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to take out at any time, without giving a reason and without cost.

I Agree ☐ I Disagree ☐

**Annex 2 English version questionnaires for health care providers: Preconception care knowledge, practice (PCC-KP) questionnaires for health care providers**

Thank you for dedicating approximately 10 -20 minutes to the completion of this questionnaire. Your honest and accurate responses will contribute towards addressing the high maternal and infant mortality rate in our country. You can be confident that your input will remain confidential and will not expose you in any way.

Definition of preconception care (PCC)

Preconception care (PCC): What is PCC?

**Preconception care** is the provision of biomedical, behavioral and social health interventions necessary to improve pregnancy outcomes and the overall health of women and her partner.

**Preconception care (PCC)** is among the parts of the continuum of maternal & reproductive health care services given **before conceptions** and **between successive pregnancies** (Inter-conception Care).

**Preconception Care (PCC) questionnaire: Health workers**

**Instruction:** Please read the following questions listed from Qn# 101 to 513 and tick in the box of the best option you choose and write your answer on the space provided to some of the questions.

**PART ONE: Socio-demographic, professional, and work-related questions**

**101. Gender** 1. □ Male 2. □ Female

**102. Your age in years _____** year

**103. Marital status**

1. □ Single 2. □ Married 3. □ Divorced 4. □ Widowed 5. □ Living together

**104. Religion** **1.** □ Orthodox 2. □ Protestant 3. □ Muslim 4 □ Catholic 5. □ Other_____

**105. Profession:**

1. □ Medical Doctor
2. □ Nurse
3. □ Midwife
4. □ Public Health Officer
5. Pharmacy
6. □ Other_____

**106. Year of experience/ _____ year**

**107. Maximum educational level attended with your health profession**

1. □ Diploma
2. □ B Sc
3. □ M.Sc.
4. □ GP MD
5. □MD/Specialty
6. □ PhD

**108. In which department you are currently working? _____**

**109. Monthly salary paid** in **Ethiopian birr** _____ Birr/month

**110. How many patients do you manage per day on average? _____** patients/day

**PART TWO: Preconception Care (PCC) Knowledge related questions.**

| | Items | True | False | Don't know |
|---|---|---|---|---|
| 201. | The eligible clients for preconception care (PCC) include all adolescents and reproductive-aged individuals | 1 □ | 2 □ | 3 □ |
| 202. | To be effective PCC should start four weeks before conception | 1 □ | 2 □ | 3 □ |
| 203. | Periodontal disease is a risk factor for adverse pregnancy outcomes (APO) | 1 □ | 2 □ | 3 □ |
| 204. | Women with BMI ≤ 18.4 planning pregnancy are at risk of developing APO | 1 □ | 2 □ | 3 □ |
| 205. | All women of reproductive age should take 0.4 mg (400 mcg) of folic acid daily. | 1 □ | 2 □ | 3 □ |
| 206. | The recommended routine pre-conceptual laboratory tests include Hgb, Hct, HIV, HBV, and RPR or VDRL tests | 1 □ | 2 □ | 3 □ |
| 207. | Preconception genetic counseling and screening include recommending carrier screening tests for the client with sickle cell hemoglobinopathies | 1 □ | 2 □ | 3 □ |
| 208. | A clinician providing PCC for clients with diabetes mellitus and chronic hypertension should recommend genetic screening testing | 1 □ | 2 □ | 3 □ |
| 209. | Isotretinions, Valproic acid, and Warfarin are medications poses teratogenic effects requiring preconception modification | 1 □ | 2 □ | 3 □ |
| 210. | Women with asthma planning pregnancy should avoid taking Salbutamol one month before and after conception | 1 □ | 2 □ | 3 □ |
| 211. | Early identification and treatment of diseases like depression, seizure disorder, and phenylketonuria during the preconception period reduce the occurrence of APO | 1 □ | 2 □ | 3 □ |
| 212. | The recommended test that guarantees good periconceptional blood sugar control for a woman with pre-gestational diabetes is random blood sugar (RBS) test | 1 □ | 2 □ | 3 □ |
| 213. | Except Influenza vaccine, vaccines such as Human | 1 □ | 2 □ | 3 □ |

| | | | | |
|---|---|---|---|---|
| | Papillomavirus, Rubella, and Varicella are all vaccines contraindicated during pregnancy | | | |
| 214. | Recommending regular exercise is an important PCC counseling point. Thus, women planning pregnancy should aim 30 minutes of moderate exercise 5 days a week. | 1 □ | 2 □ | 3 □ |
| 215. | Women planning pregnancy should be advised to delay pregnancy until reducing drug, alcohol and tobacco use | 1 □ | 2 □ | 3 □ |
| 216. | Avoidance of exposure to environmental hazards or toxin such as ionizing radiation, pesticide, lead, mercury, & pets is a concern for women with established first-trimester pregnancy not for couples planning a pregnancy | 1 □ | 2 □ | 3 □ |
| 217. | A clinician attending clients with previous caesarian section (C/S) should advise the client to delay the next pregnancy for at least 18 months before the next conception | 1 □ | 2 □ | 3 □ |
| 218. | Infertility screening and management is not the concern of PCC | 1 □ | 2 □ | 3 □ |

**PART THREE: Preconception Care (PCC) Practice related questions**

**301. Do you ask for the reproductive life plan (RPL) of clients attending to your day to day practice?**

1. □ Never
2. □ Rarely
3. □ Sometimes
4. □ Often
5. □ Always

**302. If you at least rarely ask for RPL, whom do you asking? (**Select all that can apply and add if you have more)

1. □ Adult males ( ≥ 19 years)
2. □ Adolescents and Teens (12-18 Years)
3. □ adult females ( 19 – 49 years)
4. □ Indicate if other_____

**3.1. Do you in your practice, for a client contemplating/planning a pregnancy, give counseling about issues listed from Qn # 303 - 315?**

| | About… | **Never** | **Rarely** | **Sometimes** | **Often** | **Always** |
|---|---|---|---|---|---|---|
| 303. | Family planning methods | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 304. | Pregnancy spacing | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 305. | Physical exercise | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 306. | Body weight | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 307. | Nutrition | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 308. | Alcohol tobacco, and psychoactive substance use | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 309. | Multivitamin containing Folic acid | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 310. | Importance of maintaining good control of any preexisting medical conditions before conception | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 311. | Importance of screening for STIs/HIV | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 312. | Dangers of prescribed and non-prescribed medication use | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 313. | Environmental hazard & toxins | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 314. | Preventive vaccines | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 315. | The importance of inviting partner for preconception counseling, risk screening, and management | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |

**3.2**. Do **you in your practice, for a client contemplating, conduct the Following preconception health assessment (Qn # 316- 328) to find preconception health risk factors?**

| | | **Never** | **Rarely** | **Sometimes** | **Often** | **Always** |
|---|---|---|---|---|---|---|
| **316.** | Demographic information/ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 317. | Past Obstetric & Gynecologic history | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 318. | Past medical and surgical history | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 319. | Genetic history or family pedigree | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 320. | History of dental care/checkup | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 321. | Social history particularly lifestyle behaviors | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 322. | Exposure to environmental toxins and contaminants | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 323. | Pharmacologic history | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 324. | Nutritional assessment particularly BMI | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 325. | Psycho-social assessment | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 326. | Physical examination | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 327. | Employment history | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 328. | Vaccination status | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |

**3.3. Do you in your practice, for a client planning a pregnancy, carry out the following intervention either yourself or by referring or transferring the client to other departments/health facility where the client/s get services indicated in the table below?**

| | | **Never** | **Rarely** | **Sometimes** | **Often** | **Always** |
|---|---|---|---|---|---|---|
| 329. | Folic acid supplementation/prescription | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 330. | Substance use cessation. Eg. alcohol, cigarette, or other drugs | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 331. | Select safe medication or substitute the existing with a safe one | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 332. | Ordering/checking routine preconception lab investigations | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 333. | Diagnosing & managing acute or chronic preconception risk Conditions | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 334. | Controlling existing pre-gestational chronic diseases | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 335. | Vaccination of client as per the national protocol | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 336. | Pregnancy confirmation | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 337. | Linking client to other relevant department or organizations | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 338. | Provider initiated HIV testing and counseling (PIHTC) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |

**PART FOUR: Additional factors associated with PCC practice**

**Have you taken training on or thought about topics listed from (Select all that can apply) Qn # 401 - 409?**

| | | **Yes during my stay at University College (Pre-service training)** | **Yes as an in-service training** | **Never ever get the training** | **Don't remember** |
|---|---|---|---|---|---|
| 401. | Reproductive life plan screening & brief counseling | 1 □ | 2 □ | 3 □ | 4 □ |
| 402. | the importance of increasing public awareness Preconception health &PCC | 1 □ | 2 □ | 3 □ | 4 □ |
| 403. | how to conduct preconception risk assessment | 1 □ | 2 □ | 3 □ | 4 □ |
| 404. | how to provide preconception educational & counseling | 1 □ | 2 □ | 3 □ | 4 □ |
| 405. | how to manage identified preconception risk factors | 1 □ | 2 □ | 3 □ | 4 □ |
| 406. | the elements of interconception care needed to prevent APO | 1 □ | 2 □ | 3 □ | 4 □ |
| 407. | About HIV/AIDS Testing and management (E.g. PMTCT, PIHCT,VCT, or ART) | 1 □ | 2 □ | 3 □ | 4 □ |
| 408. | PCC considerations for clients with other chronic diseases | 1 □ | 2 □ | 3 □ | 4 □ |
| 409. | how to provide alcohol or tobacco cessation service | 1 □ | 2 □ | 3 □ | 4 □ |

**PART FIVE: Regarding actual & potential access to resources and Hp practicing PCC**

| | | Yes | No | |
|---|---|---|---|---|
| 501. | Do you have access to an internet | □ 1 | □ 2 | If "No" go to Qn# 503 |
| 502. | From do you get internet access?<br>**( Select all that can apply )**<br>□ 1. Office or library<br>□ 2 From an internet cafe<br>□ 3 From hotel WIFI service<br>□ 4 Mobile phone /CDMA/ internet | | | |
| 503. | Do you use your Smartphone(SP) to share e-resources from others | □ 1 | □ 2 | □ 3 I Don't have SP |
| 504. | Does your institution have a library? | □ 1 | □ 2 | |
| 505. | Does your institution have a policy and procedural document guiding PCC? | □ 1 | □ 2 | □ 3 I Don't know |
| 506. | Did you, so far, get or see any PCC gridline or protocol from any source? | □ 1 | □ 2 | |
| 507. | Have you ever seen national PCC guidelines or protocols prepared by FMOH? | □ 1 | □ 2 | □ 3 I Don't know |
| 508. | Have you seen any HP practicing PCC in your facility? | □ 1 | □ 2 | |
| 509. | Are you willing to incorporate elements of PCC in your daily practice? | □ 1 | □ 2 | □ 3 Undecided |
| 510. | Do you want training on PCC? | □ 1 | □ 2 | |

**511. Whom do you recommend to provide preconception care (Select all that can apply & add if more)**

1. □ All Specialist Doctors
2. □ All General Practitioners
3. □ All Nurses
4. □ All Midwives
5. □ Health Officers
6. □ Health Extension workers
7. Others._____

512. In which facility should preconception care service be given (select all that can apply and add if you suggest other)

1. □ Health center
2. □ Hospital
3. □ Other. _____

513. If you provide PCC in the past three months, for how many times you provide PCC? ____ times in the past three months (please write it in number)

Thank you for participating in this study!!!

**Amharic version survey questionnaires for health care providers (HCPs): Preconception care knowledge, practice (PCC-KP) questioner for HCPs**

**የአማርኛ መጠይቅ ስምምነት ቅጽ**

አንደምን አደርሽ /እንደም ዋልሽ። ስሜ ----------ይባላል። የምሰራዉ በአዲስ አበባ ዩኒቨርሲቲ የእናቶች እና ስነ ተዋልዶ ትምህርት ክፍል የሁለተኛ ዲግሪ ማሟያ ጥናታዊ ጽሁፍ በማድረግ ላይ ከሚገኙት ይህዓለም አበጀ ከተባለ ጥናት አድራጊ ስር ነዉ። የጥናቱም ርእስ **"በእርግዝና እና ወሊድ ወቅት በእናት እና በሚወለደው ጽንስ/ልጅ/ ላይ የሚከሰቱ የጤና ቀውሶች ለመከላከል የሚሰራውን የቅድመ ጽንሰት ጤና ክብካቤ አገልግሎት (ቅ/ጽ/ጤ/ክ/አ) ምንያህል እየሰሩ እነደሆነ ለማጤን የሚደረግ ጥናት"** ነው። የ ጽሁፍ ቃለመጠይቁ ከ10 እሰከ 20 ደቂቃ ሊፈጅ ይችላል። ጥያቄዎቹ ስለ ቅ/ጽ/ጤ/ክ አገልግሎት ያልዎትን ግንዛቤ የትምህርት ዝግጅት እነዲሁም ምን ያህል እየሰሩ እነደሆነ የሚጠይቁ ናቸው። በዚህ ጥናት በመሳተፍዎ በቀጥታ የሚያገኙት ጥቅም ላይኖር ይችላል ሆኖም ጥናቱ ለሚመለከታቸው ፖሊሲ አዘጋጆች እና ለመንግስት አካላት የሆስፒታል ሰራተኞችን የቅድመ ጽንሰት ጤና ክብካቤ አገልግሎት (ቅ/ጽ/ጤ/ክ/አ) መሻሻልን በተመለከተ እቅድ ለማውጣት ይጠቅማቸዋል። እነዲሁም በእናቶች በጽንስና በልጆች ጤንነት ላይ የሚደርሰውን ችግር በመቀነስ የእናቶችንና የልጆችን ሞት፣ ጭንገፋ፣ አካልጉዳተኝነት፣ እና ሌሎችንም ተያያዥ ችግሮች ለመቅረፍ እየተደረገ ያለውን ጥረት ለመቅረፍ ስለሚረዳ በተዘዋዋሪ እርሶንና ማህበረሰቡን የሚጠቅም ስራ እንደሚሆን ተስፋ እናደርጋለን። የምናገኘውን መረጃ በሚስጥር እንጠብቃለን። ስምዎ ተመዝግቦ አይያዝም። በጥናቱ ያለመሳተፍ ሙሉ መብትዎ የተጠበቀ ነው። ለመሳተፍ ፈቅደው አንዳንድ መረጀዎችን ላለመስጠት ከፈለጉ መረጀውን ያለመስጠት መብትዎ ይከበርልዎታል። ምናልባት መረጀውን ከሰጡ በሁዋላ ስለ ግል መረጃዎ ጉዳይ ወይም ስለጥናቱ ማወቅ ከፈለጉ የጥናቱን ዋና ተመራማሪ ይህዓለም አበጀ በ +251-918-373185 በመደወል ማግኘትና መጠየቅ ይችላሉ።

**የሚስጥር አጠባበቅ ስምምነት**

እኔ ጥናቱን በተመለከተ ተገቢውን የሆነ መረጃ በተገቢው ሁኔታ ተነግሮኝ በአግባቡ ተረድቻለሁ። ጥናቱ ምንም አይነት ጉዳት በህይወቴ ላይ እንደማያደርስ ተረድቻለሁ ስለዚህም ምንም ዓይነት ካሳ አያስፈልገኝም። እኔ የዚህ ጥናት ተሳታፊ ለመሆን ተስማምቻለሁ፤ በተጨማሪም ለመረጃ ሰብሳቢዎችም ለጥናቱ አስፈላጊ የሆነ ተገቢውን መረጃ እንዲሰበስቡ ተስማምቻለሁ ።

ተስማምቻለሁ----------አልተስማማሁም----------

በጥናቱ ለመሳተፍ ስላሳዩት በጎ ፈቃደኝነት አስቀድመን ልባዊ ምስጋናችንን በአክብሮት እንገልፃለን።

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**<u>የቅድመ ጽንሰት/ቅድመ እርግዝና/ ጤና ክብካቤ (Preconception care (PCC) ምንነት/Definition</u>**

**የቅድመ ጽንት** ወይም **ቅድመ እርግዝና ክብካቤ** በእንግሊዝኛው **<u>Preconception care (PCC)</u>** ተብሎ የሚጠራ ሲሆን **<u>ከእርግዝና</u>** ወይም **<u>ከመፀነስ በፊት</u>** የሚሰጥ የጤና ክብካቤ አገልግሎት ነው።

ቅድመ ጽንት/ **<u>ቅድመ እርግዝና/ ክብካቤ (PCC)</u>** በተለይ ለማርገዝ እቅድ ያላቸውን ሰዎች ለይቶ በማውጣት ሰዎቹ አገልግሎቱን እነዲያገኙ *ያደርጋል።*

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**<u>ለጤና ባለሞያዎች የተዘጋጀ የቅድመጽንሰስ/የ ቅድመ እርግዝና አገልግሎት(Preconception Care (PCC) መጠይቅ:</u>**

**መመሪያ፡** እባክዎ ከተራቁጥር 1 እስከ መጨረሳ ድረስ የተዘረዘሩትን እያንዳንዱን ጥያቄዎች በጥንቃቄ በማንበብ መልስዎን ከተሰጡት አማራጭ መልሶች በመረጡት የመልስ ሳጥን ውስጥ የራይት ምልክት (*tick*) በማድረግ እነዲሁም ክፍት ቦታ /ዳሽ/ በተሠጣቸው ላይ መልስዎን በመጻፍ ይግለጹ

**ክፍል አንድ: ከማህበራዊ ከዲሞግራፊያዊና ከሞያዊ ስራ ጋር የተያያዙ ጥያቄዎች**

**111. ፆታ** 1. □ ወንድ 2. □ ሴት

**112. አድሜዎ ስንት ነው** _____ ዓመት

**113. የጋብቻ ሁኔታ**

1. □ ያላገባ/ች 2. □ ያገባ/ች 3. □ የፈታ/ች 4. □ ባል/ሚስት የሞተበት/ባት
5. □ ያለጋብቻ አብሮ መኖር

**114. ሃይማኖት 1.** □ ኦርቶዶክስ 2. □ ፕሮቴስታንት 3. □ ሙስሊም 4 □ካቶሊክ
5. □ ሌላ ካለ ይገለጽ ____ ____

**115. ሞያ/Profession:**

1. □ ሜዲካል ዶክተር
2. □ ነርስ
3. □ ሚድዋይፍ
4. □ ፐብሊክ ሄልዝ ኦፊሰር
5. □ ፋርማሲ
6. □ሌላ_____

**116. የስራ ልምደ/Year of experience/** _____ ዓመት

**117. በሞያዎ የደረሱበት ከፍተኛ የት/ም ደረጃ (የተጠናቀቀ)**

1. □ ዲፕሎማ
2. □ቢኤስሲ(BSc)
3. □ማስተርስMSc
4. □ ጂፒ /GP MD
5. □ስፔሻሊስት/MD
6. □ ፒኤችዲ/PhD

**118. በአሁኑ ወቅት ተመድበው የሚሰሩበት ዲፓርትምነት ወይም ኬዝ ቲም ምንድነው/ምንይባላል ?** _____

**119. የወርሃዊ ደሞዝዎ መጠን በብር** _____ ብር/ በወር

**120. በቀን በአማካኝ ምን ያህል ተገልጋዮችን ያስተናግዳሉ?** _____ ሰው/በቀን

**ክፍል ሁለት: በ ቅድመ ጽንሰት ጤና ክብከቤ** (PCC) **ዙሪያ የተዘጋጁ የ ግንዛቤ ጥያቄዎች**

| | ጥያቄ | እውነት True | ሃሰት False | አላውቅ Don't know |
|---|---|---|---|---|
| 201. | የ ቅድመ ጽንሰት ጤና ክብከቤ **የሚያቅፋቸው (Eligibles of PCC)** እድሜያቸው በፍሬያማ እድሜ (Reproductive age) ክልል ውስጥ ያሉትን ወንድና ሴቶችን ሁሉ ነው | 1 □ | 2 □ | 3 □ |
| 202. | የሚፈለገውን ውጤት ለማግኘት **ቅድመ ጽንሰት ጤና ክብከቤ መጀመር ያለበት** አራት ሳምንት ከመጸነስ በፊት ነው። | 1 □ | 2 □ | 3 □ |
| 203. | ከእርግዝና በፊት ያልታከመ Periodontal disease ላልተፈለጉ የእርግዝና ወጤቶች **Adverse Pregnancy Outcome** (**APO**) ያጋልጣል። | 1 □ | 2 □ | 3 □ |
| 204. | በቅርቡ ለማርገዝ ያቀደች የ **BMI** ልኬቷ **19.5** የሆነ ሴት ላልተፈለገ የእርግዝና ውጤት (**APO)** የተጋለጠች ናት፡ ስለሆነም ቢያንስ 20.0 እስክትሆን መጠበቅ ይኖርባታል። | 1 □ | 2 □ | 3 □ |
| 205. | በፍሬያማ እድሜ (Reproductive age) ክልል ውስጥ ያሉ ሴቶች ሁሉ በየቀኑ **0.4 ሚ.ግ folic acid** ታብሌት መውሰድ አለባቸው | 1 □ | 2 □ | 3 □ |
| 206. | የ ቅድመ ጽንሰት ክብከቤ አገልግሎት የሚያካትታቸው መደበኛ **(routine) ላቦራቶሪ ምርመራዎች** Hgb, Hct, HIV, HBV, HIV, እና RPR ወይም VDRL ይጨምራል | 1 □ | 2 □ | 3 □ |
| 207. | በ ቅድመ ጽንሰት **genetic counseling** እና **screening** ስራ ወቅት ሃኪሙ (የጤና ባለሙያው) የ **sickle cell hemoglobinopathies** ችግር ያለባት ሰው ካገኘ **carrier screening tests** ማድረግ ጠቃሚ መሆኑን ሊነግራት ይገባል | 1 □ | 2 □ | 3 □ |
| 208. | የ ቅድመ ጽንሰት ክብከቤ አገልግሎት የሚሰጥ ባለሞያ **የቅድመ እርግዝና የስኪር (DM) ና የደምግፊት (HPN)** ላለባቸው ሰዎች አስቀድሞ **ህመሙን የመቆጣጠር (control)** የማድረግ አስፈላጊነትን ሊነግራቸው ይገባል | 1 □ | 2 □ | 3 □ |
| 209. | **Isotretinions**, **Valproic acid**, እና **Warfarin ቴራቶጀኒክ** ያላቸው መድሃኒቶች ሲሆኑ እነዚህን መድሃኒቶች የሚወስዱ ና በቅርቡ መጸነስ ለሚፈልጉ ሴቶች የመድሃኒት ለውጥ ሊደረግለቸው ይገባል | 1 □ | 2 □ | 3 □ |
| 210. | በ ቅርቡ ለመጸነስ የሚፈልጉ**የአስም በሽታ** ያለባቸው ሴቶች ከእርግዝናቸው አንድ ወር በፊትና ከጸነሱበት አስከ ሶስት ወር ጊዜ ድረስ ሳልቡታሞል /**Salbutamol**/ መውሰድ የለባቸውም | 1 □ | 2 □ | 3 □ |
| 211. | በ ቅድመ ጽንሰት ክብካቤ አገልግሎት ወቅት አስቀድሞ እነደ **depression**, **seizure disorder**, እና **phenylketonuria** ያሉትነ ከመጸነስ በፊት መለየትና ማከም ያልተፈለገ የእርግዝና ውጤት(APO) እንዳይከሰት ይረዳል | 1 □ | 2 □ | 3 □ |
| 212. | የ ቅድመ ጽንሰት ወቅት **በቀን ሶስቴ ራንደም ብለድ ሹገር ምርመራ** (**RBS test 3x/day**) ማድረግ የ **pre-gestational diabetes** ታማሚን የደም ስኪር መጠን በአስተማማኝ ሁኔታ መቆጣጠራችንን የሚያረጋግጥልን ተመራጭ | 1 □ | 2 □ | 3 □ |

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| | (**Gold Standard**) የምርመራ አይነት ነው:: | | | |
| 213. | ያልተፈለገ የእርግዝና ውጤትን(APO) ከመከላከል አኳያ ከ **ኢንፈሉዌንዛ ክትባት** በስተቀር, የሁማን ፓፒሎማ (**Human Papilloma** ) ፤ የሩቤላ (**Rubella**) እና የቫሪሴላ (**Varicella** ) ቫይረስ ክትባቶችን በእርግዝና ወቅት መሥጠት የተከለከለ (contraindicated) ነው:: | 1 □ | 2 □ | 3 □ |
| 214. | በቅርቡ የ መጸነስ ሃሳብ ላላቸው ሴቶች **ለ 30 ደቂቃ ደቂቃ የሚቆይ እስኪያልብ የሆነ መካከለኛ የአካል እንቅስቃሴ በሳምነት 5 ጊዜ** ማድረግ እንዳለባቸው በጤና ባለሙያው ሊነገራቸው ይገባል። | 1 □ | 2 □ | 3 □ |
| 215. | አልኮል እና ሲጋራ የሚጠቀሙ በቅርቡ የ መጸነስ እቅድ ያላቸው ሴቶች ከመጸነሳቸው በፊት የሚጠቀሙትን የ አልኮልና የሲጋራ መጠን እንዲቀንሱ ሊነገራቸው ይገባል | 1 □ | 2 □ | 3 □ |
| 216. | በ መጀመሪያዎቹ 12 የእርግዝና ሳምንታት እንጂ በቅድመ ጽንሰት ወቅት እንደ ጨረር፤ የአረም ማጥፊያ ፣ ሊድ፤ ሜርኩሪ ፣ ድመት ጋር ከሚደረግ ንክኪ እና ከመሳሰሉ አካባቢያዊ ጠንቆችና መጠበቅ ያልተፈለገ የእርግዝና ውጤት እንዳይከሰት አይከለክልም | 1 □ | 2 □ | 3 □ |
| 217. | በቅርቡ በ **C/S** የወለደችን እናትበ ቀጣይ ለመውለድ ብትፈልግ ከ ቀድሞው C/S ቢያንስ በ **18 ወራት ዘግይታ** ማርገዝ ይኖርባታል | 1 □ | 2 □ | 3 □ |
| 218. | የ **ኢንፈርቲሊቲ ምርመራ እና ህክምና** በቅድመ ጽንሰት ክብካቤ ውስጥ የሚካተት አይደለም | 1 □ | 2 □ | 3 □ |

**<u>ክፍል ሦስት፡ የ ቅድመ ጽንሰት ክብካቤ አገልግሎት ትግበራን በተመለከተ</u>**

**301. በእለት ተእለት ስራህ/ሽ ወቅት በስነተዋልዶ የእድሜ ክልል ያሉትን ታካሚዎችህን መቼ ልጅ የመውለድ ወይም ለመጸነስ እነደሚያስቡ እቅዳቸውን ትጠይቃለህ/ ትጠይቂያለሽ?**

1. □ በፍጹም አድርጌ አላውቅም
2. □ አልፎ አልፎ እጠይቃለሁ
3. □ አንድ አንዴ እጠይቃለሁ
4. □ ብዙግዜ እጠይቃለሁ
5. □ ሁልጊዜ እጠይቃለሁ

**302. በእለት ተእለት ስራህ/ሽ ወቅት የታካሚዎችህን መቼ ልጅ ለመውለድ ወይም ለመጸነስ እነደሚያስቡ እቅዳቸውን የ ምትጠይቅ ከሆነየትኞቹን ሰዎች ነው የምትጠይቀው?** (ከ አንድ በላይ አማራጭ መስጠት ይቻላል ። ያልተጠቀሰም ካለ በመጻፍ መጨመር ቻላል)

1. □ አዋቂ ወንዶችን ( ≥ 19 Years)
2. □ እድሜያቸው ከ 12-18 ያሉ ታዳጊዎችን/ጎረምሶችን
3. □ አዋቂ ሴቶችን 19-49 years
4. □ ሌላ ካለ ይጠቀስ_____

**3.1.** በእለት ተእለት ስራህ/ሽ **ለማርገዝ ለሚያስቡ/ለሚየቅዱ ሰዎች** ከ ጥያቄ 303 – 315 በተዘረዘሩት ነጥቦች ዙሪያ **ምክር ትሰጣለህ?**

| | | **በፍጹም Never** | **አልፎ አልፎ Rarely** | **አንዳንድ ጊዜ Sometimes** | **ብዙ ጊዜ Often** | **ሁልጊዜ/ Always** |
|---|---|---|---|---|---|---|
| 303. | ስለ ቤተሰብ እቅድ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 304. | አራርቆ ስለመውለድ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 305. | የ አካል እንቀስቃሴ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 306. | ስለ ሰውነት ክብደት | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 307. | ስለ ምግብ (Nutrition) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 308. | ስለ አልኮል፣ ቶባኮና ሌሎች አነቃቂ እጾች (Psychoactive Substance use) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 309. | ስለ ፎሊክ አሲድ (Multivitamin containing Folic acid ) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 310. | ከመጸነስ በፊት ቀድመው የነበሩ ህመሞችን ወይም አዲስ የተከሰቱ ህመሞችን የማከም የማስተካከልና የመቆጣጠር አስፈላጊነት | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 311. | ስለ ኤች አይቪና (STIs/HIV) ምርመራ ጠቀሜታ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 312. | በሃኪም ትእዛዝም ሆነ ያለሃኪም ትእዛእ የሚወሰዱ መድሃኒቶች ስለሚኖራቸው ጠንቅ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 313. | ስለ አካባቢያዊ ጠንቆች እና መራዦች (Enviromnental hazard & toxins) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 314. | ስለ መከላከያ ክትባቶች (Preventive Vaccines) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 315. | በቅድመ ጽንሰት ክብከቤ ወቅት የ ትዳር አጋርን ወይም የፍቅር ገደኛን/partner/ የማሳተፍ አስፈለጊነት | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |

**3.2**. በእለት ተእለት ስራህ/ሽ ወቅት **በቅርቡ ለማርገዝ ለሚየቅዱ ሰዎችን** ከ ጥያቄ 316 - 328 በተዘረዘሩት ነጥቦች ዙሪያ **የቅድመ ጽንሰት አጋላጮችን** */preconception risk factors)* ለማግኘት **ምርመራ (*health assessment* )**ታደርገለህ/ታደርጊያለሽ?

| | የደንበኛውን…/ የደንበናውን… | **በፍጹም Never** | **አልፎ አልፎ Rarely** | **አንዳንድ ጊዜ Sometimes** | **ብዙ ጊዜ Often** | **ሁልጊዜ/ Always** |
|---|---|---|---|---|---|---|
| **316.** | ዲሞግራፊያዊ(Demographic) መረጃ/ information/ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 317. | የ ቀድሞ ጋይኒኮሎጂና ኦብስታትሪክ መረጃ /Past Obs & Gyn history/ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 318. | የቀድሞ ሜዲካል/ሰርጂካል/ ታሪክ (Past medical/surgical history) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 319. | ጀነቲክ ሂስትሪ (Genetic history/Family pedigree) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 320. | የጥርስ ህክምና ክትትል ታሪክ(History of dental care or checkup) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 321. | ማህበራዊ ታሪክና የባህሪ ዳሰሳ (Social history/Lifestyle behaviors) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 322. | ታካሚው በ አካባቢያዊ ጠንቆች እና መራዣች ስላለው ተጋላጭነት | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 323. | የመድሃኒት ተጠቃሚነትና የአጠቃቀምን መረጃ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 324. | ስለ አመጋገብ ሁኔታ/Nutritional assessment (BMI) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 325. | የማህበራዊና ስነልቦናዊ (Psycho-social ) ምርመራ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 326. | የአካል ምርመራ (Physical examination) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 327. | የስራና አይነትና የስራ አይነት ሁኔታ መረጃ (Employment history) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 328. | የቀድሞ ክትባት ሁኔታና (Vaccination status) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |

**3.3.** በእለት ተእለት ስራህ/ሽ ወቅት **በቅርቡ ለመጸነስ ለሚያስቡ ሰዎች** ከ ጥያቄ 329 – 338 የተዘረዘሩትን **ስራዎች በራስህም/ሽም በመስራት ይሁን አገልግሎቱን ሊያገኙ ወደሚችሉበት ክፍል ወይም ተቋምና ባለሙያ ጋር በመላክ አገክግሎቱን እዲያገኙ ታደርጋለህ/*ታደርጊያለሽ*?**

| | | **በፍጹም Never** | **አልፎ አልፎ Rarely** | **አንዳንድ ጊዜ Sometimes** | **ብዙ ጊዜ Often** | **ሁልጊዜ Always** |
|---|---|---|---|---|---|---|
| 329. | ፎሊክ አሲድ ማዘዝ/ መስጠት (Folic acid prescription) | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 330. | ሠብስታንሰ መጠቀም እነዲያቆሙ መርዳት/Substance use cessation/ ለምሳሌ. እንደ አልኮል፣ ሲጋራ…ወዘተ… | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 331. | ጽንስ የማይጎዳ መድሃኒት ማዘዝ ወይም በሌላ በማይጎዳ መለወጥ/substitution/ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 332. | መደበኛ (routine)የቅድመ ጽንሰት/ቅድመ እርግዝና ላቦራቶሪ ምርመራ ማሰራት | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 333. | ጽንሱንና የእናቱን ጤንነት ሊጎዱ የሚችሉ ቆዩና(chronic) አዲስ የተከሰቱ ( acute) የጤና ችግሮችን መርምሮ መለየትና እና ማከም | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 334. | በቅድመ እርግዝና ወቅት የነበሩ የቆዩ በሽታዎችን ከቀጣዩ እርግዝና በፊት መቆጣጠር | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 335. | ክትባቶችን ከታገሪቱ መመሪያ እና ከደንበኛው ሁኔታ አኳያ መከተብ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 336. | የእርግዝና ማረጋገጫ ምርመራ ማድረግ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 337. | ደንበኛውን አስፈላጊ ወደሆኑ ቦታዎች/ድርጅቶች ጋር ማገናኘት | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |
| 338. | የ ኤች አይቪ ምርመራ ማድረግ | 1 □ | 2 □ | 3 □ | 4 □ | 5 □ |

## ክፍል አራት: ሌሎች ከ ቅድመ ጽንሰት ጤና ክብካቤ ጋር የተያያዙ ጉዳዬች

| | | አዎ በ ኮሌጅ ወይ ም ዩኑቨር ሲቲ ቆይታ ዬ ወቅት | አዎ በስራ ላይ እያለ ሁ | አልተማ ርኩም/ አልሰለጠ ንኩም | አላስ ታው ስም |
|---|---|---|---|---|---|
| 401. | በእለት ተእለት ስራ ወቅት የምታክማቸውን ታካሚዎችን/ ጥንዶችን/ ልጆች የመውለድ እቅድ መጠየቅና ግልጽና አጭር ምክር ስለመስጠት (Reproductive life plan screening & brief counseling) | 1 □ | 2 □ | 3 □ | 4 □ |
| 402. | የማህበረሰቡን በ ቅድመ ጽንሰት ጤና እና ክብካቤ ዙሪያ ያለውን ግንዛቤ የማሳደግ ጠቀሜታ | 1 □ | 2 □ | 3 □ | 4 □ |
| 403. | ለማርገዝ ያቀዱ ሰዎች የፅንሱን እና የእናቱን ጤና ሊጎዳ የሚችል ጠንቅ እንዳላቸው የመለየት ምርመራ (how to conduct preconception risk assessment ) | 1 □ | 2 □ | 3 □ | 4 □ |
| 404. | ስለ የቅድመ ጽንሰት ጤና ት/ም እና ምክር አገልግሎት አሰጣጥ (how to provide preconception educational & counseling) | 1 □ | 2 □ | 3 □ | 4 □ |
| 405. | በምርመራ ለተለዩ የቅድመ ጽንሰት ችግሮች ህክምና እና የማስተካከያ መንገዶቻቸው (how to manage identified preconception risk factors) | 1 □ | 2 □ | 3 □ | 4 □ |
| 406. | በእርግዝናዎች መካከል ስለሚደረግ የቅድመ ጽንሰት ክብካቤ አገልግሎት አይነቶችና ስለ አገልግሎቱ አሰጣጥ (the elements of interconception care needed to prevent APO) | 1 □ | 2 □ | 3 □ | 4 □ |
| 407. | ስለ ኤችአይቪ ኤድስ ምርመራ ወይም ህክምና (ለምሳሌ፡ PMTCT, PIHCT፣ VCT, or ART) | 1 □ | 2 □ | 3 □ | 4 □ |
| 408. | የቆየ ሕመም ላለባቸው ደንበኞች የ ቅድመ ጽንሰት የህክምና እና ክትትል/followup አገልግሎት (PCC considerations for clients with other chronic diseases ) | 1 □ | 2 □ | 3 □ | 4 □ |
| 409. | የአልኮል ወይም፣ የቶባኮ ሱስ ያለባቸውን ሰዎች እነዲያቆሙ የሚያስችል ህክምና አሰጣጥ (how to provide alcohol or tobacco cessation service ) | 1 □ | 2 □ | 3 □ | 4 □ |

**ከ ጥያቄ ቁጥር 501 - 510 በተዘረዘሩት ርእሶች ዙሪያ ጽ/ትምህርት ወይም ስልጠና ወስደሃል/ሻል?**

**ክፍል አምስት፡ የቅድመ ጽንሰስ አገልግሎትን ለመስጠት የሚያግዙ ግብዐቶችን እና አገልግሎት አሰጣጥን በተመለከተ**

| | | **አዎ/ Yes** | **አይ/ No** | |
|---|---|---|---|---|
| 1. | የ ኢንተርኔት አገልግሎት ትታገኛለህ / ታገኚአለሽ? | □ 1 | □ 2 | "አይ " ከሆነ ወደ ጥያቄ ቁ 503 |
| 2. | የኢንተርኔት አገልግሎት የምታገኝ/ኚ ከሆነ ከየት ታገኛለህ / ታገኚአለሽ?<br>□ 1. ከ መሰሪያ ቤት / ላይብራሪ/<br>**(ከ አንድ በላይ አማራጭ መስጠት/ማክበብ ይቻላል።)** □ 2 ከ ኢንተርኔት ካፌ በክፍያ<br>□ 3 ከ ሆቴሎች ዋይፋይ ሰርቪስ<br>□4በግልየሞባይል/CDMA/ የኢንተርኔት | | | |
| . | በስማርት ፎን(Smart Phone/SP/) ለስራ የሚያግዙ መረጃዎችን ትለዋወጣለህ/ትለዋወጪያለሽ? | □ 1 | □ 2 | □ 3 ስማረት ፎን የለኝም |
| 4. | መስሪያቤታችሁ ላይብራሪ አለው? | □ 1 | □ 2 | |
| . | መስሪያቤታችሁ የቅድመጽንሰት አገልግሎት አሰጣጥን የሚመራ የፖሊሲ፣ የፕሮሲጀር ዶክመንት፣ ወይም ጋይድላይን አለው? | □ 1 | □ 2 | □ 3 አላውቅም |
| . | ከዚህ ቀደም ከየትኛውም ምንጭ የቅድመጽንሰት አገልግሎት አሰጣጥ ጋድላይን ወይም ፕሮቶኮል (PCC gridline or protocol) አይተህ ታውቃለህ? | □ 1 | □ 2 | |
| 7. | በ ኢትዮጵያ ጤና ጥበቃ ሚኒስትር (FMOH) የተዘጋጀ የቅድመጽንሰት አገልግሎት አሰጣጥጋድላይንወይም ፕሮቶኮል (PCC gridline or protocol) አይተህ ታውቃለህ? | □ 1 | □ 2 | □ 3 አላውቅም |
| . | በመስሪያቤትህ የቅድመ ጽንሰት አገልግሎት የሚሰጥ ባለሞያ አይተህ ታውቃለህ? | □ 1 | □ 2 | |
| . | የቅድመ ጽንሰት አገልግሎትን እለት ከእለት በምትሰጠው የህሙማን/የደንበኞች/ አገልግሎትህ/ሽ ጋር አቀዳጅተህ/ሽ ለመስጠት ፈቃደኛ ነህ/ሽ? | □ 1 | □ 2 | □ 3 አልወሰንኩም |
| . | የ ቅድመ ጽንሰት አገልግሎት ስልጠና (PCC training )እነዲሰጥህ ትፈልጋለህ? | □ 1 | □ 2 | |

**511.** የ ቅድመጽንሰት ጤና አገልግሎት ሊሰጡ የሚገባቸው እነማን ናቸው? **(ከ አንድ በላይ አማራጭ መስጠት/ማክበብ ይቻላል።)** ያልተጠቀሰም ካለ በመጻፍ መጨመር ይቻላል)

1. □ ሁሉም ስፔሻሊስት ሃኪሞች
2. □ ሁሉም አጠቃላይ ሃኪሞች
3. □ ሁሉም ነርሶች
4. □ ሁሉም ሚድዋይፎች
5. □ ሁሉም የጤና መኮንኖች
6. □ ሁሉም ጤና ኤክስቴንሽን ባለሞያዎች
7. □ ሌላ ካለ ይጠቀስ_____

512. የ ቅድመ ጽንሰት ጤና ክብካቤ አገልግሎት በየትኛው የጤና ድርጅት ሊሰጥ ይገባዋል ብለህ ሃሳብህን/ሽን ትሰጣለህ/ትሰጪያለሽ? (ከ አንድ በላይ አማራጭ መስጠት ይቻላል ። ያልተጠቀሰም ካለ በመጻፍ መጨመር ይቻላል)

1. □ ጤና ጣቢያ
2. □ ሆስፒታል
3. □ ሌላ ካለ ይጠቀስ _____

513. የ ቅድመጽንሰት ጤና አገልግሎት **ሰጥተህ/ሽ የምታውቅ/ቂ ከሆነ** በባለፈው ሶስት ወራት ውሰጥ በ ግምት ለስንት ሰዎች ሰጥተሃል/ሻል? ለ _____ ሰዎች

**በጥናቱ ፈቃደኛ ሆነው ስለተሳተፉ ልባዊ ምሰጋናዬን እገልጻለሁ!!!**