Ministry of Health

Preconception Care

"Maximizing the gains for
Maternal and Child Health"

National Guidelines for Health Providers

Palestine

2020

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Foreword by the Minister of Health

The Ministry of Health is committed to improving and upgrading the maternal and child health services integrated within the Primary Health care system, always responding to the latest scientific evidence-based recommendations and interventions in order to provide the best care for women, mothers, children and families.

The Ministry of Health has identified Maternal and Child Health (MCH) as a national priority to go in line with the sustainable developmental goals.

The Maternal and Child Health is a cornerstone of public health as well as social and economic development. The provided services attained a good level of implementation at the national level, good indicators are observed, however, there is room for further improvement in the maternal and child health and the related indicators. In this context, Preconception Care (PCC) is globally recognized as a priority on the agenda in improving MCH and reproductive health outcomes. It is a complementary component to the life cycle continuum of care.

Integration of preconception care component is responding to the growing scientific evidence and successful global experience to improve health and reduce morbidity and mortality rates. Therefore, the Ministry of Health is integrating the Preconception Care service into the reproductive and MCH services as integral and complementary component primary healthcare services in commitment to improve the health of women, mothers, children and families. In addition, the standardized implementation will lower maternal and perinatal morbidity and mortality rates.

This program component will help women and men plan for optimal pregnancy aiming at improving health and pregnancy outcomes and reducing morbidities and mortalities that are related to pregnancy.

The Preconception Health Care Guidelines were developed to assist health care providers in the primary health care settings to deliver the standard PCC services complementing, and not replacing, the existing content of the preventive care services.

These are national guidelines that should be made available and implemented in each health facility by all health providers.

In closing, I would like to thank all who contributed to these guidelines including, the Women Development Directorate, the Institute of Public Health, the World Health Organization, UNFPA, UNRWA, UNICEF, Health Work Committees, and the National Committee. Special thanks to Ms. Maha Awwad from the Ministry of Health, Dr. Elias Habash, Dr. Daoud Abdeen and Dr. Yehia Abed from Juzoor for Health and Social Development who took the lead into making these guidelines for health providers in the State of Palestine.

Dr. Mai Kaileh
Minister of Health

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Acronyms and Abbreviations

ANC	Antenatal Care
BSE	Breast Self Examination
CBC	Complete Blood Count
CBE	Clinical Breast Examination
CDC	Center of Disease Control
CMV	Cytomegalovirus
DM	Diabetes Mellitus
HTN	Hypertension
LBW	Low Birth Weight
MCH	Maternal and Child Health
MDGs	Millennium Developmental Goals
NCD	Non-communicable Diseases
PCC	Preconception Care
PHIC	Palestine Health Information Center
RLP	Reproductive Life Plan
SDGs	Sustainable Developmental Goals
STIs	Sexually Transmitted Infections
WHO	World Health Organization

These guidelines were adapted from the experiences and references in the West Bank and Gaza.

References:

- The UNRWA technical instructions: Provision of Maternal Health and Family Planning Services (2009)

- Preconception Health Care Technical Guidelines for Health Providers, Health Work Committees (2018)

- Preconception Care Protocol - Gaza Draft

- WHO related publications and the WHO East Mediterranean Regional framework for action on preconception care (2019 - 2023)

Introduction

There is a widespread agreement that to reduce maternal and childhood mortality, a continuum of care needs to be provided through pregnancy, childbirth, the postnatal period (addressing both mothers and infants), infancy, childhood, adolescence and adulthood.

There is increasing realization that a gap exists in the continuum of care. A growing body of scientific evidence and experience is showing that preconception care can increase the health and well-being of women and couples and improve subsequent pregnancy and child health outcomes.

Congenital anomalies are important causes of infant and childhood deaths, chronic illness and disability, which may have significant impacts on individuals, families, health care systems, and societies. Over **25%** of neonatal mortalities are caused by congenital and genetic disorders[1].

Preconception care interventions could contribute to reducing the risk for congenital anomalies, reducing maternal and childhood mortality, and improving maternal and child health outcomes.

Approximately **50%** of all congenital anomalies have no specific cause. There are some known genetic, environmental socioeconomic and demographic factors, consanguinity, increased exposure to agents or factors such as infection and alcohol and other causes or risk factors. Advanced maternal age could increase the risk of chromosomal abnormalities, including Down syndrome.

[1] WHO 2000-2015 child causes of death (published 2016)

In Palestine, over the last five years (2014 - 2018), the health statistics show the high proportion of congenital anomalies and preterm birth causing infant and child death. Congenital anomalies among infant mortalities ranged between **15.4%** and **24%** and for under-five mortality between **17.2%** and **24%**. On the other hand, the proportion of preterm births among infant mortalities ranged between **16%** and **24%** and for under-five mortality between **12%** and **21%**[2].

Some congenital anomalies can be prevented. Vaccination, adequate intake of folic acid and iodine through supplementation or food fortification and adequate ANC are just three examples of prevention methods.

Upon moving from the MDGs (2000 - 2015) to SDGs (2015 - 2030), improving Maternal and Child Health remains a priority in the global sustainable developmental goals. In addition, Maternal and Child Health is recognized one of five public health priorities in the Eastern Mediterranean Region.

Effective investment in health should be focused on improving the quality of women and child health services, achieving the widest coverage by ensuring continuity of standard care services: preconception, inter-conception, antenatal, intra-partum, post-natal, post-abortion and family planning in an integrated comprehensive approach.

[2] Palestinian Health Information Center (PHIC)- Ministry of Health - State of Palestine

Reproductive health care services in all its components are central to health in general and to socioeconomic development. They are strongly interrelated to each other; improvement in one component will facilitate improvement in others.

Preconception care has been identified as a regional priority in improving maternal, infant and child health. In 2018, in the 65th session of the WHO Regional Committee for the Eastern Mediterranean, member states committed themselves to adopt the PCC interventions and programmatic steps.

Integration and implementation of Preconception care is endorsed in the National Reproductive Health Strategy (2018-2022) as one of the strategic objectives to ensure provision of standard reproductive health care, to prevent maternal and childhood mortality and morbidity.

PCC is a complementary component within the life-cycle continuum of care integrated in the routine primary care for women of reproductive age. Improving the content and quality of PCC would contribute to better MCH outcomes and will maximize the benefits for Child, Maternal and Family Health and the Community Health in general.

Scientific evidence confirms that improving "Women Health" will improve the health of "mothers and children". Therefore, preconception health is about "well woman health". This understanding will lead us to focus on optimizing the "health of women" with "every visit" to the health care facility in order to achieve improved pregnancy outcomes.

By providing preconception care, we enable every woman and man and every couple to make informed decisions about future reproduction.

Many opportunities exist for preconception interventions and much of preconception care and counseling can be provided to address health conditions and needs, reproductive plans, sexual and contraceptive practices of clients.

Preconception Health and Health Care

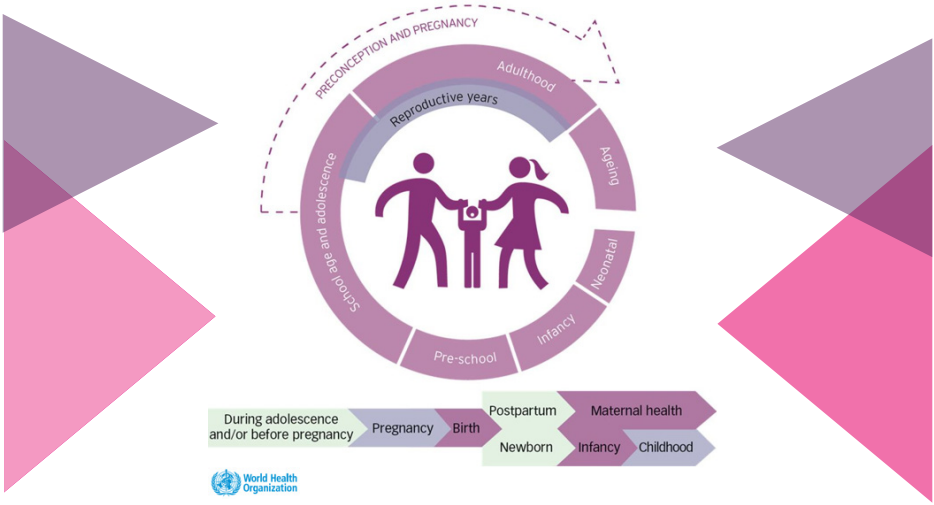
Preconception health refers to the health of women and men during their reproductive years. It focuses on taking actions tailored to their needs to increase the chance of having a healthy baby they are planning to have in the future.

We also refer to preconception health care as efforts to promote women's wellbeing and health before, during, and between pregnancies and throughout their childbearing years.

A growing scientific evidence shows the importance of a woman's physical, mental, environmental and behavioral health over her life course for her childbirth outcomes, and consequent early childhood development and later life wellbeing.

"Opportunities to prevent and control diseases occur at multiple stages of life; strong public health programs that use a life-course perspective from infancy through childhood and adolescence to adulthood are needed. Preconception care contributes to these efforts. Even if preconception care aims primarily at improving maternal and child health, it brings health benefits to the adolescents, women and men, irrespective of their plans to become parents".[3]

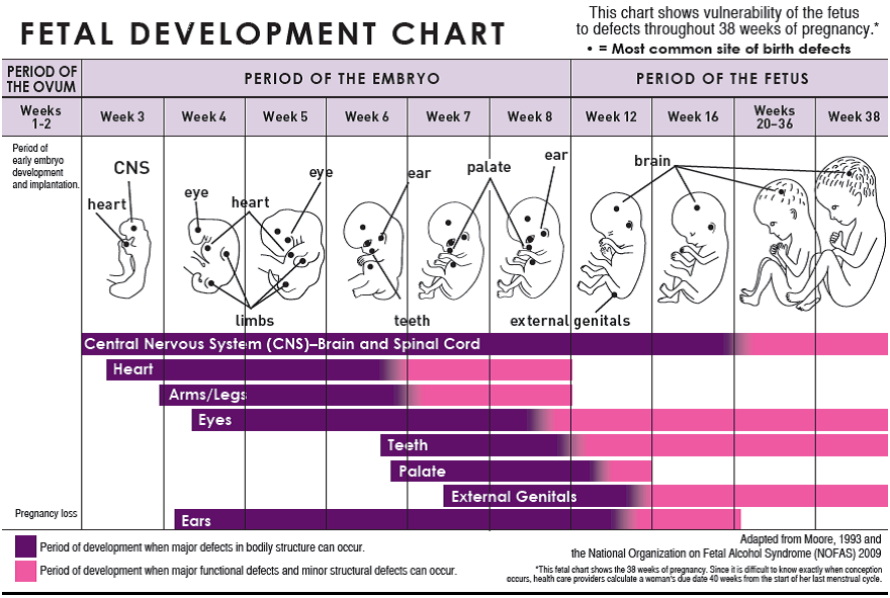
[3] Preconception care: Maximizing the gains for maternal and child health, Policy Brief, WHO (2013)



The Science and Facts Behind Preconception Care

- Poor pregnancy outcomes are related to a person's health status prior to pregnancy.
- In obstetrics, many of the determinants for pregnancy outcomes are present before ANC.
- Many risk factors can be managed and controlled before conception.
- There are evidence-based effective interventions that improve pregnancy outcomes and reduce the burden of complications of pregnancy & childbirth.
- By the time a women enters ANC, a large part of organogenesis[4] has already taken place. The first 4 -10 weeks after conception is the critical period for the prevention of poor pregnancy outcomes. Based on this scientific fact, Antenatal Care will be too late to prevent birth defects and poor pregnancy outcomes.

[4] Organogenesis begins just 3 days after the missed menses—before most women can get into ANC



Missed Period

Entry into ANC (11 weeks)

- The most critical period for development of structural anomalies is days 17-56 after fertilization.
- Placental implantation begins 5 days after fertilization and is complete by days 9-10, before most women know they are pregnant.
- The heart begins to beat at 22 days after conception.
- The neural tube closes by 28 days after conception.
- The palate fuses at 56 days after conception.

What Does Preconception Care Mean?

Preconception care is defined as a set of interventions that aim to identify and modify biomedical, behavioral, and social risks to women and couples or pregnancy outcome through prevention and management before conception occurs and early in pregnancy in order to maximize health outcomes.

When poor pregnancy outcomes occur, they are frequently the result of events long before the first antenatal visit. Therefore, many of the factors that contribute to poor birth outcomes can be effectively managed and brought under control before pregnancy.

There are three overlapping terms used:

- Preconception care: provision of preventive, promotional and curative health and social interventions before conception occurs.
- Peri-conception care: provision of interventions in the period extending from 3 months before to 3 months after conception occurs.
- Inter-conception care: provision of these interventions between two pregnancies.

Care given to women and men to ensure they are in good health before they conceive a child is an essential component to protect the health and development of their offspring.

Why do we need preconception care?

Preconception care aims at improving health status of women, men and couples, and reducing behaviors and individual and environmental factors that could contribute to poor maternal and child health outcomes. Its ultimate aim is to improve maternal and child health, in both the short and long term.

Main Goal: To reduce maternal, infant and childhood morbidity and mortality.

Objectives: There is a long list of main and specific objectives for PCC, however some of the objectives are as follows:

- Improve the knowledge, attitudes, and behaviors of men and women related to preconception health
- For women and men to have a reproductive life plan (e.g., whether or when they want to have children and how they will maintain their reproductive health);
- Women and men of childbearing age have high reproductive awareness, i.e., they understand risk factors related to childbearing
- Identify and assist couples who may have infertility problems
- To prevent unintended pregnancies
- To prevent complications during pregnancy and delivery
- To prevent stillbirths, preterm birth and low birth weight
- To prevent or reduce birth defects (congenital anomalies) among newborns
- To prevent and treat infections, in particular STIs and RTIs
- To prevent complications during pregnancy and childbirth and reduce the burden and cost of related complications and poor pregnancy outcomes.

Preconception Care: The Concept & Approach

"Every Woman…. Every Time…at Every Health visit" is an effective approach in caring for women of reproductive age, irrespective of their pregnancy intentions.

It is an "opportunistic" health care approach that takes advantage of all health care encounters to provide health promotion and prevention opportunities and curative care services throughout the life cycle.

This opportunistic approach:

- Gives the opportunity to identify modifiable and non-modifiable risk factors for poor health and pregnancy outcomes before conception.
- Provides timely counseling about risks to reduce the potential impact on woman's health and the health of future pregnancies and siblings.
- Providse risk reduction and prevention of many poor pregnancy outcomes with evidence-based best practices beyond the available traditional ANC.

Maximizing Prevention:
Targeted Care for clients with High Risk Conditions

What Are "High Risk" Conditions?

High Risk conditions are defined as pre-existing medical disease, mental psychosocial disorders, behavioural risks, exposures to environmental and occupational hazards that could result in compromised health for the woman, the fetus or the offspring should pregnancy occur.

Maternal age and the risk of adverse pregnancy outcomes:

Both extremes of the reproductive age are considered at risk for adverse pregnancy outcomes. Teenage pregnancy is associated with higher risk of preterm birth, low birth weight, low Apgar score, nutritional problems, anemia, high blood pressure, and maternal mortality.

On the other hand, delayed childbearing (>35 years old) is associated with higher risk of maternal and obstetric complications, preterm birth, low birth weight, chromosomal abnormalities (most common Trisomy 21 – Down Syndrome), Hypertension and Diabetes, spontaneous Abortion, Placenta Previa, Ectopic pregnancy, Cesarean section, etc.

Many other risk factors that affect pregnancy outcomes exist such as consanguinity. It is known that consanguineous marriages are associated with an increased risk for congenital malformations and autosomal recessive diseases.

All women with high risk conditions and factors including women of both extremes of the reproductive age should be carefully taken into high consideration while providing preconception care, to inform them adequately, providing evidence-based knowledge to support their choices, and to improve health assessment and screening to provide care and early prevention measures to improve pregnancy outcome.

When can preconception care be provided?

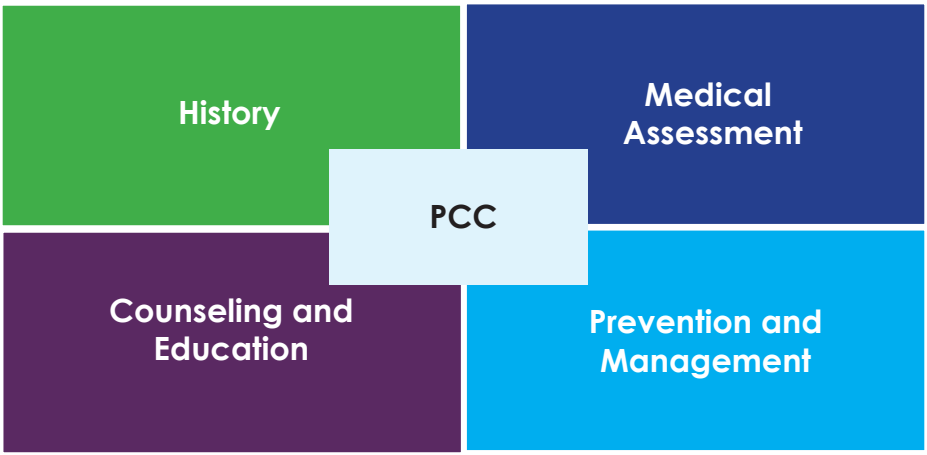
Preconception care can be provided as part of regular preventive care visits or during visits for other health problems.

Use all opportunities to ask women about their Reproductive Life Planning in PHC services, MCH, Family Planning, NCD clinics, pre-marital counseling programmes, adolescent health centers.

Health providers should take every opportunity to provide preconception care, intervention and counseling, particularly:

- After discontinuation of family planning method. Preconception care should be started immediately at the last family planning visit
- During postnatal visits
- During regular well-baby visits
- During outpatient medical consultations in general and specialized clinics
- During consultations in the non-communicable diseases clinic
- During consultations in the dental clinic
- During visits to the laboratory for doing lab tests and receiving of results
- During premarital screening for Thalassemia
- During home visits and community activities

Main components of PCC as defined by WHO:



* Please refer to Annex A WHO Regional core interventions for preconception care targeting women /couples

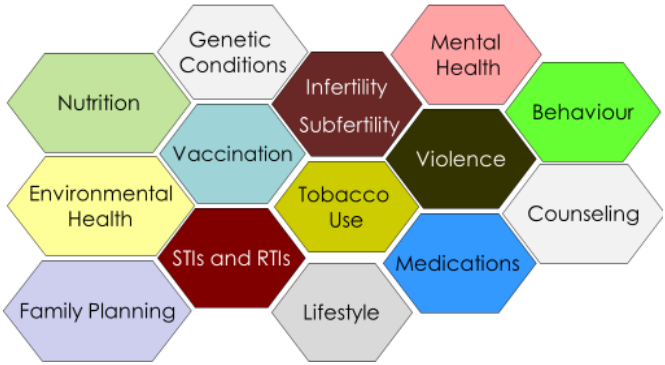
World Health Organization has developed a package of evidence-based core interventions based on the following criteria: cost-effectiveness, feasibility, affordability, sustainability, relevance, acceptability, and most importantly, these interventions should have impact on reducing Maternal & Child Morbidity and Mortality.

Areas addressed by the PCC package[5]:

These interventions cover issues such as nutrition, cessation of tobacco and excessive alcohol use, prevention of interpersonal violence, sexuality education, and protection from environmental hazards, genetic counselling and support for mental health. The package also improves awareness about men's contribution to maternal and child health.

Basic principles in providing preconception care:

- Health Promotion: to enable women to take control and maintain optimal health.
- Counseling and Education: provide individualized, non-judgmental counseling and education.
- Screening and Periodic risk Assessments: identify modifiable and non-modifiable risk factors for poor health and poor pregnancy outcomes before conception.
- Intervention, management and follow-up: Management and referrals to complementary specialized services, such as genetic, nutritional counseling, behavior modification programs, etc.
- Promote family planning services and provide contraceptives.



[5] Areas addressed by the PCC package (WHO, Policy Brief, 2013)

Procedures

High proportion of pregnancies is unintended, and even women with intended pregnancies do not usually plan their pregnancies. Knowing these facts, health care providers should be proactive in addressing reproductive planning and preconception health care counseling and interventions with their clients, to ensure that those with chronic medical conditions have the necessary knowledge to inform their decisions and actions around family planning and reproduction.

In order to optimize pregnancy outcomes, women need to actively plan for pregnancy, enter pregnancy in good health with as few risk factors as possible, and be fully informed about their reproductive and general health.

Therefore, all women of reproductive age presenting to the primary care center are considered candidates for preconception care. Women attending the outpatient, non-communicable diseases (NCDs), specialist, dental, family planning and well-baby clinics should be asked about their future reproductive intentions before health services are provided.

The key entry to preconception care is to encourage women and couples of childbearing potential to develop a Reproductive Life Plan.

What is a Reproductive Life Plan (RLP)?

Having children or not is one of the most important decisions that a person will make in his or her lifetime.

A RLP is a set of personal goals about having or not having children. It also states "when" and "how" to achieve those goals, i.e. when and how to have children. It is based on a person's priorities and goals with regard to life and children taking into account their resources, commitments, and values.

The RLP can be used by health care providers to encourage women and men to reflect their reproductive intentions and facilitate access to the appropriate services to achieve those intentions.

The Centers for Disease Control and Prevention (CDC) has recommended the RLP as a counseling tool to improve preconception health and decrease unintended pregnancies and adverse pregnancy outcomes. The CDC offers recommendations for health care providers on how to have conversations about reproductive life planning with patients.

It is recommended to assess a woman's / couple's Reproductive Life Plan at least once annually.

The Reproductive Life Plan for the coming year is an efficient way to determine what preconception recommendations and education should be addressed in the visit.

This can be assessed by asking EVERY woman capable of becoming pregnant:

"Do you hope to become pregnant in the next year?"

Three possible answers to this key question will help you individualize care to the woman's preconception needs.

Key Question:

"Do you hope to become pregnant in the next year?"

Answer	Needs
Desire A woman (couple) **DESIRES** pregnancy in the next year	→ Needs extra emphasis on preconception content in her routine preventive visit.
At Risk A woman (couple) is **AT RISK** for an unintended or unplanned pregnancy in the next year.	→ Needs extra emphasis on family planning and encouragement to consider her short and long-term pregnancy desires.
Does Not Desire A woman (couple) **DOES NOT DESIRE** pregnancy in the next year	→ Needs routine preventive care and encouragement to seek additional care if her plans about becoming pregnant change.

The Preconception Health Care Visits

Procedures, actions and recording

The role of health care providers is to Ask, Assess, Assist, Advise and Arrange for preconception health care tailored to the needs of each woman / couple, while conducting the following activities:

I. History taking

A detailed history should be recorded assessing past and current risks that may affect future pregnancy, including the following:

- Personal history /demography: age, education, occupation, consanguinity.
- Family history of diabetes, hypertension, congenital anomalies, other chronic diseases including disability, mental disorders.

Medical History

A detailed medical history should be taken to identify specific medical conditions often associated with adverse pregnancy outcomes, and other conditions that are known to be contraindications to pregnancy such as:

Hypertension, Diabetes Mellitus, Blood disease, Anemia, thromboembolism, Epilepsy, seizure disorder and anticonvulsant therapy, severe and poorly controlled Asthma, Thyroid disorders (hypo/hyperthyroidism), infectious diseases, such as sexually transmitted and reproductive tract infections (STIs, RTIs), Hepatitis and HIV/AIDS, Cardio-vascular disease, Kidney disease, Autoimmune diseases, Cancer, Tuberculosis, Mental health or psychiatric disorders, other relevant medical conditions).

Medications:

Review any medication that affects the fetus or the mother, such as anticonvulsants, immunosuppressant, and teratogenic medicines frequently used to treat acne: isotretinoin (Accutane), and others.

Reproductive Health History

A review of the reproductive health history should be conducted, including:

- Previous obstetric and gynecological history with pregnancy, abortion, fertility, birth and use of family planning methods.
- Immunization status, in particular immunization against rubella and tetanus.
- Risk of exposure to hepatitis, HIV or other STIs, toxoplasmosis, congenital cytomegalovirus (CMV), rubella, chickenpox or other infectious diseases.

Behaviours and Lifestyle History

Lifestyle and social behaviours should be reviewed to identify factors and conditions that might affect future pregnancy, in particular:

- Smoking and substance use.
- Gender Based Violence (GBV).
- Psychological and mental health history.
- Dietary habits (vegetarian, weight reduction, diets).
- History of being underweight / overweight or obesity.
- If the client undertakes regular physical exercise.

II. Medical Examination

A comprehensive medical examination and risk assessment should be conducted during the first preconception visit.

III. Health Promotion

"Health Promotion is the process of enabling people (Individuals and communities) to increase control over and to improve their health".[6]

Promotion of a healthy lifestyle is an essential component of preventive care and should be an integral part of health care provision through health education and counseling.

The following should be addressed during the Preconception care visit:

- Promotion of healthy behaviours such as, nutrition / dietary, physical exercise, optimal weight control, oral hygiene and stress release.
- Family planning counseling to avoid unwanted and unplanned pregnancies.
- Avoiding smoking (cigarettes, shisha) and avoiding passive smoke.
- Promoting a healthy environment at home and workplace by avoiding use or exposure to toxic substances, smoke, alcohol, etc.

[6] Ottawa Charter, WHO 1986

IV. Counseling

The medical doctors, nurses, midwives, health educators, should provide counseling. The aim of counseling is to enable women / couples to make informed choices about pregnancy by providing them with information about their health in relation to reproduction and the potential risks involved.

The main elements of counseling during the preconception care visits should take into consideration the following:

- Impact of pregnancy on pre-existing medical conditions, and the impact of those conditions on pregnancy.
- Lifestyle modification conducive to favourable pregnancy outcome.
- Importance of appropriate preconception testing.
- Conditions associated with high-risk pregnancy, such as age, chronic disease, previous obstetric history and previous fetal / newborn congenital anomalies.
- Genetic assessment and genetic risks.
- Environmental and occupational hazards, such as exposure to chemicals in workplace and surroundings.
- Family planning and contraceptive use.

V. Screening

The following screening tests should be conducted during the first preconception visit:

- Measuring weight and height and calculating Body Mass Index (BMI).
- Measuring blood pressure.
- Laboratory tests.

Following the assessment by the medical doctor, the following laboratory tests should be ordered (additional tests can be requested as required and upon the judgment of the examining doctor):

- **Blood Group**: the blood group and Rh factor of the woman should be identified if they are not known. If the Rh factor of the woman is negative then the blood group and Rh factor of the husband should also be tested.

- **Complete Blood Count (CBC)**: CBC should be requested for all women. In cases where iron-deficiency anemia is suspected, further testing is necessary to rule out thalassemia and sickle cell disease.
- **Random plasma glucose**: to identify undetected diabetes mellitus, refer to the national diabetes protocol for blood sugar readings and cut-off points.

- **Urine analysis**: a complete urine analysis should be performed.

Breast examination

The medical doctor/nurse should conduct a clinical breast examination (CBE) and train clients on breast self-examination (BSE).

Genetic screening and counseling

This should be undertaken if there is history of pregnancy outcomes with autosomal trisomy or other congenital anomalies. Identified cases with relevant congenital anomalies may need to be referred to a specialized center for further investigations and specialized genetic counseling.

Oral Health Screening

Oral health care is an integral part of primary health care. Oral health problems are highly prevalent; they constitute a public health problem and pose high demand for treatment. Women presenting to preconception care should be referred to the dental clinic for oral health screening and detection including health education, counseling and treatment of the identified problems. The preconception period is the ideal time for dental interventions.

VI. Assessment, Intervention and follow-up:

The first questions asked to each woman of reproductive age attending health facilities should relate to her future fertility intentions and the current family planning method she is using.
It is expected that each woman should make at least two preconception visits. During the visits the Reproductive Life Plan (future plan for pregnancy) should be discussed, comprehensive examination, risk assessment, counseling and treatment as needed. Additional preconception visits can be arranged if deemed necessary by the attending physician.

During the preconception visit, the medical doctor should undertake the following:

- Determine if the woman suffers from any undiagnosed or uncontrolled medical problems and provide treatment where necessary and recommend the most appropriate time to attempt pregnancy.
- Make sure that the women is aware of any implications of the medical condition(s) and medication(s) she is taking on pregnancy outcomes if she conceives; and the impact of pregnancy on her health condition.

- Determine the woman's fertility intentions, counsel her on contraceptive method use and explain the risk of unplanned / unintended pregnancy.
- Ask the woman about behavior and lifestyle, social support and concerns that affect health, such as smoking, alcohol, drugs, psychological problems, domestic violence, nutrition, health conditions of the family, medications, and potential risks at home and at the workplace.
- Review the immunization status and update them if necessary.
- Arrange for laboratory tests, including: urine analysis, CBC, Blood Group and Rh factor, random / fasting plasma glucose, testing for sexually transmitted infections, and other health conditions;
- Conduct a comprehensive physical examination and risk assessment.

VII. Risk Assessment

The concept of risk assessment in preconception care is focused on the identification of risk factors to women's health or pregnancy outcome and providing preventive and corrective measures to improve outcomes.

During the first visit, the medical doctor should perform a comprehensive medical examination and conduct a risk assessment and set a management plan.

According to the presence or absence of risk factors, women are classified into three categories:

Normal Group (N)

This category includes women with no identified risk factors for pregnancy. Women in this category should receive the necessary counseling and advice; and should be given folic acid tablets.

Alert Group (A)

This category includes women with identified risk factors for pregnancy. However, the risks are correctable or controllable before conception, such as diabetes, hypertension, obesity, STIs, hypothyroidism, medications (Isotretinoins, anti-epileptic drugs, oral anticoagulant, Angiotensin Converting Enzyme (ACE), Angiotensin II Receptor Blocker (ARBs), statins), immunization needs for rubella, hepatitis B, drug/alcohol/tobacco use, inadequate folic acid intake, poor dietary habits, short inter-pregnancy intervals and psychosocial risks.

Women in this category should be provided with family planning methods to achieve optimal health for pregnancy.

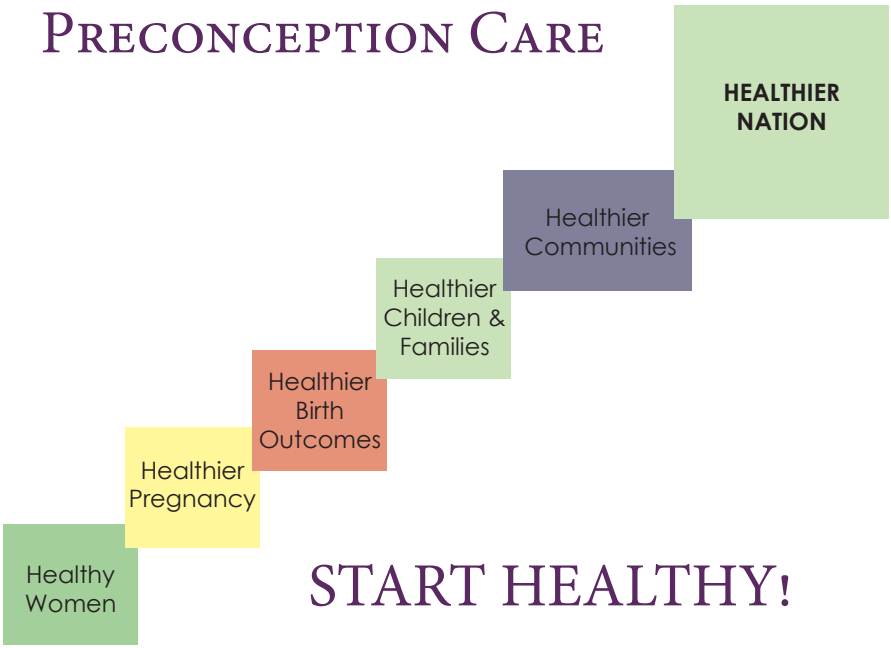
High Risk Group (H)

This category includes women with identified risk factors that could be life threatening.

Such risk factors may include cancer, renal failure, status asthmaticus, uncontrolled severe hypertension, advanced cardiovascular and hepatic conditions.

Women in this category should be advised to avoid pregnancy and should be provided with a reliable contraceptive method.

To integrate preconception care into the continuum of health care, it requires involvement of diverse multi-level and multi-sectoral professionals to address the determinants of health.



We All Have a Role to Play

Hospitals/Specialized Clinics

Specialists caring for women with Chronic Conditions can optimize preconception Health, support family planning, ensure safe medications are prescribed to women of reproductive age.

Schools/Universities

Teachers, support staff, school doctors and nurses, allied professionals can reinforce key health messages and behaviors.

Children's Centers

Children's Center multidisciplinary staff (educators, speech therapists, occupational therapists, psych-social counselors, physical therapists, etc.) can support the inter-pregnancy period and help provide a continuum of care from one pregnancy to the next.

Primary Health Care Center

Family Planning

MCH Clinic

Well Baby Clinic

Family doctors, general practitioners, dentists, nurses, midwives, pharmacists, laboratory technologist, nutritionists, psycho-social counselors, and allied professionals in primary health care are trusted and embedded in communities, so well placed to support women and men in reproductive age to enter pregnancy in optimal health.

Community Centers

Community health, social care and voluntary staff, educators, counselors, home visiting staff can support health services, peer support and promote health.

Maternity Centers

Obstetricians, midwives, nurses, midwifery support workers are well placed to promote pregnancy planning, fitness for future pregnancies and healthy behavior and lifestyle.

References

for further reading

1. Medical Eligibility Criteria for Contraceptive Use, Fifth edition, 2015. A WHO Family
2. Planning cornerstone.
3. Family Planning: A Global Handbook for Providers, WHO, 2018.
4. Decision-Making Tool for Family Planning clients and providers.
5. WHO Regional core interventions for preconception care targeting women/couples (married, planning for marriage or planning for pregnancy).

Annex I

PRECONCEPTION SCREENING RISK ASSESSMENT and COUNSELING HEALTH RECORD

All questions in this checklist are confidential and will become part of the medical record.

District:	Clinic:	Date of registration:
Full Name:	ID No.	Record No. _____ / _____
DOB:	Age:	Date of last physical exam:
Address:	Referred by:	Examiner:

Demographics	What is the highest grade of education you completed? _____ years of education: _____ Husband years of education _____ Do you or your husband have insurance? □Yes □No

Intent of Pregnancy:	Are you planning to get pregnant in the next 6-12 months?			□Yes	□No
	Does your husband support your pregnancy plan?			□Yes	□No
	Are you using any birth control method?			□Yes	□No
	If yes: what type? And since when?				
	□OCP	□IUD	□Depo-Provera	□Condoms	□*Others*
	Notes:				

FAMILY HISTORY	**Do any one of your family have:** *(√ Check all that apply, if Yes please specify)*	
	□ DM	□ HTN
	□ chronic diseases	□ disability
	□ mental disorders	□ Other:
	Notes:	

MEDICAL HISTORY	**Do you have or have you ever had:** *(√ Check all that apply)*			
	□ Diabetes	□ High BP	□ Heart disease	□ Seizures (Epilepsy)
	□Thyroid Disease	□ Asthma	□ Anemia	□ Digestive problems
	□ Hepatitis	□Lupus	□ Scleroderma	□ Kidney disease
	□ bladder disorders	□ Hemophilia	□Sickle Cell Disease	□Active TB
	□ Cancer (type)			
	□ Depression or other mental health problem?			
	□ Surgeries:		□ Other conditions:	
	Notes:			

IMMUNIZATION HISTORY	□Measles, Mumps, Rubella (MMR)	□Chickenpox	□Hepatitis B
	□Tetanus/Diphtheria/Pertussis (TDP)		
	Notes:		

GENETIC HISTORY Do you or your husband have a	Blood diseases (sickle cell, thalassemia, other)?			□Yes	□No	□Don't Know
	Birth Defects □Yes □No □Don't Know (Spine/heart/kidney)?			□Yes	□No	□Don't Know
	Hemophilia	□Yes □No □Don't	Other	□Yes □No □Don't Know		

family history of? *(√ Check all that apply)*		Know	bleeding disorders	
	Muscular Dystrophy	□Yes □No □Don't Know	Gaucher's Disease	□Yes □No □Don't Know
	Downs Syndrome	□Yes □No □Don't Know	PKU	□Yes □No □Don't Know
	Cystic Fibrosis	□Yes □No □Don't Know	Niemann-Pick Disease	□Yes □No □Don't Know
	Tay-Sachs	□Yes □No □Don't Know	Trisomy 18	□Yes □No □Don't Know
	Others *(specify):*			
	Notes:			

REPRODUCTIVE HISTORY *A detailed reproductive history should be obtained*	**Menstrual History:** ■ When was your LMP? ____/____/____ ■Regular? □Yes □No ■every_____ days / _____ days. ■ Do you have any problems with your menstrual cycle? □Yes □No_____
	Obstetric History: *Inquire about previous pregnancies:* **Have you ever been pregnant? □Yes □No** *if yes please √ check below the Pregnancy Outcomes:* □Gravida ____ Para_____ □ Abortion ___□Full-Term:_____ □Preterm: ____ □Living Children: ____ □Stillbirth ____ Fetal Deaths: ____□Ectopic Pregnancy:____ □Congenital anomalies: _____ ■ Date of the last pregnancy outcome: _____/_____/_____ □ Mode of Deliveries: □ Normal_____□ Instrumental_____□ Caesarean _____ □ High / Low Birth Weight: _____ □ Have any of your babies died at birth or during their first year of birth? □Yes □No
	■ Do you have a history/or were you treated for the following? *(√ check all that apply)* ■ Preeclampsia / eclampsia : □Yes____ □No _____ □Gestational diabetes: □Yes____ □No _____
	■ Did you have difficulty getting pregnant last time? □Yes___ □No___ ■ Have you been treated for infertility? □Yes___ □No___ Assisted Reproduction: □Yes___ □No___ ■ Uterine Anomalies □Yes □No ■ Surgeries on: □cervix □Uterus □Ovaries □Tubes □Breast □Cervix
	Do you have a history/or were you treated for a sexually transmitted infection? *(√ check all that apply)* □ Genital Herpes □Gonorrhea □Genital Warts □Chlamydia □Syphilis □Trichomonas □HPV □ Other? _____
	Notes:

MEDICATIONS AND SUPPLEMENTS	*Are you taking any of the following: (√ check all that apply)* □Folic acid □Multivitamins □Calcium □Iron □Diet pills □Herbal remedies □Over the counter medication, *If yes list them:*

	Are you taking any prescribed medications? (Accutane, Valproic acid, anticoagulants)? □Yes □No *If yes list them:*
	Are you taking non-prescribed drugs? *If yes list them:*
	Are you allergic to any medication? *If yes list them:*
	Notes:

DIET AND EXERCISE	Are you at a healthy weight? □Yes □No Are you: □Overweight or □Underweight Are you on a special diet? □Yes □No (if yes √ *check all that apply)* □ Vegetarian □Diabetic □Low Salt □Other _____
	Do you eat three meals a day? □Yes □No Do you eat fruits and vegetables every day? □Yes □ No
	Do you take folic acid? □Yes □ No Do you take other vitamins daily? □ multivitamin □ vitamin D □ other
	Do you drink (__coffee __tea __cola __milk __water __soda ____ other _____)?
	Do you exercise? □Yes □ No Type / frequency: _____
	Notes:

Oral and Dental Health	Do you have problems with your teeth or gums? □Yes □No Have you seen a dentist in the past year? □Yes □No ___Do you see a dentist regularly?

Lifestyle	Do you smoke cigarettes or use other tobacco products? How many cigarettes / packs a day? _____	□Yes	□No
	Are you exposed to second hand smoke?	□Yes	□No
	Do you drink alcohol? How often? _____How much? _____	□Yes	□No
	What kind of work do you do?		
	Notes:		

Environmental Health	Do you work or live near possible hazards (chemicals, x-ray or other radiation, lead)? List:_____
	Do you have any pets? □Yes □No *If yes, check all that apply:* □Cats □Rodents □Exotic Animals Have you had contact with: □Contaminated soil □Cat litter
	Do you or your husband have to wear protective coverings at work? □Yes □No Do you or your husband work with: □Pesticides □Cleaning fluids □Chemicals □Paint □ others
	Notes:

Emotional Support	Do you have emotional support at home?	□Yes	□No
	Do you have help from relatives or friends if needed?	□Yes	□No
	Are you in a stable relationship? □Yes □No Do you feel safe at home? □Yes □No		

	Does anyone threatens or physically hurt you? □Yes □No Do you feel good about yourself? □Yes □No
	Have the following been diagnosed with depression? □You □Your family □Your husband
	Notes:

OTHERS	Is there anything else you would like me to know? Are there any questions you would like to ask me?

Screening Tests: a) Laboratory tests

Date	Wt.	Ht.	BMI	BP	Hb	BG Rh	RBS	Urine for			Others *(specify)*
								Alb.	Sugar	Nitrite	

Medical Examination:

Breast Examination (clinical breast examination and training on BSE)		
BSE	Trained	Not trained
Clinical	□Done	□Not Done
Findings:		

Oral Health Screening/ Examination

Others:

Main Findings and Interventions

Date	Main Findings	Action taken	Name and sig.

Risk Assessment: √ ***Check one of the circles below:***

Normal ◯	Alert ◯	High ◯

Plan of Management and Recommendations:

Follow Up Visits

Date	General findings	Advice and Interventions	Next appointment	Name Signature

Annex II

Guidance on Using the Preconception Assessment tool and PCC Health Record completion

Tool Section		Recommendations
PREGNANCY INTENTION	▸Yes	▪ **Last menstrual period →Check Pregnancy test** **if negative** →proceed with preconception checklist →discuss health benefits of pregnancy planning **if positive** → schedule prenatal care → prescribe prenatal vitamins → discuss involvement of husband
	▸No or ▸Unsure	▪ Last menstrual period - if abnormal →Check Pregnancy test ▪ Unprotected intercourse in the last month – if ***yes*** counsel for STI prevention & Discuss birth control options: – Screen for compliance – Discuss side effects ▪ Discuss health benefits of pregnancy planning and spacing (18-24 months). ▪ Encourage annual health assessments.
MEDICAL HISTORY		▪ Screen for diabetes, thyroid disease, hypertension, seizure disorders and asthma. ▪ Treatment and control of identified conditions. ▪ Counsel on fetal effects with appropriate specialty referral.
INFECTIOUS DISEASES		▪ Screen for HIV, Hepatitis B surface Antigen (HBsAg), Hepatitis C, Tuberculosis
IMMUNIZATIONS		**All individuals of reproductive age should have their immunization status reviewed and updated.** □Varicella □Rubella □HPV □Influenza □Hepatitis B □Tetanus, Diphtheria, B. Pertussis □ Measles, Mumps **Screen for immunity:□Rubella □Hepatitis B □Varicella** ▪ **Check Immunization status for:** – **MMR vaccination** – recommended if non-pregnant, not vaccinated or non-immune. Since it is a live vaccine, women should be counseled not to become pregnant for 3 months after receiving the MMR vaccination. – **Hepatitis B vaccination** recommended for high-risk cases. – If Varicella (Chickenpox) is discovered during pregnancy, the series to be initiated immediately after delivery (or termination of pregnancy) with a second vaccination in the series at the 6-week postpartum visit. – **DPT immunization status** unknown women should receive one dose. **All required immunizations should be provided prior to conception with the exception of the flu vaccine, which can be administered before and/or during pregnancy.** * The varicella immune status of women planning a pregnancy or receiving treatment for infertility can be determined by obtaining a past history of chickenpox and by testing the serum for varicella antibodies in those who have no history or an uncertain history of previous infection. If a woman of reproductive

	age is vaccinated, she should be advised to avoid pregnancy for 4 weeks after completing the two-dose vaccine schedule and to avoid contact with susceptible pregnant women should a post-vaccination rash occur. (RCOG).	
GENETIC RISK FACTORS	**Screening for family related genetic disorders:** ▣ Obtain 3 generation family history for both members of the couple to identify: □ Congenital malformations, birth defects. □ Developmental delays, mental retardation, learning disabilities. □ Genetic disorders □ Family history of a genetic condition □ Consanguinity (first cousins). □ Children who died at a young age (may reveal a metabolic condition). □ History of sudden unexplained death (may indicate cardiomyopathy or metabolic condition). □ History of infertility, multiple miscarriages. ➔ **If positive, refer for genetic counseling those with family and genetic history risk factors**	
REPRODUCTIVE HISTORY	▣ **Detailed Reproductive History should be obtained for all individuals:** ○ Gravida (G); Abortions (A); Full-Term (T); Living Children (L); and Details. ○ **Inquire about previous pregnancies:** Preterm Birth, Pre-eclampsia, Congenital Anomalies, Stillbirth, Miscarriage, Assisted Reproduction, Gestational DM, Caesarean Birth, Uterine Anomalies, High / Low BW • For preterm or low birth weight infants → screen for underlying causes. • For Miscarriages → structural evaluation of the uterus and work-up to determine the underlying etiology. ✓ Provide appropriate referrals. ✓ Counsel women with prior caesarean delivery to wait at least 18 months before the next pregnancy. ✓ Recommend folic acid 5 mg daily prior to conception and for 12 weeks after conception if positive history of neural tube defect. ✓ Recommend inter-pregnancy interval (≥18 months).	
SEXUALLY TRANSMITTED INFECTIONS (STI)	• Screen if high risk for Chlamydia, Trichomoniasis, Gonorrhea, Genital Herpes; Syphilis • Provide treatment according to Guidelines on Sexually Transmitted Infections • Treat all active STIs (Including Herpes) • Prevention counseling: All individuals should be counseled about safer sexual practice.	
MEDICATIONS SUPPLEMENTS	▪ Folic Acid - 400 µg daily ▪ Calcium - 1000 mg/day for pregnant and lactating women > 19 years old 1300 mg/day for pregnant and lactating women < 19 years old. ▪ Screen for iron deficiency ▪ Screen for psychotropic medications, Antidepressants ▪ Screen for medications contraindicated to a pregnancy (Teratogenic); prescribed medications; over-the-counter medications; complementary and alternative therapy (herbal, natural, weight loss, etc.)	
WEIGHT ASSESSMENT	– Calculate annual BMI* – Counsel if BMI **< 19.8** *or* **> 26** due to risks to fertility – Refer to treatment programs for eating disorders – Suggest well-balanced diet of fruits	□ **Underweight** (BMI <18.5) □ **Overweight** (BMI = 25-29.9) □ **Obese** (BMI >30) **BMI Calculation:** BMI = body mass (Kg) ÷ body height $(m)^2$

	and vegetables Provide referrals for management. Recommend folic acid 5mg daily prior to conception and for 12 weeks after conception for obese individuals.	***Target Body Mass Index (BMI) = 18.5 - 24.9**
LIFESTYLE	▪ Screen for alcohol consumption – counsel on fetal effects of alcohol. ▪ Screen for tobacco use – counsel on fetal effects, refer chronic smokers to smoking cessation programs. ▪ Screen for illicit drugs - counsel on fetal effects, refer to treatment programs. ▪ Screen for methadone (opioid/narcotic drug) usage and enrollment in outpatient drug rehabilitation.	
ENVIRONMENTAL HEALTH	*Discuss potential exposure to toxins in occupational and recreational activities:* Inquire about use or exposures to: Solvents; Plastics; Metals (lead, mercury); Pollutants; Pesticides; Teratogenic / toxic Treatments (chemotherapy, radiation therapy); Gases; Radiation. – Rural residents - screen water quality, bacteria, pesticides and toxic exposure. – Screen for exposure to chemicals. – Counsel on effects of exposure to pet feces – Refer to occupational medicine specialist if necessary.	
MENTAL HEALTH **EMOTIONAL SUPPORT**	**Promote mental health wellness through adequate sleep, work-life balance, stress reduction and social life and engagement.** ▪ Screen for: □Depression □Anxiety □Other ▪ Screen for family history of mental health issues. ▪ Screen for domestic and partner violence - Refer as needed. → Counsel women with mental health diagnoses of risks of pregnancy and relapse. → Stabilize /optimize mood and anxiety level; discuss risks and benefits of medications. → Consider Mental Health Referral as necessary.	

Annex III

WHO Regional core interventions for preconception care targeting women/couples (married, planning for marriage or planning for pregnancy)

Areas	Core interventions	Expanded
1. History	• Family history of diabetes, hypertension, congenital anomalies, other chronic diseases including disability, mental disorders • Personal history/demography: age, education, occupation, consanguinity, domestic violence • Personal medical, surgical and obstetrics/gynaecology history: seizure disorders, diabetes, hypertension, mental disorders, vaccination status (tetanus, diphtheria, rubella), hepatitis C, STIs, thyroid, history of poor perinatal outcomes • Behaviour: smoking, medical prescription, self-medication (over the counter), folic acid intake • Contraception • Environmental exposures: second-hand smoking, insecticides, pesticides	• Socioeconomics (housing, income, etc.) • Air pollution • Physical exercise • Alcohol intake • Drug use • HIV

Areas	Core interventions	Expanded
2. Medical Assessment	• Physical examination, body mass index, vital signs • Mental health status (depression), Patient Health Questionnaire-2, three screening questions • History and pedigree construction to detect couples with high risk for genetic diseases • Complete blood count • Screening and testing for haemoglobinopathies: sickle cell disease and beta thalassaemia • ABO blood grouping and Rhesus • Blood sugar: fasting sugar and when available HbA1c, and glucose tolerance if there is a family history of diabetes • Syphilis screening	• Female genital mutilation (history and/or examination) • Screening for infectious diseases: hepatitis B/C, HIV, STIs • Vitamin D • Specific tests: thrombolytic disorders and rare genetic diseases testing (based on epidemiology of country) • Provider-initiated STI/HIV testing

Areas	Core interventions	Expanded
3. Counselling & Education	**For women and/or couples:** • Counselling on healthy lifestyles • Counselling on healthy reproductive life planning • Counselling on the importance of early entry into antenatal care • Folic acid intake, healthy diet • Counselling and education on avoiding tobacco, alcohol, substance use • Prevention of teratogenic infections (rubella, toxoplasmosis, cytomegalovirus, varicella) • Avoiding medication contraindicated in pregnancy • Counselling consanguineous couples on risks of congenital anomalies • Sharing information on existing screening programme services • Infertility counselling • Follow up and referral of couples with identified risks including genetic conditions	• Counselling for STI/HIV

Areas	Core interventions	Expanded
4. Prevention & Management	**Individual level:** • Management and/or referral of identified medical conditions such as chronic diseases, communicable diseases, mental and personality disorders, substance use disorders, genetic disorders • Management or referral for identified risk behaviours such as tobacco, alcohol and drug use • Vaccination against rubella (if not vaccinated and at least four weeks before pregnancy) • Vaccination against tetanus and diphtheria using tetanus and diphtheria vaccine • Vaccination against hepatitis B (if there is no confirmed history of previous vaccination) • Vaccination against influenza • Promote and provide family planning services and healthy reproductive life planning **Population level:** • Flour fortification (folic acid, iron and other micronutrients) • Iodization of salt • Promoting child vaccination: health education on the prime importance of child vaccination according to national schedule • Health education on the importance of HPV vaccine, especially in pre-marriage counseling or with newly married women	• Iron • Promoting safe sex • HPV vaccine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