

ORIGINAL ARTICLE

Preconception care to improve pregnancy outcomes: clinical practice guidelines

Hani Atrash¹, Brian Jack²



¹MD, MPH, Adjunct Professor, Department of Epidemiology Emory University, Rollins School of Public Health.

²MD, Professor and Vice Chair, Department of Family Medicine Boston University School of Medicine / Boston Medical Center.

Corresponding author
hatrash@emory.edu

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Abstract

Introduction: There is scientific evidence that the health of women before pregnancy contributes to the maternal and infant outcomes of pregnancy. There is also scientific evidence that the health of women of reproductive age may be improved through the provision of Preconception Care (PCC). Preconception care includes interventions to assess, identify, address, and modify a woman's health conditions and risks to ensure that these health conditions and risks do not negatively affect the outcome of her pregnancy. Many of the medical conditions, environmental exposures, personal behaviors, and psychosocial risks associated with negative pregnancy outcomes have been identified and there are recommendations for including these conditions in PCC services.

Objective: Our purpose is to present a tool for clinical care providers involved in delivering PCC services. We try to answer the following questions: what do providers actually do when a woman of reproductive age arrives at their offices? What questions to ask? What examinations to conduct? What laboratory tests to perform? And, what education and counselling to offer?

Methods: We reviewed published and un-published literature related to the scientific evidence for the effectiveness of PCC in improving pregnancy outcomes. We searched PubMed for published articles, and we searched the internet for unpublished reports prepared by international organizations such as the World Health Organization and reports from governmental agencies. We summarized the information and presented a comprehensive overview of actions that providers should take to address various risk behaviors, exposures and health conditions.

Results: Several scientists, countries, and international organizations have proposed answers to the above questions. However, there has been no consistency and there is not a single publication that includes a comprehensive compilation of the proposed actions. We summarized the recommended actions that clinical care providers should take in addressing various health conditions, risk behaviors, and exposures.

Conclusion: It is recommended that all providers screen all women for their intentions to become pregnant and to provide them with appropriate services. Women should be referred to specialized care when risk behaviors and medical conditions that go beyond the skills and abilities of the primary care provider are identified.

Keywords: preconception care, preconception health, women's health, maternal health, infant health, clinical practice guidelines

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Authors summary

Why was this study done?

- There is scientific evidence that improving the health of women before pregnancy (preconception care) will improve maternal and infant pregnancy outcomes. • Over 80 interventions have been recommended to be included in a preconception care package.
- Some publications have proposed actions to be taken to address a woman's risk behaviors, exposures and health conditions before pregnancy. • There is no comprehensive compilation of these actions and there is a need for "clinical practice guidelines" for the delivery of preconception care services (a document that presents a comprehensive summary of the proposed actions).

What did the researchers do and find?

- We reviewed published and un-published literature related to the proposed actions to address risk behavior, exposures and health conditions during the preconception period. • We searched PubMed for published articles. • We searched the internet for unpublished reports prepared by international organizations such as the World Health Organization and reports from governmental agencies. • We found several reports that propose actions to be included in preconception care services. • We summarized the proposed actions and developed step by step guidelines for clinical care providers for the delivery of preconception care services.

What do these findings mean?

- There is a need for "clinical practice guidelines" for the delivery of preconception care services. • This article serves as a tool for clinicians and offers a list of proposed actions to manage identified risks during the preconception period.

INTRODUCTION

Over the past two decades there has been renewed interest in ensuring the health of women before pregnancy to further improve maternal and infant health outcomes. The health of women of reproductive age may be improved through the provision of Preconception Care (PCC). Preconception care proposes a primary prevention approach that aims to engage women and couples of reproductive age before they become pregnant in a set of educational and management interventions that identify and modify health risks. Risks include physical and behavioral health, exposure to teratogens or environmental conditions, genetic disorders, substance use, smoking, unhealthy diet or weight, domestic abuse or not following evidence-based preventive actions such as taking folic acid. Many of the medical conditions, environmental exposures, personal behaviors, and psychosocial risks associated with negative pregnancy outcomes can be identified and modified or eliminated before conception.

A comprehensive PCC program has the potential to benefit women desiring pregnancy by reducing risks, promoting healthy lifestyles, and increasing readiness for pregnancy. For women not desiring pregnancy, a PCC program can reduce personal health risks and the risk of an unwanted pregnancy. In 2004, the United States Centers for Disease Control and Prevention (CDC) convened experts who developed "Recommendations to Improve Preconception Health and Health Care"¹. Following the publication of the recommendations, state and local health departments within the United States initiated programs to implement the recommendations. Several countries such as Canada, Belgium and the Netherlands have also started to implement PCC programs²⁻⁴. In February 2012, the World Health Organization (WHO) convened a meeting of researchers and partner organizations "to achieve a global consensus on the place of PCC as part of an overall strategy to prevent maternal and childhood mortality and morbidity". The WHO concluded that PCC has a positive impact on maternal and child health outcomes. The WHO also provided a foundation for implementing a package of promotive, preventive and curative health interventions shown to have been effective in improving maternal and child health. According to the WHO a wide

range of sectors and stakeholders needs to be engaged to ensure universal access to PCC and guides non-health sectors, foundations and civil society organizations to collaborate with, and support, public health policy-makers to maximize gains for maternal and child health through PCC⁵.

In a previous article we described the components of PCC, the interventions recommended to be included in each component, and the quality of evidence and strength of recommendation in support of these interventions⁶. The question that remains is: what do providers actually do when a woman of reproductive age arrives at their offices? What questions to ask? What examinations to conduct? What laboratory tests to perform? And, what education and counselling to offer? Another question is: who should be providing these services? The discussion in this article is limited to clinical services provided to individuals; however, a population-based PCC is needed to ensure that patients and providers are educated about PCC and its importance in improving pregnancy outcomes and to also ensure that PCC services are available and accessible to people who need and seek those services. Therefore, the purpose of this publication is to serve as a tool for clinical care providers involved in delivering preconception care services.

WHO PROVIDES PRECONCEPTION CARE?

Within the clinical healthcare setup, the main providers of PCC are physicians, including general practitioners, obstetricians/gynecologists, pediatricians, among others (endocrinologists, cardiologists, surgeons, psychiatrists, etc): at every encounter with a woman of reproductive age, physicians should ask the woman about her plans for pregnancy. If planning to get pregnant, physicians should offer or refer her to preconception care counseling and services. If not planning pregnancy, physicians should offer or refer her to family planning services. Other clinical care providers (nurses, midwives, public health workers, social workers, health educators, pharmacists, nutritionists, etc.) also have a role and should enquire about a woman's reproductive life plan at every encounter. Every provider should use every opportunity

to educate women, men and the community about the importance of being healthy especially if planning pregnancy, and the importance of effective contraception if not planning pregnancy.

■ WHAT SHOULD PROVIDERS DO?

There have been many reports (published and unpublished) describing recommended services to be provided to women and couples in the context of preconception care. We reviewed the literature and summarized recommended actions in the tables below. The tables and their content align with tables previously prepared and which summarize the recommended components and interventions of PCC⁶. The information in tables 1 to 3 was prepared based on various publications listed in the references at the end of this document describing how to address and implement various recommended interventions²⁻¹⁴. The recommended interventions were grouped into three categories: assessment (history and medical assessment), counseling and education, and, prevention and management.

I. Assessment

During a preconception encounter, it is important to identify risk factors related to a woman's personal and family history as well as her current behaviors and conditions. Prior personal and family health conditions as well as current personal behavior and health conditions may have an impact on the health of the mother and infant during and after pregnancy. Thus, it is recommended that all women of reproductive age should have a screening history during their encounter with general health care and maternal and child healthcare providers; other health care providers should at least enquire about women's reproductive life planning. In addition, all women in need of PCC services should undergo a thorough physical examination and have specific laboratory tests done to identify potential risks to their pregnancy outcomes. Tables 1-a and 1-b summarize recommended assessment interventions and what to do about them²⁻¹⁴.

Table 1-a: Recommended PCC history interventions and what to do

Intervention	Recommended Action
Personal history/ demography	Review patient history to get information about age, national origin, education, occupation, and family relationship between the woman and her partner (consanguinity)
Family history	<ul style="list-style-type: none"> • Chronic diseases, ask: Does any member of your family currently have or has ever had any of the following conditions: hypertension, diabetes, seizure disorder, heart disease, etc. • Genetic conditions, ask: Does your family or your partner's family have a history of birth defects, sickle cell disease, thalassemia, clotting disorders (thrombophilia), etc.
Personal medical, surgical and obstetrics/ gynecology history	<ul style="list-style-type: none"> • Review medical record and discuss with the patient her medical and surgical history. Ask the patient: <ul style="list-style-type: none"> o Do you have or ever had any of the following conditions: diabetes, hypertension, mental disorders, seizure disorders, thyroid disease? o Have you ever had pelvic surgery? o Has your doctor ever told you that you have syphilis, gonorrhea, chlamydia, or HIV? o Have you been tested for HIV? o Has any of your previous pregnancies resulted in miscarriage, preterm birth, low birth weight, congenital anomalies, cesarean birth, preeclampsia, or gestational diabetes? o Has your doctor ever told you that you have a uterine anomaly? • Obtain a detailed history of known genetic disorders (such as cystic fibrosis), congenital malformations such as congenital heart disease and neural tube defects (NTDs) or developmental delays. Ask: <ul style="list-style-type: none"> o Do you, your partner, previous children or other relatives have a birth defect, genetic condition, developmental delay or learning disability? o Review vaccination status of all women: (tetanus, diphtheria, rubella), hepatitis B and Hepatitis C.

Continuation - Table 1-a: Recommended PCC history interventions and what to do

Intervention	Recommended Action
Behavior	<p>Ask the following questions:</p> <ul style="list-style-type: none"> • Do you currently smoke or use any tobacco products? • Do you drink alcohol? How many drinks at a time? How many times per week? • Are you taking any prescription medications? • Are you taking any over the counter drugs including multivitamins and folic acid? • Do you use any other substances: dietary supplements, folk or herbal remedies, recreational drugs, or other drugs? • Would you like to become pregnant in the next year? If no, <ul style="list-style-type: none"> ◦ Are you using any birth control? What methods are you using? ◦ If not planning to get pregnant, ask: Does your partner routinely use condoms?
Domestic violence	<p>Examples of direct questions:</p> <ul style="list-style-type: none"> • Are you afraid of your partner? • Do you feel you are in danger at home or at work? • Do your arguments or fights with your partner ever become physical? • Does your partner or anyone close to you ever hit, kick or threaten you? <p>Examples of indirect questions:</p> <ul style="list-style-type: none"> • How are things going at home? At work? • How is your stress level at home? At work? • How do you feel about the relationships in your life? • How does your partner treat you? • Are you having any problems with your partner?
Environmental exposures	<p>Ask all women about exposures to materials that could be harmful to the fetus at home, work or in the environment, ask the woman:</p> <ul style="list-style-type: none"> • Are you exposed to any of the following substances at work: lead, mercury, anesthetic gases, pesticides, herbicides, vinyl chloride, radiation? • Are you exposed to any of the following substances at home: solvents, paint thinners, pesticides, toxins such as lead used in hobbies?
Physical exercise	<p>Ask women about their daily physical activities including work and exercise. Ask the woman:</p> <ul style="list-style-type: none"> • Do you regularly exercise? How long? How many times per week? • Do your home responsibilities require moderate or high level of physical activity? • Does your job require moderate or high level of physical activity?

Table 1-b: Recommended PCC medical assessment interventions and what to do

Intervention	Recommended Action
Physical examination	<ul style="list-style-type: none"> • Perform a complete physical exam • Measure vital signs: heart rate, temperature, blood pressure • Calculate body mass index - BMI (a person's weight in kilograms divided by the square of height in meters).
Mental health status	<ul style="list-style-type: none"> • Assess all women for depression • Ask all women about history of mental illness; mood disorders, suicidal ideation, homicidal ideation, postpartum depression, behavioral changes.

Continuation - Table 1-b: Recommended PCC medical assessment interventions and what to do

Intervention	Recommended Action
Complete blood count	<ul style="list-style-type: none"> Request a complete blood count to screen for anemia and hemoglobinopathies.
Screening and testing if indicated	<ul style="list-style-type: none"> Request a CBC and hemoglobin electrophoresis if there is a history of sickle cell disease, beta thalassemia, or other genetic conditions
ABO blood grouping and Rhesus	<ul style="list-style-type: none"> Request ABO blood grouping and Rhesus typing before pregnancy.
Blood sugar	<ul style="list-style-type: none"> Request fasting blood sugar and HbA1c for high risk women including women with family history of diabetes.
Other screenings if indicated: hepatitis B/C, HIV, Sexually Transmitted Infections, bleeding/clotting disorders, periodontal disease, pap smear, mammogram, etc	<ul style="list-style-type: none"> Screen high risk men and women for STIs Screen women for bleeding/clotting disorders who have a personal or family history of venous thrombotic events or recurrent or severe adverse pregnancy outcomes. Request pap smear and mammogram as recommended Test for and request immunizations for emerging infections if available, e.g. Zika and COVID 19

II. Counseling and Education

There is evidence that counseling and education during the preconception period results in changes in risk behaviors which eventually leads to improved maternal and neonatal outcomes. Based on history and medical assessment, if a health condition or a risk is identified, women and couples will have the opportunity to receive treatment or sit down with a specialist to receive counselling on the best course of action. Counselling and education related to chronic health conditions is

becoming increasingly important as women are choosing to get pregnant at a more advanced age where chronic conditions (and medications to treat these conditions) are more common. Some of the most common blood pressure medications (ACE inhibitors), high cholesterol medications (statins), blood thinners (Warfarin), and seizure medications have been shown to be teratogenic. Table 2 summarize recommended counselling and education interventions and what to do about them²⁻¹⁴.

Table 2: Recommended PCC counselling and education interventions and what to do

Intervention	Recommended action
Counselling on healthy lifestyles	<p>Advise women and couples to modify their behaviors and exposures to reduce risks to their pregnancy:</p> <ul style="list-style-type: none"> Consume a healthy balanced diet including diet rich with iron and folic acid Consume iodized salt instead of non-iodized salt Engage in moderate physical activity. Quit smoking. Avoid drinking alcohol in pregnancy. Maintain a healthy weight, BMI between 18.5 and 24.5 kg/m²
Counselling on healthy reproductive life planning	<ul style="list-style-type: none"> If the woman desires pregnancy in the immediate future: <ul style="list-style-type: none"> Address with the patient issues and conditions identified as potential risk factors for adverse pregnancy outcomes through history and assessment. Manage or refer the patient to specialty care for management of all identified medical and behavioral conditions prior to pregnancy. Advise delay of pregnancy until issues are managed and provide appropriate contraceptive guidance. If not planning pregnancy soon: <ul style="list-style-type: none"> Educate about safest interpregnancy interval (18-59 months). Offer safe, effective birth control options. Offer advice on the time it may take to become pregnant. Encourage preconception care when planning pregnancy.

Continuation - Table 2: Recommended PCC counselling and education interventions and what to do

Intervention	Recommended action
Counselling on the importance of early entry into prenatal care	<ul style="list-style-type: none"> • Encourage women to seek prenatal care as soon as they realize they are pregnant, preferably before 10 weeks of gestation • Educate women that prenatal care reduces complications of pregnancy
Counselling on Folic acid intake	<ul style="list-style-type: none"> • Educate women that consuming folic acid before pregnancy and during early pregnancy reduces the risk of neural tube defects (NTDs).
Counselling on healthy diet	<ul style="list-style-type: none"> • Educate all women about the importance of consuming a balanced diet and maintaining a healthy weight. • Counsel women about the specific risks associated with underweight, overweight, and obesity to future pregnancies.
Counselling and education on avoiding tobacco	<ul style="list-style-type: none"> • Educate women that tobacco smoking and substance abuse in pregnancy are associated with numerous pregnancy complications including spontaneous abortion, stillbirth, low birthweight, preterm birth, placenta previa, placental abruption, and cleft lip/palate as well as an increased risk of sudden infant death syndrome (SIDS).
Counselling and education on avoiding alcohol and harmful substances	<ul style="list-style-type: none"> • Advise all women of the risks to the embryo/fetus of alcohol exposure in pregnancy (causing fetal alcohol syndrome) and that no safe level of consumption has been established. • Advise all women of the risks to the embryo/fetus of exposure to illicit drugs and other harmful substances in pregnancy. • Refer women to specialized services as appropriate
Counselling and education about avoiding medications contraindicated in pregnancy	<ul style="list-style-type: none"> • Advise women that some medications (prescription or over the counter) may be teratogenic and that some medications may need to be discontinued or switched to safer doses or different medications. • Educate woman NOT to stop prescription drugs prescribed for chronic diseases without medical consultation. • Work with women and their specialist care givers to achieve safest medication profile prior to conception.
Counselling on risks of congenital anomalies	<ul style="list-style-type: none"> • Advise couples with family history of developmental delay, congenital anomalies, or other genetic disorders about the risks of that condition to future pregnancies. • Inform couples about all available screening and genetic counseling services. • Refer couples to specialized services as appropriate
Infertility counselling	<ul style="list-style-type: none"> • Offer an infertility assessment to couples who fail to conceive after regular unprotected sexual intercourse for 12 months in the absence of known reproductive pathology. • Advise couples to have an assessment before one year if there is a history of sub fertility such as amenorrhea, oligomenorrhea, previous ectopic pregnancy, pelvic inflammatory disease, prior treatment for cancer in male or female partner or undescended testes, or where the woman is aged 35 years or over. • Refer to a medical geneticist, women with repeated spontaneous miscarriage, stillbirth, or prolonged infertility.
Counselling on STI/ HIV	<ul style="list-style-type: none"> • Inform women who test positive for HIV of the risks of vertical transmission to the infant and the associated morbidity and mortality probabilities. • Offer contraception to women who test positive; counsel women who choose pregnancy about the availability of treatment to prevent vertical transmission and that treatment should begin before pregnancy. • Counsel all women about safe sexual practices.

III. Prevention and management

Many women of childbearing age suffer from various chronic conditions and are exposed to (or consume) substances that can have an adverse effect on pregnancy outcomes, leading to pregnancy loss, infant death, birth defects, or other complications for mothers and infants. Conditions like asthma, overweight or obesity, cardiac disease, hypertension, diabetes, thyroid disorder, dental caries and other oral diseases have been found to be associated with complications for mothers and infants⁹. It is essential that these conditions be identified and addressed in the preconception period. Managing chronic conditions during pregnancy is not feasible and often by the time a woman presents for prenatal care,

all the fetal organs had been formed and it is too late to prevent maternal and fetal complications related to these conditions. In addition to having chronic diseases, a substantial proportion of women who become pregnant engage in high-risk behaviors that contribute to adverse pregnancy outcomes. These behaviors must be addressed during a PCC encounter. All health conditions should be properly managed and controlled before pregnancy occurs to avoid complications. Consider the need to change treatment regimens when a woman is planning a pregnancy. Refer the woman to a specialist for adjustment or alteration of treatment regimens before conception. Tables 3a and 3b summarize recommended prevention and management interventions and what to do about them²⁻¹⁴.

Table 3 - a: Recommended PCC prevention interventions and what to do

Intervention	What to do
Provide Folic acid supplements	<ul style="list-style-type: none"> • Prescribe 400 mcg of synthetic Folic Acid daily to all pregnant women and women intending pregnancy • Prescribe 5000 mcg Folic Acid supplement to women at increased risk for NTDs daily 3 months prior to pregnancy and through the first trimester, followed by a 400 mcg per day folic acid for the remainder of pregnancy and continued for 4-6 weeks postpartum or as long as breastfeeding continues. This group of women includes: <ul style="list-style-type: none"> o Women with a history of NTD o Women whose male partner has a personal history of NTD, or o A previous pregnancy of either partner with an NTD.
Provide family planning services	<ul style="list-style-type: none"> • Screen all reproductive age women for their intentions to become or not become pregnant in the short and long-term. • Educate all couples about all forms of contraception that is consistent with their reproductive life plan and risk of pregnancy. • Encourage all patients (women, men, and couples) to consider a reproductive life plan. • Discuss family planning options and refer if needed.
Promote safe sex	<ul style="list-style-type: none"> • Counsel all at risk men and women about safe sexual practices to protect them against sexually transmitted infections such as HIV, Chlamydia, Syphilis, gonorrhea, etc.
Provide Iron supplements if indicated	<ul style="list-style-type: none"> • Provide iron supplements (18 mg per day for non-pregnant women and 27 mgs per day for pregnant women) to women who screen positive for iron deficiency anemia. • Encourage women to incorporate iron-rich foods, such as red meat, poultry and fish, into their diets.
Vaccination against rubella (MMR) (if indicated)	<ul style="list-style-type: none"> • Offer MMR vaccine to women who have not been vaccinated or who are not immune and who are not pregnant. • Counsel women not to become pregnant for 3 months after receiving vaccination.
Vaccination against tetanus and diphtheria (if indicated)	<ul style="list-style-type: none"> • Offer the diphtheria-tetanus vaccine to women who have not been vaccinated and who might become pregnant before pregnancy or after delivery
Vaccination against hepatitis B (if indicated)	<ul style="list-style-type: none"> • Offer hepatitis B vaccine before pregnancy to all high-risk women who have not been vaccinated previously.
Vaccination against influenza	<ul style="list-style-type: none"> • Offer Influenza vaccination to women who will be pregnant during influenza season. • Offer Influenza vaccine to any woman with increased risk for influenza-related complications, such as cardiopulmonary disease or metabolic disorders, before influenza season begins.
HPV vaccine	<ul style="list-style-type: none"> • Offer HPV vaccine to all women of reproductive age

Table 3 - b: Recommended PCC management interventions and what to do

Condition	What to do
Diabetes Mellitus	<ul style="list-style-type: none"> • Work with women with diabetes to maximize diabetes control before pregnancy through: <ul style="list-style-type: none"> ◦ Maintaining an optimal weight before pregnancy. ◦ Self-glucose monitoring, reaching a normal glucose level. ◦ A regular exercise program, and, ◦ Tobacco, alcohol, and drug cessation.
Obesity	<ul style="list-style-type: none"> • Offer women specific behavioral strategies to decrease caloric intake and increase physical activity and encourage them to enroll in structured weight loss programs.
Thyroid Disease	<ul style="list-style-type: none"> • Provide adequate therapy to women with hypothyroidism.
Phenylketonuria (PKU)	<ul style="list-style-type: none"> • Work with women with PKU to maintain a low phenylalanine level during their childbearing years.
Seizure disorder	<ul style="list-style-type: none"> • Inform women with seizure disorders about the need to plan their pregnancies with a healthcare provider well in advance of a planned conception. <ul style="list-style-type: none"> ◦ Refer the woman to a specialist for alteration or withdrawal of the anticonvulsant regimen before conception. ◦ Ask women with seizure disorders to take 4 mg of folic acid supplementation per day starting at least 1 month before conception and until the end of the first trimester.
Hypertension	<ul style="list-style-type: none"> • Consider the need to change antihypertensive regimen when a woman is planning a pregnancy. • Refer the woman to a specialist for adjustment or alteration of the antihypertensive regimen before conception.
Rheumatoid Arthritis	<ul style="list-style-type: none"> • Consider the need to change rheumatoid arthritis treatment regimen when a woman is planning a pregnancy. • Refer the woman to a specialist for adjustment or alteration of the treatment before conception.
Cancer	<ul style="list-style-type: none"> • Counsel cancer survivors who consider pregnancy about the potential reproductive effects of cancer treatments on fertility and on pregnancy. • Refer women to specialists if these options are desired.
Alcohol use	<ul style="list-style-type: none"> • Provide women who consume alcohol with brief interventions in primary care settings and refer to proper services if needed.
Tobacco	<ul style="list-style-type: none"> • Provide brief interventions to all tobacco users; refer to smoking cessation clinic.
Illicit drugs	<ul style="list-style-type: none"> • Counsel and refer women to programs that support abstinence and rehabilitation.

CONCLUSION

Health care providers are ideally positioned to offer PCC and to serve as advocates for the creation of healthy, supportive communities for women and men throughout the childbearing phase of their lives. Providers involved in PCC enter into a collaborative partnership that enables women and men to examine their own health and its influence on the health of their baby. The role of health care providers is to communicate clear, accurate,

and timely information; screen for, and act upon, any potential impediments to a successful outcome; support the decision-making process; and offer and refer patients to relevant services when appropriate. The information provided, and the techniques used to encourage effective discussion and communication will allow women and men to make an informed decision about having a baby. All choices, of course, ultimately rest with the woman and her partner.

The interventions included in a preconception care package are numerous and it is unreasonable to expect every provider to provide all services to all women during all encounters, but much could and should be done at routine exams by primary health care providers. However, it is essential that all providers screen all women for their intentions to become pregnant and to provide (or refer) them with appropriate services. It is also important to

keep in mind the “common” conditions that should be screened for. Obviously, there are conditions that are not listed above which affect some women and which have an adverse effect on a pregnancy and its outcome. Thus, the above guidelines are not all-inclusive and include only broad recommendations for action. Specialized care will be needed when risk behaviors and medical conditions are identified.

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Resumo

Introdução: Existem evidências científicas de que a saúde das mulheres antes da gravidez contribui para os resultados maternos e infantis da gravidez. Há também evidências científicas de que a saúde das mulheres em idade reprodutiva pode ser melhorada através da prestação de cuidados preconcepção. Os cuidados preconcepção incluem intervenções para avaliar, identificar, abordar e modificar as condições e riscos de saúde de uma mulher para garantir que essas condições e riscos não afetem negativamente o resultado de sua gravidez. Muitas condições médicas, exposições ambientais, comportamentos pessoais e riscos psicossociais associados a resultados negativos da gravidez foram identificados e existem recomendações para a inclusão dessas condições nos serviços de assistência preconcepção.

Objetivo: O objetivo deste estudo é servir como uma ferramenta para os prestadores de cuidados clínicos envolvidos na prestação de serviços de cuidados preconcepção. Tentamos responder às seguintes perguntas: o que os profissionais realmente fazem quando uma mulher em idade reprodutiva chega a seus escritórios? Que perguntas fazer? Quais exames realizar? Quais exames laboratoriais devem ser realizados? E que educação e aconselhamento oferecer?

Método: Revisamos a literatura publicada e não publicada relacionada à evidência científica para a eficácia dos cuidados preconcepção na melhoria dos resultados da gravidez. Pesquisamos no PubMed por artigos publicados e pesquisamos na Internet relatórios não publicados preparados por organizações internacionais como a Organização Mundial da Saúde e relatórios de agências governamentais. Resumimos as informações e apresentamos uma visão abrangente das ações que os fornecedores devem adotar para abordar vários comportamentos de risco, exposições e condições de saúde.

Resultados: Vários cientistas, países e organizações internacionais propuseram respostas para as perguntas acima. No entanto, não houve consistência e não há uma única publicação que inclua uma compilação abrangente das ações propostas. Resumimos as ações recomendadas que os prestadores de cuidados clínicos devem adotar para lidar com várias condições de saúde, comportamentos de risco e exposições.

Conclusão: Recomenda-se que todos os profissionais examinem todas as mulheres quanto à sua intenção de engravidar e forneçam-lhes os serviços adequados. As mulheres devem ser encaminhadas para atendimento especializado quando forem identificados comportamentos de risco e condições médicas que vão além das habilidades do prestador de cuidados primários.

Palavras-chave: cuidados preconcepção, saúde preconcepção, saúde da mulher, saúde materna, saúde infantil, diretrizes de prática clínica.

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